



Čj. 282855/2023-ČRA

Ref. No. 282855/2023-ČRA

SMLOUVA O DÍLO

WORK CONTRACT

na

for

**„Dodávka softwaru pro
zavedení vinohradnického a
vinařského registru v Bosně
a Hercegovině“
včetně dalších souvisejících
služeb**

**"Supply of Software for the
Implementation of the Wine
and Viticulture Register in
Bosnia and Herzegovina"
including other related
services**

Smluvní strany

Contracting parties

Objednatel:

**Česká republika – Česká rozvojová
agentura**

se sídlem Nerudova 3, 118 50 Praha 1

IČ: 75123924

jejímž jménem jedná Ing. Michal Minčev,
MBA, ředitel

dále jen „objednatel“

a

Zhotovitel:

GC system a.s.

se sídlem: Špitálka 41 a Brno 60200

IČ: 64509826, DIČ: CZ64509826

Client:

**Czech Republic - Czech Development
Agency**

with its registered office at Nerudova 3, 118 50
Prague 1

Business ID number: 75123924

represented by Ing. Michal Minčev, MBA,
Director

“Client”

and

Contractor:

GC system a.s.

Registered office: Špitálka 41 a Brno 60200

Business ID number: 64509826 Tax ID
number: CZ64509826



společnost zapsaná v obchodním rejstříku
vedeném KS Brno. Oddíl B vložka 1927,

company registered in the Commercial
Register lodged with the KS Brno, Section
oddíl B, 1927

bank. spojení: KB Brno, č. účtu:
7223040247/0100

bank: KB Brno, account no:
7223040247/0100

zastoupená: Ing. Zbyněk Smetana, předseda
představenstva

represented by: Ing. Zbyněk Smetana,
předseda představenstva

dále jen „zhotovitel“

“Contractor”

I. Základní ustanovení

1. Smluvní strany prohlašují, že budou postupovat v souladu se zadávacími podmínkami veřejné zakázky s názvem „Vytvoření software pro zavedení vinohradnického a vinařského registru v Bosně a Hercegovině“ (dále jen „veřejná zakázka“), na základě které je tato smlouva uzavřena. Smluvní strany prohlašují, že obsah uvedeného dokumentu je jim znám.
2. Zhotovitel dále prohlašuje, že při plnění této smlouvy budou akceptovány veškeré požadavky a podmínky objednatele, uvedené v Zadávací dokumentaci k veřejné zakázce. V případě rozporu mezi Zadávací dokumentací a textem smlouvy má text smlouvy, včetně příloh přednost.
3. Zhotovitel prohlašuje, že se detailně seznámil s rozsahem a povahou předmětu smlouvy a že je odborně způsobilý k zajištění plnění předmětu smlouvy.
4. Zhotovitel je povinen zajistit, že veškeré vlastnosti předmětu smlouvy budou po celou dobu účinnosti této smlouvy odpovídat obecně platným právním předpisům Bosny a Hercegoviny.
5. Zhotovitel a objednatel se zavazují k vzájemné součinnosti za účelem plnění smlouvy.
6. Pro účely této smlouvy se zavádí následující zkratky:

I. Basic Provisions

1. The parties declare that they will act in accordance with the terms and conditions of the tender entitled "Supply of Software for the Implementation of the Wine and Viticulture Register in Bosnia and Herzegovina" ("tender"), on the basis of which this Contract is concluded. The parties declare that they are aware of the contents of the said document.
2. The Contractor further declares that in the performance of this Contract all requirements and conditions of the Client, as specified in the Tender Documentation, will be accepted. In the event of a conflict between the Tender Documentation and the wording of the Contract, the wording of the Contract, including the annexes, shall prevail.
3. The Contractor declares that it has familiarised itself in detail with the scope and nature of the subject of the Contract and that it is professionally qualified to ensure the performance of the subject of the Contract.
4. The Contractor shall ensure that all the characteristics of the subject of the Contract shall comply with the generally applicable laws of Bosnia and Herzegovina throughout the term of this Contract.
5. The Contractor and the Client undertake to cooperate with each other for the purpose of fulfilling the Contract.
6. The following abbreviations are introduced for the purposes of this Contract:



ČRA – Česká rozvojová agentura

CDA – Czech Development Agency

MOFTER – Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina (Ministerstvo zahraničního obchodu a ekonomických vztahů Bosny a Hercegoviny)

MOFTER - Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina

RS – Republika Srbská

RS - Republic of Srpska (Republika Srpska)

Brčko – Distrikt Brčko, Bosna a Hercegovina

Brčko - Brčko Distrikt of Bosnia and Herzegovina

FBIH – Federace Bosny a Hercegoviny

FBIH - Federation of Bosnia and Herzegovina

MOAFWM - Ministry of Agriculture, Forestry and Water Management of Republika Srpska (ministerstvo zemědělství, lesního a vodního hospodářství Republiky Srbské)

MOAFWM - Ministry of Agriculture, Forestry and Water Management of Republika Srpska

MOAWMF - Ministry of Agriculture, Water Management and Forestry of the Federation of Bosnia and Herzegovina (ministerstvo zemědělství, vodního hospodářství a lesnictví Federace Bosny a Hercegoviny)

MOAWMF - Ministry of Agriculture, Water Management and Forestry of the Federation of Bosnia and Herzegovina

BD BIH - The Department for Agriculture, Water-management and Forestry Brčko district BiH (ministerstvo zemědělství, vodního hospodářství a lesnictví distriktu Brčko v BaH)

BD BIH - The Department for Agriculture, Water-management and Forestry Brčko district BiH

API – Application Programming Interface

API - Application Programming Interface

II. Účel a předmět smlouvy

1. Účelem této smlouvy je dodávka a implementace software pro zavedení vinohradnického a vinařského registru v Bosně a Hercegovině, včetně jeho instalace pro příjemce plnění, který mi jsou MOFTER, MOAFWM, MOAWMF a BD BIH (dále jen „příjemci předmětu plnění“).
2. Předmětem této smlouvy je závazek zhotovitele provést pro příjemce předmětu plnění na vlastní riziko a nebezpečí dále specifikované dílo včetně poskytnutí všech nutných licencí, dokumentací, implementace a zkušebního provozu.
3. Zhotovitel zabezpečí pro příjemce předmětu plnění poskytování technické podpory a servisu po dobu záruky.

II. Purpose and Subject of Contract

1. The purpose of this Contract is the supply and implementation of software for the introduction of the wine and viticulture register in Bosnia and Herzegovina, including its installation for the beneficiaries of the performance, which are MOFTER, MOAFWM, MOAWMF and BD BIH ("beneficiaries of the subject of performance").
2. The subject of this Contract is the Contractor's obligation to perform the work specified below for the beneficiaries of the subject of performance at its own risk, including the provision of all the necessary licences, documentation, implementation and trial operation.
3. The Contractor shall ensure the provision of technical support and service for the beneficiaries of the subject of performance during the warranty period.



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| 4. Objednatel se zavazuje řádně a včas provedené a dokončené dílo převzít a uhradit za něj zhotoviteli sjednanou cenu. | 4. The Client undertakes to accept the work performed and completed in a due and timely manner and to pay the agreed price to the Contractor. |
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III. Specifikace díla

1. Realizace díla zahrnuje:
 - a) vytvoření díla, včetně poskytnutí všech nutných licencí a zdrojového kódu,
 - b) instalace a implementace díla u všech příjemců předmětu plnění,
 - c) součinnosti při provedení akceptačních testů, akceptační testy budou provedeny před předáním jednotlivých systémů do zkušebního provozu,
 - d) školení uživatelů a administrátorů,
 - e) zpracování odpovídající projektové, technické a provozní dokumentace.
2. Dílo, jeho rozsah a obsah plnění jeho jednotlivých částí jsou definovány v přílohách této smlouvy.
3. V případě, že provedená změna nebo úprava má vliv na funkčnost díla, případně mění uživatelské vlastnosti díla, je zhotovitel povinen dodat i aktualizovanou uživatelskou dokumentaci a dokumentaci pro správce informačních systémů.
4. Příjemci předmětu plnění jsou oprávněni provádět změny hardware a software a konfigurace hardware a software, a to tak, aby byl zabezpečen chod díla a související infrastruktury.
5. Zjistí-li zhotovitel při plnění předmětu smlouvy skryté překážky bránící řádnému provedení předmětu plnění, je povinen to bez odkladu oznámit objednateli a navrhnout mu další postup.

III. Specification of the Work

1. The implementation of the work includes:
 - a) the creation of the work, including the provision of all the necessary licences and source code,
 - b) installation and implementation of the work at all beneficiaries of the subject of performance,
 - c) cooperation in the performance of acceptance tests; acceptance tests will be performed before the individual systems are handed over for trial operation,
 - d) training of users and administrators,
 - e) preparation of appropriate project, technical and operational documentation.
2. The work, its scope and the content of the performance of its individual parts are defined in the annexes to this Contract.
3. If a change or modification affects the functionality of the work or changes the user characteristics of the work, the Contractor is obliged to provide updated user documentation and documentation for the information system administrator.
4. The beneficiaries of the subject of performance are entitled to make changes to the hardware and software and to the configuration of the hardware and software in such a way as to ensure the operation of the work and the related infrastructure.
5. If the Contractor discovers hidden obstacles preventing the proper performance of the subject of the Contract, it is obliged to notify the Client without delay and suggest further action.



IV. Doba a místo plnění

1. Zhotovitel dílo předá příjemcům předmětu plnění za účasti objednatele v termínech dle jednotlivých etap stanovených v čl. IV. odst. 2 této smlouvy. Zhotovitel začne s plněním předmětu této smlouvy ihned po účinnosti smlouvy.
2. Zhotovitel je povinen dílo předat objednateli (případně dle charakteru plnění provádět pro objednatele) bez vad a nedodělků na základě předávacího protokolu podepsaného oprávněnými zástupci obou smluvních stran v těchto etapách a termínech:

IV. Time and Place of Performance

1. The Contractor shall hand over the work to the beneficiaries of the subject of performance with the participation of the Client on the dates set for the individual stages in accordance with Article IV(2) of this Contract. The Contractor shall commence performance of the subject of this Contract immediately after the Contract becomes effective.
2. The Contractor is obliged to hand over the work to the Client (or, depending on the nature of the performance, to perform it for the Client) without defects or unfinished works on the basis of a handover record signed by the authorised representatives of both parties in the following stages and on by following deadlines:



Etapa	Termín	Obsah dodávky
M0	(datum účinnosti smlouvy)	Účinnost této smlouvy o dílo
M-api	Nejméně 2,5 měsíce před M1	1. Akceptační protokol částečného dokumentu návrhu a architektury systému podepsaný představiteli ČRA, příjemci předmětu plnění a zhotovitele P.II. (protokol bude podepsán s každým z příjemců předmětu plnění samostatně) 2. (částečný) Dokument návrhu a architektury systému – obsahující návrh API služeb tak, jak byl dohodnut se smluvní stranou zhotovitele P.II
M1	M0 + 4 měsíců ¹	1. Akceptační protokol dokumentu návrhu a architektury systému podepsaný představiteli ČRA a příjemci předmětu plnění (v anglickém a místním jazyce ²) (protokol bude podepsán s každým z příjemců předmětu plnění samostatně) 2. Dokument návrhu a architektury systému – v poslední verzi v anglickém jazyce 3. Prototyp / mock-upy (včetně API služeb) (v anglickém jazyce, přístupné všem stranám včetně zhotovitele P.II)
Mfapi	Ne později než 4 měsíce před Mf	1. Finální API mock-upy / funkční služby včetně jejich dokumentace (v anglickém jazyce)
Mf	M1 + 10 měsíců ³	1. Akceptační protokol, podepsaný představiteli ČRA a příjemci předmětu plnění (v anglickém jazyce a místních jazycích) (protokol bude podepsán s každým z příjemců předmětu plnění samostatně) 2. Dokument návrhu a architektury systému – včetně všech příloh v jejich odpovídajících požadovaných jazycích + Vyplněné protokoly testovacích případů od RS/FBIH/Brčko/MOFTER (ne všechny testovací případy musejí být vyhodnoceny všemi stranami!) 3. Manuály (v místních jazycích, a kde požadováno, také anglickém jazyce) 4. Software - nainstalovaný v produkčním prostředí u všech příjemců plnění jako 'ready-to-manufacture' verze a stejná v testovacím prostředí (pozn.: tato instalace musí být k dispozici už pro provedení testování/akceptace a pak opět reinstalována s čistými případně importovanými daty dle MRxxx – migrační požadavky) - komentované a připravené zdrojové kódy 5. Balík projektové dokumentace odevzdán minimálně 2 týdny před termínem Mf 6. Podepsané prezenční listiny ze školení (podepsané všemi účastníky) – dle potřeby v anglickém jazyce a místních jazycích (tato dodávka může být posunutá na pozdější termín až o 3 měsíce). <i>Pozn.: Tato akceptace bude provedena na místě realizace v Sarajevu případně Brčku / Banja Luce (či jiném obdobném místě) v Bosně a Hercegovině a to s alespoň jedním zástupcem zhotovitele (oprávněným ke smluvním úkonům alespoň v tomto projektu či pro tento účel) přítomným během formálního předání.</i>
Mw	Mf + 36 měsíců ⁴ (záruční lhůty)	1. Předávací protokol

² Požadavek na jazykové mutace díla je dále specifikován v části UR004 přílohy č.1 smlouvy (P.I. Tender technical requirements and conditions)

⁴ Pro Z (délka záruky za předmět plnění) je minimální doba záruky 24 měsíců, maximálně pak 60 měsíců / For Z (the length of the warranty for the subject of performance), the minimum warranty period is 24 months and the maximum 60 months



		2. Dokument návrhu a architektury systému – se zapracovanými změnami plynoucími z případných reklamací včetně všech příloh v jejich odpovídajících požadovaných jazycích 3. (instalovaný aktualizovaný) software a jeho (sestavitelné) zdrojové kódy včetně aplikovaných změn plynoucích z reklamací 4. Manuály a další uživatelská dokumentace s aktualizacemi vyplývajícími z reklamací (v místních jazycích a anglickém jazyce)
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Stage	Deadline	Content of delivery
M0	(effective date of Contract)	Effectiveness of this Work Contract
M-api	At least 2.5 months before M1	1. Acceptance Record of the partial System Design and Architecture Document signed by the representatives of the CDA, the beneficiary of the subject of performance and the P.II Contractor (the record will be signed with each of the beneficiaries of the subject of performance separately) 2. (partial) System Design and Architecture Document - containing the draft of the API services as agreed with the P.II Contractor
M1	M0 + 4 months ⁵	1. Acceptance Record of the System Design and Architecture Document signed by the representatives of the CDA and the beneficiaries of the subject of performance (in English and local languages (the record will be signed with each of the beneficiaries of the subject of performance separately) 2. System Design and Architecture Document - latest version in English 3. Prototype / mock-ups (including API services) (in English, accessible to all parties including the P.II Contractor)
Mfapi	No later than 4 months before Mf	1. Final API mock-ups / functional services including their documentation (in English)
Mf	M1 + 10 months ⁶	1. Acceptance Record, signed by the representatives of the CDA and the beneficiaries of the subject of performance (in English and local languages ⁷) (the record will be signed with each of the beneficiaries of the subject of performance separately) 2. System Design and Architecture Document - including all annexes in their respective required languages + Completed test case reports from RS/FBIH/Brčko/MOFTER (not all test cases have to be evaluated by all parties!) 3. Manuals (in local languages and, where required, English) 4. Software - installed in the production environment at the sites of all beneficiaries of the subject of performance as a 'ready-to-manufacture' version and the same in the test environment (note: this installation must be available for testing/acceptance and then reinstalled again with clean or imported data according to MRxxx - migration requirements) - annotated and prepared source codes 5. Project documentation package submitted at least 2 weeks before the Mf deadline 6. Signed training attendance sheets (signed by all participants) - in English and local languages as required (this delivery can be delayed by up to 3 months).

⁷ The request for language mutations of the work is further specified in part UR004 of Annex 1 of this contract (P.I. Tender technical requirements and conditions)



		<i>Note: This acceptance shall be made at the implementation site in Sarajevo or Brčko / Banja Luka (or another similar place) in Bosnia and Herzegovina with at least one representative of the Contractor (authorised to perform contractual acts at least in this project or for this purpose) present during the formal handover.</i>
Mw	Mf + 36 months ⁸ (warranty periods)	1. Handover Record 2. System Design and Architecture Document - incorporating changes resulting from any claims, including all attachments in their respective required languages 3. (installed updated) software and its (compilable) source code, including applied changes resulting from claims 4. Manuals and other user documentation with updates resulting from claims (in local languages and English)

Hlavním místem plnění je sídlo Ministerstva zahraničního obchodu a ekonomických vztahů (MOFTER), TRG BiH 1, 71000 Sarajevo, Bosna a Hercegovina; sídlo Ministerstva zemědělství, lesního a vodního hospodářství Republiky Srbské (MOAFWM), 1 Trg Republike Srpske; 78000 Banja Luka, Bosna a Hercegovina; a sídlo Ministerstvo zemědělství, vodního hospodářství a lesnictví Federace Bosny a Hercegoviny (MOAWMFBiH), Hamdije Čemerlica br. 2, 7100 Sarajevo, Bosna a Hercegovina; Ministerstvo zemědělství, vodního hospodářství a lesnictví distriktu Brčko v BaH (BD BiH), Mostarska 195, 76100 Brčko. Projekt a kontrola software před nasazením v Bosně a Hercegovině bude probíhat v České republice.

The main place of performance is the headquarters of the Ministry of Foreign Trade and Economic Relations (MOFTER), TRG BiH 1, 71000 Sarajevo, Bosnia and Herzegovina; the headquarters of the Ministry of Agriculture, Forestry and Water Management of Republika Srpska (MOAFWM), 1 Trg Republike Srpske; 78000 Banja Luka, Bosnia and Herzegovina; and the headquarters of the Ministry of Agriculture, Water Management and Forestry of the Federation of Bosnia and Herzegovina (MOAWMFBiH), Hamdije Čemerlica br. 2, 7100 Sarajevo, Bosnia and Herzegovina; Department of Agriculture, Water Management and Forestry in Government of the Brčko District in BaH (BD BiH), Mostarska 195, 76100 Brčko. The project and software will be checked in the Czech Republic before deployment in Bosnia and Herzegovina.

V. Cena

1. Cena předmětu plnění dle článku II a v rozsahu specifikovaném v čl. III této smlouvy v členění dle nabídky zhotovitele je stanovena v příloze č. 2 této smlouvy.
2. Cena předmětu plnění bude rozdělena do 2 faktur:

V. Price

1. The price of the subject of performance according to Article II and in the scope specified in Article III of this Contract broken down according to the Contractor's bid is set out in Annex 2 to this Contract.
2. The price of the subject of performance will be split across 2 invoices:

⁸ Pro Z (délka záruky za předmět plnění) je minimální doba záruky 24 měsíců, maximálně pak 60 měsíců / For Z (the length of the warranty for the subject of performance), the minimum warranty period is 24 months and the maximum 60 months



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| <p>a) Cena za zpracování dodávky dle M1</p> <p>Cena včetně DPH (Kč) 240 000 Kč</p> <p>b) Cena za zpracování dodávky dle Mf</p> <p>Cena včetně DPH (Kč) 2 742 000 Kč</p> | <p>a) Price for the processing of the delivery according to M1</p> <p>Price including VAT (CZK) 240 000 Kč</p> <p>b) Price for the processing of the delivery according to Mf</p> <p>Price including VAT (CZK) 2 742 000 Kč</p> |
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| <p>3. Ceny jsou uvedeny jako pevné a nejvýše přípustné, zahrnující veškeré náklady zhotovitele nutné k řádnému plnění předmětu smlouvy. Ceny je možné upravit pouze za níže specifikovaných podmínek.</p> <p>4. Cena předmětu plnění je dána součtem položek v rozpočtu díla, který je Přílohou č. 2 této smlouvy. V případě, že by v průběhu realizace předmětu plnění došlo k provádění víceprací, či méněprací, bude pro určení ceny těchto prací rozhodná cena uvedená v Příloze č. 2 této smlouvy u dané položky, která má být vykonána ve větším objemu, nebo která vykonána být nemá, pokud bude rozpočet tuto položku obsahovat. V případě, že u případných víceprací nebude daná položka uvedena v Příloze č. 2 této smlouvy, bude její cena stanovena jako cena v místě a čase obvyklá dohodou smluvních stran.</p> <p>5. Smluvní strany se dohodly, že pokud dojde v průběhu plnění této smlouvy ke změně zákonné sazby DPH stanovené pro příslušné plnění vyplývající z této smlouvy, bude tato sazba promítnuta do všech cen uvedených v této smlouvě s DPH a zhotovitel je od okamžiku nabytí účinnosti změny zákonné sazby DPH povinen účtovat platnou sazbu DPH. O této skutečnosti není nutné uzavírat dodatek k této smlouvě.</p> <p>6. Za stanovení sazby daně v souladu s platnými právními předpisy odpovídá zhotovitel.</p> <p>7. Smluvní strany se dohodly, že po celou dobu záručního a zkušebního provozu budou technická podpora a další služby ze strany zhotovitele poskytovány bezúplatně.</p> | <p>3. The prices are quoted as fixed and the maximum permissible, including all of the Contractor's costs necessary for the proper performance of the subject of the Contract. The prices can only be adjusted under the conditions specified below.</p> <p>4. The price of the subject of performance is determined as the sum of the items in the work budget, which comprises Annex 2 to this Contract. In the event that more or less work is carried out during the performance of the subject of the Contract, the price specified in Annex 2 of this Contract for the item to be carried out in greater volume or not to be carried out shall be decisive for determining the price of that work, provided that the budget includes that item. In the event that the given item, in the event of any extra work, is not listed in Annex 2 to this Contract, its price shall be determined as the price customary at the time and place agreed by the parties.</p> <p>5. The parties have agreed that if the statutory VAT rate for the respective performance under this Contract changes during the performance of this Contract, this rate will be reflected in all prices quoted in this Contract including VAT and the Contractor is obliged to charge the applicable VAT rate from the moment the change in the statutory VAT rate takes effect. No addendum needs to be concluded to this Contract for this purpose.</p> <p>6. The Contractor is responsible for setting the tax rate in accordance with the applicable legislation.</p> <p>7. The parties have agreed that technical support and other services will be provided by the Contractor free of charge throughout the warranty and trial period.</p> |
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VI. Platební a fakturační podmínky

1. Úhrada ceny předmětu plnění, viz článek V, odst. 2, písm. a) bude provedena po předání části díla na základě Akceptačního protokolu podepsaného oprávněnými zástupci obou smluvních stran a zástupců příjemců předmětu plnění. Akceptační protokol bude podepsán s každým z příjemců předmětu plnění samostatně. Den podpisu posledního akceptačního protokolu je dnem uskutečnění zdanitelného plnění.
2. Úhrada ceny předmětu plnění, viz článek V, odst. 2, písm. b) bude provedena po protokolárním předání celého díla do rutinního provozu na základě Akceptačního protokolu podepsaného oprávněnými zástupci obou smluvních stran a příjemců předmětu plnění. Akceptační protokol bude podepsán s každým z příjemců předmětu plnění samostatně. Den podpisu posledního akceptačního protokolu je dnem uskutečnění zdanitelného plnění.
3. Po ukončení každé části díla specifikované v čl. IV, odst. 2 této smlouvy vyhotoví zhotovitel protokol o předání a převzetí části díla (dále jen „předávací protokol“), obsahující přehled všech předávaných částí a provedených prací. Objednatel se za příjemce předmětu plnění zavazuje tyto části díla převzít v případě, že budou provedeny a předány řádně v souladu se smlouvou, bez vad a nedodělků.
4. Zhotovitel vyzve Objednatele a každého příjemce předmětu plnění k akceptaci minimálně 5 pracovních dní (1 kalendářní týden, co bude delší) před termínem předání plnění k akceptaci.
5. Objednatel provede spolu s příjemci předmětu plnění akceptaci (vyplnění testovacích a akceptačních protokolů) nejpozději do 10 pracovních dnů (2

VI. Payment and Invoicing Terms

1. The payment of the price of the subject of performance, see Article V(2)(a), shall be made after the handover of the part of the work on the basis of the Acceptance Record signed by the authorised representatives of both parties and the representatives of the beneficiaries of the subject of performance. The Acceptance Record will be signed with each of the beneficiaries of the subject of performance separately. The date of taxable supply is the date the last Acceptance Record is signed.
2. The payment of the price of the subject of performance, see Article V(2)(b), shall be made after the signature of the record confirming the handover of the entire work for routine operation on the basis of the Acceptance Record signed by the authorised representatives of both contracting parties and the beneficiaries of the subject of performance. The Acceptance Record will be signed with each of the beneficiaries of the subject of performance separately. The date of taxable supply is the date the last Acceptance Record is signed.
3. Upon completion of each part of the work specified in Article IV(2) of this Contract, the Contractor shall draw up a record of the handover and acceptance of the part of the work ("Handover Record"), containing an overview of all parts handed over and work carried out. The Client undertakes to accept these parts of the work on behalf of the beneficiaries of the subject of performance assuming that they have been duly performed and handed over in accordance with the Contract, without defects or unfinished works.
4. The Contractor shall invite the Client and each beneficiary of the subject of performance to the acceptance process at least 5 working days (1 calendar week, whichever is longer) before the date on which the subject of performance is handed over for acceptance.
5. The Client shall carry out the acceptance process (completion of the test and acceptance reports) together with the beneficiaries of the subject of performance



kalendářní týdny, co bude delší) od oznámeného data. Neprovede-li Objednatel spolu s příjemci předmětu plnění toto testování/akceptaci v termínu, pozastavuje se běh všech lhůt a má se za to, že ani Objednatel ani Zhotovitel nejsou v prodlení. Objednatel si vyhrazuje právo na požadavky na přiměřené úpravy předmětu plnění v průběhu běhu akceptace.

within 10 working days (2 calendar weeks, whichever is longer) of the notified date. If the Client together with the beneficiaries of the subject of performance do not carry out this testing/acceptance process in time, all deadlines are suspended and neither the Client nor the Contractor is deemed to be in default. The Client reserves the right to request reasonable adjustments to the subject of performance during the acceptance process.

6. Výše uvedené platí obdobně i pro plnění v podobě dokumentu „Analýza a návrh systému“ ovšem s tím, že dokument bude připomínkován minimálně ve dvou iteracích, každá za podmínek a trvání dle výše uvedených podmínek s výjimkou předstihu výzvy k akceptaci, který se pro dokument zkracuje z 5-ti na 1 pracovní den.
6. The above applies similarly to the performance in the form of the document "System Analysis and Design", although with the proviso that the document will be subject to comments in at least two iterations, each under the conditions and for the duration specified in the above conditions, with the exception of the advance call for acceptance, which is reduced from 5 working days to 1 working day for the document.
7. Pokud objednatel či příjemce předmětu plnění dílo nebo jeho část nepřevzme, protože obsahuje vady, je povinen specifikovat tyto vady v předávacím protokolu. To platí obdobně i pro připomínky v komentářích k dokumentu „Analýza a návrh systému“.
7. If the Client or the beneficiaries of the subject of performance do not accept the work or part thereof because it contains defects, they are obliged to specify those defects in the Handover Record. The same applies to the comments on the "System Analysis and Design" document.
8. Předávací protokol a akceptační protokol musí obsahovat minimálně tyto náležitosti:
 - číslo předávacího/akceptačního protokolu a datum,
 - číslo smlouvy a datum jejího uzavření,
 - označení předmětu plnění nebo jeho části,
 - název, sídlo, IČ a DIČ objednatele, zhotovitele a konkrétního příjemce předmětu plnění,
 - název projektu,
8. The Handover Record and the Acceptance Record must contain at least the following elements:
 - the number of the Handover/Acceptance Record and the date,
 - the number of the Contract and the date on which it was signed,
 - the designation of the subject of performance or part thereof,
 - the name, registered office, identification number and tax identification number of the Client, the Contractor and the specific beneficiary of the subject of performance,
 - the name of the project,



- datum zahájení a dokončení plnění příslušné části díla/celého díla,
 - podrobné vymezení rozsahu provedených prací a dodávek
 - prohlášení objednatele a příjemce předmětu plnění, že plnění (jeho část) přijímá (nepřijímá), podpis oprávněné osoby objednatele a příjemce předmětu plnění,
 - jméno a vlastnoruční podpis osoby, která předává/akceptační protokol vystavila, včetně kontaktního telefonu.
 - the date of commencement and completion of the relevant part of the work/entire work,
 - a detailed definition of the scope of the works and supplies carried out
 - a declaration by the Client and the beneficiaries of the subject of performance that they accept (do not accept) the performance (part thereof), the signature of an authorised person of the Client and the beneficiary of the subject of performance,
 - the name and handwritten signature of the person who issued the Handover/Acceptance Record, including a contact telephone number.
9. Podkladem pro úhradu ceny dle této smlouvy bude faktura, která bude mít náležitosti účetního dokladu podle zákona č. 563/1991 Sb., o účetnictví, ve znění pozdějších předpisů, a daňového dokladu dle zákona č. 235/2004 Sb., o dani z přidané hodnoty, ve znění pozdějších předpisů (dále jen „faktura“).
9. The basis for the payment of the price under this Contract shall be an invoice, which shall contain the details stipulated for an accounting document pursuant to Act No. 563/1991 Coll., on Accounting, as amended, and for a tax document pursuant to Act No. 235/2004 Coll., on Value Added Tax, as amended ("invoice").
10. Zhotovitel je oprávněn v souladu s čl. V. odst. 2 této smlouvy vystavit samostatně fakturu po řádném dokončení a předání části díla specifikovaného v čl. V, odst. 2, této smlouvy, na základě podepsaného Akceptačního protokolu, ze kterého vyplývá, že dílo, jeho část, bylo předáno řádně a bez vad a nedodělků.
10. In accordance with Article V(2) of this Contract, the Contractor is entitled to issue a separate invoice after the proper completion and handover of the part of the work specified in Article V(2) of this Contract, on the basis of a signed Acceptance Record, which shows that the work, part thereof, was handed over properly and without defects or unfinished works.
11. Lhůta splatnosti faktury činí 21 kalendářních dnů ode dne doručení objednateli. Faktura bude doručena doporučenou poštou nebo emailem nebo osobně oprávněnému zaměstnanci objednatele.
11. The due date of the invoice is 21 calendar days from the date of its receipt by the Client. The invoice will be delivered by registered mail or email or in person to an authorised employee of the Client.
12. Faktura musí kromě zákonem stanovených náležitostí pro daňový doklad obsahovat také:
- číslo a datum vystavení faktury,
 - číslo smlouvy a datum jejího uzavření,
 - název projektu,
 - the invoice number and date of issue,
 - the number of the Contract and the date on which it was signed,
 - the name of the project,



- předmět plnění a jeho přesnou specifikaci ve slovním vyjádření (nestačí pouze odkaz na číslo uzavřené smlouvy),
 - označení banky a číslo účtu, na který musí být zapláceno (pokud je číslo účtu odlišné od čísla uvedeného v této smlouvě, je zhotovitel povinen o této skutečnosti informovat objednatele),
 - číslo a datum příslušných předávacích protokolů a Akceptačního protokolu podepsaných zástupcem zhotovitele a odsouhlasených zástupcem objednatele a příjemci předmětu plnění (Akceptační protokol bude přílohou faktury),
 - lhůtu splatnosti faktury,
 - název, sídlo, IČ a DIČ objednatele a zhotovitele,
 - jméno a vlastnoruční podpis osoby, která fakturu vystavila, včetně kontaktního telefonu.
13. Nebude-li faktura obsahovat zákonem či touto smlouvou stanovené náležitosti nebo bude chybně vyúčtována cena nebo DPH nebo budou vyúčtovány práce, které zhotovitel neprovedl, je objednatel oprávněn fakturu před uplynutím lhůty splatnosti vrátit druhé smluvní straně k provedení opravy s vyznačením důvodu vrácení. Zhotovitel provede opravu vystavením nové faktury. Dnem odeslání vadné faktury zhotoviteli přestává běžet původní lhůta splatnosti a nová lhůta splatnosti běží znovu ode dne doručení nové faktury objednateli.
14. Povinnost zaplatit cenu je splněna dnem odepsání příslušné částky z účtu objednatele.
- the subject of performance and its precise specification in words (reference to the number of the Contract is not sufficient),
 - the name of the bank and the account number to which payment must be made (if the account number is different from that specified in this Contract, the Contractor must inform the Client of this fact),
 - the number and date of the relevant Handover Records and the Acceptance Report signed by the Contractor's representative and agreed by the Client's representative and the beneficiaries of the subject of performance (the Acceptance Report will be attached to the invoice),
 - the due date of the invoice,
 - the name, registered office, identification number and tax identification number of the Client and the Contractor,
 - the name and handwritten signature of the person who issued the invoice, including a contact telephone number.
13. If the invoice does not contain the statutory or contractually required details or if the price or VAT is incorrectly invoiced or if works are invoiced which the Contractor has not performed, the Client is entitled to return the invoice to the other party for correction before the due date, indicating the reason for returning it. The Contractor shall rectify the matter by issuing a new invoice. The original maturity period ceases to run on the date that the defective invoice is sent to the Contractor and the new maturity period starts again on the date the new invoice is delivered to the Client.
14. The obligation to pay the price is fulfilled on the date the relevant amount is debited from the Client's account.

VII. Licence a podmínky užití díla

1. Zhotovitel poskytuje touto smlouvou objednateli a příjemcům předmětu plnění

VII. Licence and Terms of Use of the Work

1. The Contractor hereby grants the Client and the beneficiaries of the subject of



(každému z nich samostatně) nevýhradní licenci k volnému užití díla včetně jeho aktualizací, a to všemi způsoby uvedenými v § 12 odst. 4 autorského zákona, přičemž licenční poplatek je zahrnut v ceně díla podle článku V. této smlouvy

2. Touto smlouvou se zhotovitel zavázal dodat potřebný software předmětu plnění a další standardní software potřebný k provozování předmětu plnění, včetně poskytnutí licenčních práv na tyto software. Zhotovitel se zavazuje zajistit průmyslově-právní, resp. autorskoprávní nezávadnost plnění této smlouvy.

3. Jestliže zhotovitel při plnění dle této smlouvy uplatní jakýkoliv svůj předmět duševního vlastnictví vytvořený před uzavřením této smlouvy nebo v čase plnění této smlouvy, nabývá objednatel i příjemci předmětu plnění právo na jeho nevýhradní užívání bez zvláštní smlouvy a úhrady dnem jeho užití (uplatnění), a to na dobu neomezenou (i po ukončení trvání smlouvy). Předchozí věta platí stejně i pro případ, že při plnění této smlouvy zhotovitel vytvoří autorské dílo. Získání práva na užívání těchto předmětů duševního vlastnictví (veškerých licencí) k účelu vyplývajícímu z této smlouvy je zahrnuto v ceně plnění. I na takovýto předmět duševního vlastnictví se vztahují ostatní ujednání této Smlouvy. Pokud zhotovitel jako autor vyvinul předmět plnění nebo některou jeho část, zavazují se smluvní strany tak, jak je uvedeno v následujících ustanoveních (pouze software individuálně vytvořený pro objednatele, nikoliv standardní software):

- a) Zhotovitel se zavazuje objednateli a příjemcům předmětu plnění předat zdrojový kód předmětu plnění, příp. jeho části a součásti jako například ale ne výlučně běhové knihovny třetích stran (dále zdrojový kód předmětu plnění), a všechny následné změny zdrojového kódu předmětu plnění, vytvořený zhotovitelem pro příjemce předmětu

performance (each of them separately) a non-exclusive licence to freely use the work including its updates, in all the ways specified in Section 12(4) of the Copyright Act; the licence fee is included in the price of the work according to Article V of this Contract

2. By signing this Contract, the Contractor has agreed to supply the necessary software for the subject of performance and other standard software necessary for the operation of the subject of performance, including the provision of licensing rights to that software. The Contractor undertakes to ensure that the performance of this Contract is in accordance with industrial and copyright law.

3. If, during the performance of this Contract, the Contractor uses any of its intellectual property created before the conclusion of this Contract or during the performance of this Contract, the Client and the beneficiaries of the subject of performance acquire the right to use it non-exclusively without a separate agreement and payment on the date it is used (applied), for an unlimited period (including after the termination of the Contract). The preceding sentence also applies if the Contractor creates a copyright work during the performance of this Contract. The acquisition of the right to use this intellectual property (all licences) for the purpose of this Contract is included in the price of performance. Such intellectual property shall also be subject to the other provisions of this Contract. If the Contractor as the author has developed the subject of performance or any part thereof, the parties are bound as specified in the following provisions (only software individually created for the Client, not standard software):

- a) The Contractor undertakes to provide the Client and the beneficiaries of the subject of performance with the source code of the subject of performance, or its parts and components such as, but not limited to, third-party runtime libraries ("source code of the subject of performance"), and all subsequent changes to the source code of the



plnění. Zdrojový kód předmětu plnění bude předán prostřednictvím elektronického média (např. CD, DVD, Flash disc apod.), přičemž zhotovitel předá novou, aktuální verzi tohoto zdrojového kódu předmětu plnění k termínům specifikovaným jako Mf a Mw, a v době mezi nimi vždy bezodkladně po jejím nasazení do produkčního prostředí.

subject of performance created by the Contractor for the beneficiaries of the subject of performance. The source code of the subject of performance will be delivered via electronic media (e.g. on CD, DVD, flash disk, etc.), and the Contractor will deliver a new, up-to-date version of the source code of the subject of performance on the dates specified as Mf and Mw, and in the time between them, always immediately after it has been deployed into the production environment.

Předaný zdrojový kód musí být ve správné verzi a umožňovat kompilaci, instalaci, spuštění a ověření funkcionality. Pro splnění předchozí věty nemusejí být součástí předaného kódu ty části, které jsou sice nutné pro kompilaci, ale představují buďto oddělený předmět licencování (např. vývojářské licence knihoven třetích stran, vývojové prostředí) nebo jsou k dispozici nebo součástí poskytnutého software (např. webové servery, nástroje pro správu RDBMS). Takové součásti ale musejí být v průvodní dokumentaci zdrojového kódu explicitně uvedeny včetně správné verze a zdroje odkud je lze získat či kde se nachází.

The source code provided must be in the correct version and allow it to be compiled, installed, executed and its functionality verified. To satisfy the preceding sentence, the code provided need not include those parts of the code that are necessary for compilation but constitute either a separate licensing subject (e.g. third-party library licences, development environment) or are available or part of the provided software (e.g. web servers, RDBMS management tools). However, such components must be explicitly listed in the accompanying source code documentation, including the correct version and source from where they can be obtained or located.

b) Zhotovitel prohlašuje, že má právo užít a udělit objednateli i příjemcům předmětu plnění oprávnění k výkonu všech práv ke všem verzím zdrojového kódu předmětu plnění.

b) The Contractor declares that it has the right to use and grant the Client and the beneficiaries of the subject of performance the right to exercise all rights to all versions of the source code of the subject of performance.

4. Součástí plnění předmětu smlouvy může být tzv. standardní software (dále jen „standardní software“), anebo tzv. open source software, u kterého Zhotovitel nemůže udělit příjemcům předmětu plnění oprávnění dle předchozích ustanovení tohoto článku nebo to po něm nelze spravedlivě požadovat, pouze při splnění některé z následujících podmínek:

4. The performance of the subject of the Contract may include so-called standard software ("standard software") or open source software for which the Contractor cannot grant the beneficiaries of the subject of the Contract the rights under the preceding provisions of this article or cannot be fairly required to do so, only if one of the following conditions is met:

a. Jedná se o software renomovaných výrobců, jenž je na trhu běžně dostupný, tj. nabízený celosvětově alespoň třemi na sobě nezávislými a vzájemně nepropojenými subjekty oprávněnými takovýto software upravovat, a který je v době uzavření smlouvy celosvětově prokazatelně užíván v produktivním prostředí nejméně u deseti na sobě

a. It is software from reputable manufacturers that is commonly available on the market, i.e. offered worldwide by at least three independent and unconnected entities authorised to modify such software, and that is demonstrably in use in a productive environment worldwide by at least ten independent and unconnected entities at the time



nezávislých a vzájemně nepropojených subjektů. Zhotovitel je povinen poskytnout Objednateli o této skutečnosti písemné prohlášení a na výzvu Objednatele tuto skutečnost prokázat.

- b. Jedná se o open source software, který je veřejnosti poskytován zdarma, včetně detailně komentovaných zdrojových kódů, úplné uživatelské, provozní a administrátorské dokumentace a práva software měnit. Zhotovitel je povinen poskytnout Objednateli o této skutečnosti písemné prohlášení a na výzvu Objednatele tuto skutečnost prokázat.
- c. Jedná se o software, u kterého Zhotovitel poskytne s ohledem na jeho (i) marginální význam, (ii) nekomplikovanou propojitelnost či (iii) oddělitelnost a nahraditelnost v Systému bez nutnosti vynakládání výraznějších prostředků, písemnou garanci, že další rozvoj Systému jinou osobou než Zhotovitelem je možné provádět bez toho, aby tím byla dotčena práva autorů takového softwaru, neboť nebude nutné zasahovat do zdrojových kódů takového softwaru anebo proto, že případné nahrazení takového softwaru nebude představovat výraznější komplikaci a náklad na straně příjemců předmětu plnění.
- d. Zhotovitel Objednateli a příjemcům předmětu plnění k software poskytne nebo zprostředkuje poskytnutí úplných komentovaných zdrojových kódů software a bezpodmínečného práva provádět jakékoliv modifikace, úpravy, změny takového software a dle svého uvážení do něj zasahovat, zapracovávat ho do dalších autorských děl, zařazovat ho do děl souborných či do databází apod., a to i prostřednictvím třetích osob. Poskytování zdrojových kódů se řídí ostatními podmínkami zejména čl. VII. této Smlouvy.

the Contract is concluded. The Contractor is obliged to provide the Client with a written declaration confirming this fact and to prove this fact at the Client's request.

- b. It is open source software that is provided to the public free of charge, including detailed annotated source code, full user, operational and administrative documentation and the right to modify the software. The Contractor is obliged to provide the Client with a written declaration confirming this fact and to prove this fact at the Client's request.
- c. It is software for which the Contractor shall provide written assurance, with respect to its (i) marginal importance, (ii) uncomplicated interconnectivity, or (iii) separability and substitutability in the System without the need to expend significant resources, that the further development of the System by a person other than the Contractor can be accomplished without affecting the rights of the authors of such software because the source code of such software will not need to be altered, or because the eventual replacement of such software will not impose significant complications and expense on the part of the beneficiaries of the subject of performance.
- d. The Contractor shall provide or arrange for the provision of complete annotated source code of the software to the Client and the beneficiaries of the subject of performance as well as the unconditional right to make any modifications, adjustments, changes to such software and to alter it at their own discretion, to incorporate it into other copyright works, to include it in collective works or databases, etc., including through third parties. The provision of source code is subject to the other terms and conditions, in particular Article VII of this Contract.



- e. Jedná se o software, jehož API pokrývá všechny moduly a funkcionality software, je dobře dokumentované, umožňuje zapouzdření software a jeho adaptaci v rámci měnících se podmínek IT prostředí příjemců předmětu plnění bez nutnosti zásahu do zdrojových kódů softwaru, a Zhotovitel poskytne Objednateli a příjemcům předmětu plnění právo užít toto rozhraní pro programování aplikací ve stejném rozsahu jako software.
- f. Zhotovitel se zaváže Objednateli po ukončení implementace na písemnou výzvu Objednatele nejpozději do 30 dnů poskytnout (i) úplné komentované zdrojové kódy softwaru a bezpodmínečné právo software měnit nebo (ii) API, (které pokrývá všechny moduly a funkcionality softwaru, je dobře dokumentované, umožňuje zapouzdření softwaru a jeho adaptaci v rámci měnících se podmínek IT prostředí příjemců předmětu plnění bez nutnosti zásahu do zdrojových kódů softwaru, a právo užít toto rozhraní pro programování aplikací ve stejném rozsahu jako software.
- e. It is software whose API covers all modules and functionalities of the software, is well documented, allows encapsulation of the software and its adaptation within the changing conditions of the IT environment of the beneficiaries of the subject of performance without the need to alter the source code of the software, and the Contractor shall provide the Client and the beneficiaries of the subject of performance with the right to use this interface for programming applications to the same extent as the software.
- f. The Contractor shall undertake to provide the Client, at the written request of the Client, within 30 days after the completion of the implementation, with (i) the complete annotated source code of the software and the unconditional right to modify the software or (ii) the API (which covers all modules and functionalities of the software), is well documented, allows for encapsulation of the software and its adaptation within the changing conditions of the IT environment of the beneficiaries of the subject of performance without the need to alter the source code of the software, and the right to use this interface for application programming to the same extent as the software.

V případě že Zhotovitel poruší povinnost či vydá nepravdivé prohlášení dle tohoto odstavce je Objednatel oprávněn požadovat úhradu smluvní pokuty ve výši 1.000.000,- Kč za každý jednotlivý případ a náhradu škody v plné výši.

In the event that the Contractor breaches its obligation or makes a false declaration according to this paragraph, the Client is entitled to claim a contractual penalty of CZK 1,000,000 for each individual breach and full compensation for damages.

5. Územní a časový rozsah licencí je neomezený.
6. Příjemci předmětu plnění mají právo realizovat rozhraní díla s jinými, jimi provozovanými softwarovými produkty.
7. Objednatel nebo příjemce předmětu plnění má právo libovolným způsobem zasáhnout do díla od okamžiku předání dle termínu **Mw**, objednatel má právo zasáhnout do díla způsobem popsáním v Příloze č. 1 této
5. The territorial and temporal scope of the licences is unlimited.
6. The beneficiaries of the subject of performance have the right to interface the work with other software products that they operate.
7. The Client or the beneficiary of the subject of performance has the right to alter the work in any way from the moment it is handed over according to the **Mw** date; the Client has the right to alter the work in the



smlouvy **nebo** **dohodnutým**
se Zhotovitelem mezi termíny **Mf** a **Mw**.

manner described in Annex 1 of this
Contract **or in the manner agreed with the**
Contractor between the **Mf** and **Mw** dates.

8. Dojde-li v rámci plnění předmětu smlouvy k pořízení databáze, pak je objednatel a příjemci předmětu plnění od okamžiku pořízení databáze oprávněn databází užívat.
9. Zhotovitel se zavazuje, že prováděním plnění dle této smlouvy nezasáhne neoprávněně do autorských práv třetí osoby. Odpovědnost za neoprávněný zásah do autorských i jiných práv třetích osob nese výlučně zhotovitel.
10. Zhotovitel výslovně prohlašuje, že je plně oprávněn disponovat právy k duševnímu vlastnictví, včetně práv autorských zahrnutých v předmětu díla, a zavazuje se za tímto účelem zajistit řádné a nerušené užívání díla příjemci předmětu plnění, včetně zajištění souhlasů s autory děl v souladu s autorským zákonem.
11. Zhotovitel je povinen objednateli či příjemcům předmětu plnění uhradit jakékoli majetkové a nemajetkové újmy, vzniklé v důsledku toho, že konkrétní příjemce plnění nemohl předměty díla užívat řádně a nerušeně. Jestliže zhotovitel poruší povinnosti podle tohoto článku smlouvy, jde o podstatné porušení této smlouvy a zhotovitel uhradí ve prospěch objednatele smluvní pokutu ve výši 100.000,- Kč za každé jednotlivé porušení povinnosti. Zaplacením smluvní pokuty není nijak dotčeno ani omezeno právo každého příjemce předmětu plnění na náhradu škody, kterou lze vymáhat vedle smluvní pokuty v plné výši. S nositeli chráněných práv duševního vlastnictví vzniklých v souvislosti s realizací díla dle této smlouvy je zhotovitel povinen vždy smluvně zajistit možnost volného nakládání s těmito právy příjemci předmětu plnění.
12. Objednatel je oprávněn tuto licenci nevýhradním způsobem, včetně všech součástí díla (dokumentace a obdobné
8. If a database is acquired as part of the performance of the subject of the Contract, the Client and the beneficiaries of the subject of performance are entitled to use the database from the moment it is acquired.
9. The Contractor undertakes not to infringe any third-party copyright through its performance under this Contract. Liability for unauthorised interference with the copyright and other rights of third parties rests exclusively with the Contractor.
10. The Contractor expressly declares that it is fully entitled to dispose of the intellectual property rights, including copyright, included in the subject of the work and undertakes to ensure the proper and undisturbed use of the work by the beneficiaries of the subject of performance, including securing the consent of the authors of the works in accordance with copyright law.
11. The Contractor is obliged to compensate the Client or the beneficiaries of the subject of performance for any pecuniary and non-pecuniary damage resulting from the fact that a particular recipient of performance was unable to make proper and undisturbed use of the subjects of the work. A breach of the obligations under this article of the Contract by the Contractor constitutes a material breach of this Contract and the Contractor shall pay the Client a contractual penalty of CZK 100,000 for each individual breach. Payment of the contractual penalty shall in no way affect or limit the right of each beneficiary of the subject of performance to compensation for damages, which may be recovered in full in addition to the contractual penalty. The Contractor is always obliged to contractually ensure the free disposal of these rights by the beneficiaries of the subject of performance with the holders of protected intellectual property rights arising in connection with the execution of the work under this Contract.
12. The Client is entitled to transfer, assign or lend this licence in a non-exclusive manner, including all parts of the work



části plnění) a zdrojových kódů, předat, postoupit či propůjčit jakékoliv třetí straně za jakýchkoliv dalších podmínek (včetně možnosti této strany modifikovat předmět licence a dále jej šířit ovšem výhradně pro účely, pro který byl předmět vyvinut).

(documentation and similar parts of the performance) and source codes, to any third party on any other terms and conditions (including allowing such a party to modify the subject of the licence and to redistribute it solely for the purposes for which the subject was developed).

VIII. Odpovědnost za škodu

1. Zhotovitel bude povinen nahradit příjemcům předmětu plnění v plné výši škodu, která vznikla při realizaci a užívání díla v souvislosti nebo jako důsledek porušení povinností a závazků zhotovitele dle této smlouvy.
2. V případě, že při činnosti prováděné zhotovitelem dojde ke způsobení prokazatelné škody objednateli, příjemcům předmětu plnění nebo třetím osobám, bude zhotovitel povinen tyto škody uhradit.
3. Nesplní-li zhotovitel své závazky stanovené v čl. VI. (Platební a fakturační podmínky) této smlouvy a objednateli v důsledku toho vznikne škoda (např. uhrazením sankcí uložených příslušným finančním úřadem v důsledku pozdní úhrady DPH u prací a dodávek podléhajících režimu přenesené daňové povinnosti), bude zhotovitel povinen objednateli tuto škodu v plném rozsahu uhradit.

IX. Záruční podmínky

1. Zhotovitel zaručuje, že dílo má vlastnosti a funkční specifikaci stanovené touto smlouvou a že je způsobilé pro použití ke sjednanému účelu.
2. Zhotovitel poskytuje objednateli a příjemcům předmětu plnění záruku, že celé dílo (a každá jeho část) bude prosto jakýchkoliv vad věcných, právních i ostatních. Dílo nebo jeho část má vady, jestliže zejména neodpovídá výsledku určenému ve smlouvě, účelu jeho využití,

VIII. Liability for Damages

1. The Contractor shall be obliged to compensate the beneficiaries of the subject of performance in full for any damage incurred during the implementation and use of the work in connection with or as a result of a breach of the Contractor's obligations and commitments under this Contract.
2. In the event that demonstrable damage is incurred by the Client, the beneficiaries of the subject of performance or third parties during the activities carried out by the Contractor, the Contractor shall be obliged to pay compensation for such damage.
3. If the Contractor fails to fulfil its obligations set out in Article VI (Payment and Invoicing Conditions) of this Contract and the Client incurs damage as a result (e.g. by paying penalties imposed by the competent tax authority as a result of the late payment of VAT for works and supplies subject to the reverse charge regime), the Contractor shall be obliged to compensate the Client for the damage in full.

IX. Warranty Conditions

1. The Contractor guarantees that the work has the characteristics and functional specification set out in this Contract and that it is fit for the agreed purpose.
2. The Contractor guarantees to the Client and the beneficiaries of the subject of performance that the whole work (and each part thereof) will be free of any factual, legal or other defects. The work or part thereof is defective if it does not correspond to the result specified in the



případně nemá vlastnosti výslovně stanovené smlouvou, dokumentací, objednatelem, platnými předpisy nebo nemá vlastnosti obvyklé.

Contract, the purpose of its use, or if it does not have the characteristics expressly stipulated in the Contract, documentation, by the Client or the applicable regulations, or does not have the usual characteristics.

3. Zhotovitel poskytuje po uvedené záruční dobu záruku za bezvadnost předmětu díla, tj. záruku za všechny vlastnosti, které má mít předmět díla zejména dle smlouvy, dle jednotlivých požadavků a pokynů objednatele, případně ostatních pověřených osob, dle dokumentace, norem a ostatních předpisů, pokud se na prováděný předmět díla, jeho části a příslušenství vztahují. Zhotovitel prohlašuje, že předmět díla si po tuto dobu zachová všechny takové vlastnosti, funkčnost a stanovenou účelovou způsobilost. Po dobu záruční doby je tedy rozsah záruky neomezený, což znamená zejména, že předmět díla provedený podle smlouvy bude prostý jakýchkoliv vad.
3. The Contractor provides a warranty for the defect-free performance of the subject of work for the specified warranty period, i.e. a warranty for all the properties that the subject of work should have, especially those specified in the Contract and according to the individual requirements and instructions of the Client, or other authorised persons, according to the documentation, standards and other regulations, if they apply to the subject of work, its parts and accessories. The Contractor declares that the subject of the work will retain all such characteristics, functionality and fitness for purpose during this period. During the warranty period, the scope of the warranty is therefore unlimited, which means in particular that the subject of the work carried out in accordance with the Contract will be free of any defects.
4. Není-li sjednáno jinak je záruční doba díla a každé jeho části sjednána na dobu **36 měsíců** a začíná běžet následujícím dnem po protokolárním předání celého díla dle podmínek Mf do rutinního provozu (podpis Akceptačního protokolu) vždy u každého z příjemců předmětu plnění samostatně. Záruka se vztahuje na vady, resp. nedodělky díla, které se projeví během záruční doby s výjimkou vad, u nichž zhotovitel prokáže, že jejich vznik zapříčinil objednatel nebo třetí strana.
4. Unless otherwise agreed, the warranty on the work and each part thereof is agreed for the period of **36 months** and shall commence on the day following the date of the signature of the record confirming the handover of the entire work according to the Mf conditions for routine operation (signature of the Acceptance Record) for each of the beneficiaries of the subject of performance separately. The warranty covers defects or unfinished works that become apparent during the warranty period, with the exception of defects that the Contractor proves were caused by the Client or a third party.
5. V průběhu záruční doby bude zhotovitel poskytovat příjemcům předmětu plnění na dílo a každou jeho část záruku na jakost ve smyslu občanského zákoníku a se zárukou související servisní podporu v rozsahu a s parametry jak je specifikováno v kapitole 4.6. Přílohy č. 1 této smlouvy.
5. During the warranty period, the Contractor shall provide the beneficiaries of the subject of performance with a quality warranty in accordance with the Civil Code for the work and each part thereof and service support related to the warranty in the scope and with the parameters as specified in section 4.6. of Annex 1 to this Contract.



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| <p>6. Pokud je uplatnění reklamace na zařízení v záruční době oprávněné, má každý příjemce předmětu plnění právo na bezplatnou opravu vady. Záruční doba je automaticky prodloužena o případnou dobu opravy zařízení.</p> <p>7. Zhotovitel se zavazuje provádět na vlastní náklady odstranění nahlášených vad dle požadavků stanovených v tomto článku smlouvy. Odstranění vady bude provedeno v rozsahu odpovídajícím záruce dle časového rozsahu specifikovaného v tomto článku smlouvy.</p> <p>8. Záruční doba se staví po dobu, po kterou nemůže každý příjemce plnění dílo řádně užívat pro vady, za které nese odpovědnost zhotovitel.</p> <p>9. Veškeré vady (reklamace) je objednatel či příjemce předmětu plnění povinen uplatnit u zhotovitele bez zbytečného odkladu poté, kdy vadu zjistil, a to hlášením v souladu s ustanoveními článku XI této smlouvy, obsahujícím specifikaci zjištěné vady.</p> <p>10. Reklamací lze uplatnit do posledního dne záruční doby, přičemž i reklamace odeslaná v poslední den záruční doby se považuje za včas uplatněnou.</p> <p>11. Záruční servis bude prováděn u příjemce předmětu plnění bezplatně po celou dobu záruky.</p> <p>12. Zhotovitel odpovídá za to, že dokumenty a soubory dat, které objednateli či příjemci předmětu plnění v rámci plnění předmětu smlouvy předal:</p> <ul style="list-style-type: none">▪ jsou autorizovanými kopiemi originálů příslušných dokumentů a souborů dat zhotovitele,▪ neobsahují žádné infiltrační prostředky, | <p>6. If a justified claim is filed within the warranty period, each beneficiary of the subject of performance has the right to have the defect repaired free of charge. The warranty period is automatically extended by the length of time required to repair the equipment, if any.</p> <p>7. The Contractor undertakes to remedy the reported defects at its own expense in accordance with the requirements set out in this article of the Contract. The defect will be rectified to the extent corresponding to the warranty in accordance with the time range specified in this article of the Contract.</p> <p>8. The warranty period shall be suspended for the period during which each beneficiary cannot make proper use of the work due to defects for which the Contractor is responsible.</p> <p>9. All defects (claims) must be reported by the Client or beneficiaries of the subject of performance to the Contractor without undue delay after the defect has been discovered in the manner set out under Article XI of this Contract, containing a specification of the defect.</p> <p>10. Claims may be filed up to the last day of the warranty period, and even a claim sent on the last day of the warranty period is considered to have been filed in a timely manner.</p> <p>11. Warranty service will be performed at the premises of the beneficiary of the subject of performance free of charge for the entire warranty period.</p> <p>12. The Contractor shall be responsible for ensuring that the documents and data sets it has provided to the Client or the beneficiaries of the subject of performance within the framework of its performance of the subject of the Contract:</p> <ul style="list-style-type: none">▪ are authorised copies of the Contractor's original documents and data files,▪ do not contain any infiltration agents, |
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| <ul style="list-style-type: none">▪ že k nim má práva na jejich šíření, instalaci, konfiguraci a správu, která mu umožňují s nimi nakládat a dále je poskytovat tak, jak je sjednáno v této smlouvě. <p>13. V případě, že se některá z uvedených garancí zhotovitele ukáže nepravdivou a příjemcům předmětu plnění, nebo některému z nich, z tohoto důvodu vznikne škoda, bude zhotovitel povinen tuto škodu nahradit.</p> <p>14. Zhotovitel uhradí škodu, která příjemcům předmětu plnění, nebo některému z nich vznikla vadným plněním v plné výši. Zhotovitel rovněž příjemcům předmětu plnění, nebo některému z nich uhradí náklady vzniklé při uplatňování práv z odpovědnosti za vady.</p> <p>15. Nebezpečí škody na díle a dalším hmotném plnění z této smlouvy přechází na každého z příjemců předmětu plnění okamžikem jejich převzetí.</p> <p>16. Zhotovitel prohlašuje, že na díle ani na jiném plnění z této smlouvy nevážnou žádné právní vady.</p> | <ul style="list-style-type: none">▪ that it has the rights to distribute, install, configure and administer them, allowing it to use them and to provide them as agreed in this Contract. <p>13. In the event that any of the Contractor's aforementioned guarantees prove to be false and any of the beneficiaries of the subject of performance incur damage as a result, the Contractor shall be obliged to pay compensation for such damage.</p> <p>14. The Contractor shall pay the full amount of any damage incurred by any of the beneficiaries of the subject of performance as a result of defective performance. The Contractor shall also reimburse any of the beneficiaries of the subject of performance for the costs incurred in exercising their rights relating to liability for defects.</p> <p>15. The risk of damage to the work and other material performance under this Contract shall pass to each of the beneficiaries of the subject of performance at the moment of their acceptance.</p> <p>16. The Contractor declares that the work and any other performance under this Contract are free of legal defects.</p> |
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X. Reklamáce - odstraňování vad vzniklých z důvodů na straně zhotovitele

1. Objednatel či každý z příjemců předmětu plnění má právo uplatnit formou reklamáce svoje práva z odpovědnosti zhotovitele za vady následujících skutečností:
- záznamových materiálů, na kterých jsou uloženy dokumenty a soubory dat, které tvoří předmět plnění zhotovitele,
 - obsahu dokumentů a souborů dat, které tvoří předmět plnění zhotovitele,

X. Claims - rectification of defects caused by reasons on the part of the Contractor

1. The Client or each of the beneficiaries of the subject of performance has the right to file a claim to exercise their rights arising from the Contractor's liability for defects in relation to the following:
- the recording materials on which documents and data sets that form the subject of the Contractor's performance are stored,
 - the content of documents and data sets that form the subject of the Contractor's performance,



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| <ul style="list-style-type: none">▪ programového vybavení (produktu), které tvoří předmět plnění zhotovitele. <ol style="list-style-type: none">2. Reklamace (vady) budou zástupci objednatele nebo příjemců předmětu plnění hlášeny zhotoviteli prostřednictvím kontaktního místa pro hlášení závad v souladu s článkem XI. této smlouvy.3. Proces odstraňování vad produktu bude probíhat v režimech, jak je specifikováno v kapitole 4.6. Přílohy č. 1. této smlouvy.4. Zařazení vady do jednotlivých kategorií určuje objednatel nebo příjemce předmětu plnění.5. Vyplyne-li z objektivních skutečností potřeba lhůty delší, než je stanovena u jednotlivých kategorií, lze písemně dohodnout lhůtu delší. Za objektivní skutečnosti lze považovat zásah vyšší moci, chybnou funkci operačních a databázových platform, časový rozsah potřebných prací jdoucí nad stanovený rámec. | <ul style="list-style-type: none">▪ the software (product) that forms the subject of the Contractor's performance. <ol style="list-style-type: none">2. Claims (defects) shall be reported to the Contractor by the representatives of the Client or the beneficiaries of the subject of performance via the contact point for reporting defects in accordance with Article XI of this Contract.3. The process of rectifying defects in the product will be carried out in the modes as specified in section 4.6. of Annex 1 to this Contract.4. Defects are classified into individual categories by the Client or the beneficiaries of the subject of performance.5. If objective facts show that a longer time limit than that laid down for each category is needed, a longer time limit may be agreed in writing. Objective facts include force majeure, malfunctions in operational and database platforms, and the time scope of the necessary work extending beyond the specified scope. |
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XI. Technická podpora a servis

1. Technická podpora a servis jsou po dobu implementace systému poskytovány zdarma. Kontaktní způsob navrhne bezodkladně po podpisu smlouvy zhotovitel.
2. Po vzájemné dohodě bude zhotoviteli umožněn zabezpečený vzdálený přístup do datové sítě infrastruktury pro dodávku u všech příjemců předmětu plnění a úpravy/opravy plnění z IP adresy zhotovitele protokolem TCP/IP za účelem plnění části této smlouvy, a to v souladu s podmínkami specifikovanými v Příloze č. 1 této smlouvy. Objednatel si vyhrazuje právo, že po předchozím upozornění bude tento přístup zhotovitele ukončen.

XI. Technical Support and Service

1. Technical support and service are provided free of charge during the implementation of the system. The contact method will be proposed by the Contractor immediately after the Contract is signed.
2. By mutual agreement, the Contractor shall be provided with secure remote access to the data network infrastructure for delivery to all beneficiaries of the subject of performance and modification/repair of the performance from the Contractor's IP address via TCP/IP protocol for the purpose of performance of part of this Contract, in accordance with the terms and conditions specified in Annex 1 to this Contract. The Client reserves the right to



terminate the Contractor's access after prior notice.

3. Zhotovitel si je vědom toho, že přístup do infrastruktury produkční části systému mu nemusí být udělen a plnění, které po Zhotoviteli tato smlouva vyžaduje, tak mohou být prováděna pouze postupy uvedenými v Příloze č. 1 této smlouvy.
3. The Contractor understands that access to the infrastructure of the production part of the system may not be granted and that the performance required of the Contractor under this Contract may therefore only be carried out in accordance with the procedures set out in Annex 1 to this Contract.

XII. Sankce

1. Smluvní pokuty:

- a) V případě prodlení zhotovitele s provedením nebo předáním díla nebo jeho jednotlivých částí dle čl. IV této smlouvy ve sjednané lhůtě se zhotovitel zavazuje objednateli uhradit smluvní pokutu ve výši 2 000,- Kč včetně DPH, za každý i započatý kalendářní den prodlení, není-li jinými ustanoveními této smlouvy výslovně uvedeno jinak.
- b) V případě prodlení zhotovitele s odstraněním vad ve lhůtách stanovených v kap. 4.6 Přílohy č. 1 této smlouvy se zhotovitel zavazuje objednateli uhradit smluvní pokutu ve výši 500,- Kč za každou hodinu prodlení v případě vad kategorie A a B, a smluvní pokutu ve výši 1.000,- Kč za každý i započatý den prodlení v případě vady kategorie C, a to pro každý případ prodlení, není-li jinými ustanoveními této smlouvy výslovně uvedeno jinak.
- c) V případě prodlení zhotovitele s poskytnutím veškeré součinnosti k řádné migraci dat do jiného informačního systému dle výběru objednatele či každého příjemce předmětu plnění, je zhotovitel

XII. Sanctions

1. Contractual penalties:

- a) In the event that the Contractor is delayed in performing or handing over the work or its individual parts in accordance with Article IV of this Contract past the agreed deadline, the Contractor undertakes to pay the Client a contractual penalty of CZK 2,000.00 including VAT for each calendar day of delay, unless expressly stated otherwise in other provisions of this Contract.
- b) In the event that the Contractor is delayed in rectifying defects within the time limits set out in section 4.6 of Annex 1 to this Contract, the Contractor undertakes to pay the Client a contractual penalty of CZK 500 for each hour of delay in the case of category A and B defects, and a contractual penalty of CZK 1,000 for each day of delay in the case of category C defects, for each case of delay, unless expressly stated otherwise in other provisions of this Contract.
- c) In the event that the Contractor is delayed in providing all assistance for the proper migration of data to another information system selected by the Client or each beneficiary of the subject of performance, the



povinen uhradit objednateli smluvní pokutu ve výši 50 000,- Kč včetně DPH za každé jedno porušení.

Contractor is obliged to pay the Client a contractual penalty of CZK 50,000 including VAT for each individual breach.

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| <p>d) Zhotovitel je povinen zaplatit objednateli smluvní pokutu ve výši 10.000,- Kč za každé jednotlivé porušení smlouvy, které není uvedeno výše, a to v případě že porušení povinnosti neodstraní nebo v něm bude pokračovat i poté, co ho objednatel vyzve k nápravě alespoň pět dní předem.</p> | <p>d) The Contractor is obliged to pay the Client a contractual penalty of CZK 10,000 for each individual breach of the Contract not specified above if the Contractor fails to remedy the breach or continues to commit the breach even after the Client has called on the Contractor to remedy the matter at least five days beforehand.</p> |
| <p>2. V případě nedodržení lhůty splatnosti faktury, kterou od zhotovitele převzal objednatel k úhradě, se objednatel zavazuje zhotoviteli uhradit úrok z prodlení v zákonné výši.</p> | <p>2. In the event of failure to comply with the due date of an invoice accepted for payment by the Client from the Contractor, the Client undertakes to pay the Contractor default interest at the statutory rate.</p> |
| <p>3. Sankce jsou splatné do 30 dní ode dne doručení písemného vyúčtování její výše povinné straně.</p> | <p>3. Penalties are payable within 30 days of the date on which the written bill for the penalty is delivered to the obligated party.</p> |
| <p>4. Zaplacením smluvní pokuty není dotčen nárok oprávněné strany na náhradu škody, oprávněná strana má nárok na náhradu škody v plné výši.</p> | <p>4. The payment of the contractual penalty shall not affect the entitled party's right to compensation for damages; the entitled party shall be entitled to full compensation for damages.</p> |

XIII. Důvěrné informace, ochrana osobních údajů

XIII. Confidential Information, Protection of Personal Data

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| <p>1. Objednatel předává zhotoviteli osobní údaje nezbytné pro plnění výše uvedené smlouvy ze strany zhotovitele a zhotovitel je tedy v pozici zpracovatele ve smyslu Nařízení Evropského parlamentu a Rady (EU) 2016/679 ze dne 27. dubna 2016 o ochraně fyzických osob v souvislosti se zpracováním osobních údajů a o volném pohybu těchto údajů a o zrušení směrnice 95/46/ES, (dále jen „GDPR“). Zhotovitel se zavazuje postupovat v souladu se zákonem č. 110/2019 Sb., o zpracování osobních údajů, ve znění pozdějších předpisů. Osobní údaje předávané</p> | <p>1. The Client provides the Contractor with the personal data necessary to enable the Contractor to fulfil the aforementioned Contract, and the Contractor therefore acts in the capacity of a processor as defined by Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (“GDPR”). The Contractor undertakes to comply with Act No. 110/2019 Coll., on the Processing of Personal Data, as amended. The personal data handed over to the</p> |
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| <p>zhotoviteli jsou blíže specifikovány v příloze č. 4 této smlouvy.</p> <p>2. Osobní údaje budou zhotovitelem zpracovávány pouze po dobu trvání smlouvy.</p> <p>3. Zhotovitel se zavazuje, že bude dodržovat veškeré povinnosti stanovené mu právními předpisy upravujícími ochranu osobních údajů, zejména pak GDPR, a zachovávat mlčenlivost ohledně osobních údajů získaných od objednatele.</p> <p>4. Zhotovitel se zavazuje, že bude zpracovávat osobní údaje pouze na základě doložených pokynů objednatele a informuje objednatele o případných požadavcích na předání osobních údajů do třetí země nebo mezinárodní organizaci, pokud právní předpisy nestanoví, že toto informování z důležitých důvodů veřejného zájmu není možné.</p> <p>5. Zhotovitel se zavazuje, že zajistí, aby se osoby oprávněné pro něj zpracovávat osobní údaje zavázaly k mlčenlivosti nebo aby se na ně vztahovala zákonná povinnost mlčenlivosti.</p> <p>6. Zhotovitel se zavazuje, že dodrží podmínky stanovené objednatelem pro zapojení dalšího zpracovatele, zejména bude vybírat dalšího zpracovatele se zvláštní pečlivostí a bude od něj požadovat takové záruky, které zabezpečí ochranu osobních údajů aspoň v rozsahu odpovídající úrovni zabezpečení zhotovitele a požadavkům GDPR. Zapojení dalšího zpracovatele je možné jen s písemným souhlasem objednatele.</p> <p>7. Zhotovitel se zavazuje, že poskytne součinnost objednateli pro splnění jeho povinnosti vyřídit žádost subjektu údajů vztahující se k výkonu jeho práv a k jednáním s dozorovým orgánem.</p> <p>8. Zhotovitel se zavazuje, že osobní údaje získané od objednatele nijak nezneužije pro svůj prospěch nebo ve prospěch třetí osoby.</p> | <p>Contractor are specified in Annex 4 to this Contract.</p> <p>2. Personal data will be processed by the Contractor only for the duration of the Contract.</p> <p>3. The Contractor undertakes to comply with all duties set out in the legal regulations governing the protection of personal data, in particular the GDPR, and to maintain confidentiality regarding personal data obtained from the Client.</p> <p>4. The Contractor undertakes to process personal data solely on the basis of the Client's documented instructions and to inform the Client of any requests to transfer personal data to a third country or an international organisation, unless the legal regulations stipulate that the provision of this information is not possible for important reasons in the public interest.</p> <p>5. The Contractor undertakes to ensure that the persons authorised to process personal data for it are bound by an obligation of confidentiality or are subject to a legal duty of confidentiality.</p> <p>6. The Contractor undertakes to comply with the conditions stipulated by the Client for the involvement of another processor, particularly to select such other processor with special care and to request that it provide guarantees to keep personal data secure at least to the same extent as the security implemented by the Contractor and in accordance with the requirements of the GDPR. The involvement of another processor is only permissible with the written consent of the Client.</p> <p>7. The Contractor undertakes to cooperate with the Client in the fulfilment of its obligation to handle data subjects' requests related to the exercise of their rights and in dealings with the supervisory authority.</p> <p>8. The Contractor undertakes to refrain from using personal data obtained from the Client for its own benefit or for the benefit of a third party.</p> |
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| <p>9. Zhotovitel prohlašuje, že osobní údaje získané od objednatele budou dostatečně chráněny jeho systémem technických a organizačních opatření. Tento systém ochrany se zavazuje pravidelně kontrolovat. V rámci těchto opatření bude zhotovitel zejména nakládat s osobními údaji tak, aby nebyly zpřístupněny nepovolaným osobám, tj. osobní údaje v listinné podobě, na výměnných a vyjímatelných datových médiích bude ukládat mimo dosah třetích osob v uzamykatelných prostorech nebo skříních a výpočetní techniku zabezpečí přístupovým heslem.</p> <p>10. Zhotovitel se zavazuje přijmout taková technická a organizační opatření, aby dosáhl stejné nebo vyšší úrovně ochrany jako objednatel, pokud to po něm lze spravedlivě požadovat s ohledem na výši nákladů, kterou na tato opatření bude muset vynaložit.</p> <p>11. Zhotovitel se zavazuje, že s objednatelem bude spolupracovat při posuzování vlivu na ochranu osobních údajů a v otázkách zabezpečení osobních údajů a ohlašování porušení tohoto zabezpečení.</p> <p>12. Dojde-li k porušení zabezpečení osobních údajů je zhotovitel povinen tuto skutečnost bez zbytečného odkladu ohlásit objednateli, nejpozději pak do 48 hodin.</p> <p>13. Zhotovitel se zavazuje, že poskytne objednateli veškeré informace nutné k doložení plnění všech povinností zhotovitele při zpracování osobních údajů a umožní objednateli provádění kontroly.</p> <p>14. V případě, že má zhotovitel za to, že určitý pokyn objednatele je v rozporu s GDPR nebo jinými právními předpisy týkajícími se ochrany osobních údajů, neprodleně na to objednatel upozorní.</p> <p>15. Po ukončení poskytování služeb zhotovitel provede likvidaci všech osobních údajů zpracovaných pro objednatele s výjimkou těch osobních údajů, které si objednatel vyžádá zpět a těch osobních údajů, které musí archivovat po dobu stanovenou</p> | <p>9. The Contractor declares that personal data obtained from the Client will be adequately protected by its system of technical and organisational measures. It undertakes to check this protection system on a regular basis. As part of these measures, the Contractor will, in particular, handle personal data in such a way that they are not accessible to unauthorised persons, i.e. personal data in paper form, on exchangeable and removable data media will be stored out of the reach of third parties in lockable areas or cabinets and computer equipment will be secured with an access password.</p> <p>10. The Contractor undertakes to take such technical and organisational measures to achieve the same or a higher level of protection as the Client, insofar as it can be fairly required to do so, having regard to the cost of such measures.</p> <p>11. The Contractor undertakes to cooperate with the Client in assessing the impact on the protection of personal data and in matters relating to the security of personal data and reporting any such security breaches.</p> <p>12. In the event of a breach of the security of personal data, the Contractor is obliged to report the fact to the Client without undue delay, although no later than within 48 hours.</p> <p>13. The Contractor undertakes to provide the Client with all the information necessary to prove compliance with all the Contractor's obligations relating to the processing of personal data and to enable the Client to carry out checks.</p> <p>14. If the Contractor suspects that a certain instruction issued by the Client contravenes the GDPR or other data protection regulations, it shall promptly inform the Client of such.</p> <p>15. After it has finished providing its services, the Contractor will dispose of all personal data processed for the Client, with the exception of personal data that the Client requests be returned and personal data that must be archived for the period</p> |
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zákonem č. 563/1991 Sb., o účetnictví, ve znění pozdějších předpisů, nebo jiným právním předpisem.

stipulated by Act No. 563/1991 Coll., on Accounting, as amended, or by another legal regulation.

16. Pokud zhotovitel v průběhu realizace předmětu plnění získá od třetího subjektu osobní údaje, které bude předávat objednateli, je zhotovitel povinen zajistit před zahájením zpracování od subjektu údajů nebo jeho zákonného zástupce v případě, že subjektem údajů je dítě, tohoto třetího subjektu písemný souhlas se zpracováním jeho osobních údajů objednatel (Českou rozvojovou agenturou) a tento písemný souhlas předat bez zbytečného odkladu od jeho získání objednateli, pokud nebude možné zpracování osobních údajů objednatel provést v souladu s GDPR bez souhlasu subjektu údajů. Souhlas bude udělen na formuláři souhlasu, který tvoří přílohu č. 5 této smlouvy.
 17. Zhotovitel zajistí, aby jeho zaměstnanci byli v souladu s platnými právními předpisy poučeni o povinnosti mlčenlivosti a o možných následcích pro případ porušení této povinnosti.
 18. Zhotovitel zajistí, aby písemnosti a jiné hmotné nosiče informací, které obsahují osobní údaje, byly uchovávány pouze v uzamykatelných místnostech.
 19. Zhotovitel zajistí, aby písemnosti a jiné hmotné nosiče informací, které obsahují citlivé údaje, byly uchovávány v uzamykatelných skříních umístěných v uzamykatelných místnostech.
 20. Zhotovitel zajistí, aby elektronické datové soubory obsahující osobní údaje byly uchovávány v paměti počítače pouze:
 - je-li přístup k takovýmto souborům chráněn heslem,
 - je-li přístup k užívání počítače, v jehož paměti jsou tyto soubory umístěny, chráněn heslem.
 21. Je-li pro účel kontroly správného fungování díla, odstranění vady nebo další vývoj díla nezbytné poskytnout zhotoviteli kopii databází, souborů nebo nosičů údajů
16. If, during the implementation of the subject of performance, the Contractor obtains personal data from a third party that it is to pass on to the Client, before starting to process the data the Contractor is obliged to secure written consent from the data subject or its legal representative, if the data subject is a child, allowing the processing of that party's data by the Client (the Czech Development Agency) and to forward that written consent to the Client without undue delay after obtaining it, if the Client is unable to process the personal data in accordance with the GDPR without the consent of the data subject. Consent will be given on the consent form attached as Annex 5 to this agreement.
 17. The Contractor shall ensure that its employees are instructed in accordance with the applicable legal regulations on the duty of confidentiality and the possible consequences in the event of a breach of that duty.
 18. The Contractor shall ensure that documents and other tangible media containing personal data are stored only in lockable rooms.
 19. The Contractor shall ensure that documents and other tangible media containing sensitive information are stored in lockable cabinets located in locked rooms.
 20. The Contractor shall ensure that electronic data files containing personal data are stored in the computer memory only:
 - provided that access to such files is password-protected,
 - provided that access to use the computer in whose memory the files are stored is password-protected.
 21. If it is necessary to provide the Contractor with a copy of databases, files or data carriers containing any data from the activities of the Client and its designated



obsahujících jakékoliv údaje z činnosti objednatele a jím určených organizací, je zhotovitel povinen s takovými údaji nakládat tak, aby nedošlo k jejich úniku či zneužití.

organisations for the purpose of checking the correct functionality of the work, rectifying defects or the further development of the work, the Contractor is obliged to handle such data in such a way as to prevent their leakage or misuse.

22. Veškeré skutečnosti obchodní, ekonomické a technické povahy související se smluvními stranami, které nejsou běžně dostupné v obchodních kruzích a se kterými se smluvní strany seznámí při realizaci předmětu smlouvy nebo v souvislosti s touto smlouvou, se považují za důvěrné informace.
22. All facts of a commercial, economic and technical nature relating to the parties that are not generally available in commercial circles and that come to the attention of the parties during the performance of the subject of the Contract or in connection with this Contract shall be considered confidential information.
23. Zhotovitel se zavazuje, že důvěrné informace jiným subjektům nesdělí, nepředá, ani nevyužije pro sebe nebo pro jinou osobu. Zavazuje se zachovat je v přísné tajnosti a sdělit je výlučně těm svým zaměstnancům nebo poddodavatelům, kteří jsou pověřeni plněním smlouvy a za tímto účelem jsou oprávněni se s těmito informacemi v nezbytném rozsahu seznámit. Zhotovitel se zavazuje zabezpečit, aby i tyto osoby považovaly uvedené informace za důvěrné a zachovávaly o nich mlčenlivost.
23. The Contractor undertakes not to provide or disclose confidential information to any other entity or use confidential information either for itself or for any other entity. It undertakes to keep such information strictly confidential and to disclose it exclusively to those of its employees or subcontractors who are authorised to perform the Contract and who are entitled to consult such information to the extent necessary for this purpose. The Contractor undertakes to ensure that these persons also consider the information to be confidential and keep it confidential.
24. Povinnost plnit ustanovení tohoto článku smlouvy se nevztahuje na informace, které:
- mohou být zveřejněny bez porušení této smlouvy,
 - byly písemným souhlasem obou smluvních stran zproštěny těchto omezení,
 - jsou známy nebo byly zveřejněny jinak, než následkem porušení povinnosti jedné ze smluvních stran,
 - příjemce je zná dříve, než je sdělí smluvní strana,
 - jsou vyžádány soudem, státním zastupitelstvím nebo příslušným správním orgánem na základě
24. The obligation to comply with the provisions of this article of the Contract does not apply to information that:
- may be disclosed without breach of this Contract,
 - has been exempted from these restrictions with the written agreement of both parties,
 - is known or has been disclosed in a manner other than as a result of a breach of duty by one of the parties,
 - the information is known to the recipient before it is communicated by the Contracting Party,
 - is requested by a court, prosecutor's office or competent administrative authority on the



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| <p>zákona, popřípadě, jejichž uveřejnění je stanoveno zákonem,</p> <ul style="list-style-type: none">▪ smluvní strana sdělí osobě vázané zákonnou povinností mlčenlivosti (např. advokátovi nebo daňovému poradci) za účelem uplatňování svých práv. <p>25. Povinnost ochrany důvěrných informací trvá bez ohledu na ukončení platnosti této smlouvy.</p> <p>26. Vzhledem k veřejnoprávnímu charakteru objednatel zhotovitel výslovně prohlašuje, že je s touto skutečností obeznámen a souhlasí se zveřejněním smluvních podmínek obsažených v této smlouvě v rozsahu a za podmínek vyplývajících z příslušných právních předpisů, zejména zákon č. 106/1999 Sb., o svobodném přístupu k informacím, ve znění pozdějších předpisů.</p> <p>27. Smluvní strany se zavazují, že obchodní a technické informace, které jim byly svěřeny druhou stranou, nezpřístupní třetím osobám bez písemného souhlasu druhé strany a nepoužijí tyto informace k jiným účelům, než je k plnění podmínek této smlouvy.</p> | <p>basis of the law, or the publication of which is required by law,</p> <ul style="list-style-type: none">▪ is disclosed by a party to a person bound by a legal duty of confidentiality (e.g. a lawyer or tax adviser) for the purpose of exercising its rights. <p>25. The obligation to protect confidential information shall continue notwithstanding the termination of this Contract.</p> <p>26. Due to the public law nature of the Client, the Contractor expressly declares that it is aware of this fact and agrees to the publication of the contractual conditions contained in this Contract to the extent and under the conditions resulting from the relevant legislation, in particular Act No. 106/1999 Coll., on Free Access to Information, as amended.</p> <p>27. The parties undertake not to disclose commercial and technical information entrusted to them by the other party to third parties without the written consent of the other party and not to use such information for purposes other than to fulfil the terms of this Contract.</p> |
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XIV. Doba trvání smlouvy, ukončení smlouvy

1. Smluvní strany mohou odstoupit od smlouvy z důvodu podstatného porušení smlouvy.
2. Za podstatné porušení smluvních povinností zhotovitele se považuje mimo jiné:
 - a) prodlení zhotovitele s plněním kteréhokoli jeho závazku podle smlouvy delším než 30 dní,
 - b) nesplnění pokynu objednatel při plnění předmětu smlouvy zhotovitelem,

XIV. Duration of Contract, Termination of Contract

1. The parties may withdraw from the Contract on the grounds of a material breach of Contract.
2. The following, amongst other things, shall constitute a material breach of the Contractor's contractual obligations:
 - a) a delay by the Contractor in the performance of any of its obligations under the Contract by more than 30 days,
 - b) the Contractor's failure to comply with the Client's instructions in the performance of the subject of the Contract,



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| <p>c) bránění zhotovitelem objednateli v provádění kontrol a zkoušek díla nebo jeho části.</p> <p>d) opakované nebo hrubé porušení pravidel bezpečnosti práce, protipožární ochrany, ochrany zdraví při práci či jiných bezpečnostních předpisů a pravidel zhotovitelem nebo jeho subdodavatelem v místě plnění,</p> <p>e) dílo vykazuje vady, které neumožní jeho řádné užívání k účelu, který je sjednán touto smlouvou</p> <p>f) nedodržení ujednání o poskytnuté záruce.</p> <p>3. Za podstatné porušení smluvních povinností objednatelem se považuje mimo jiné opakované prodlení objednatele s placením kterékoliv faktury (nebo její části) delší než jeden (1) měsíc.</p> <p>4. Odstoupení od smlouvy musí být učiněno písemně; s uvedením důvodu; účinky odstoupení nastávají dnem doručení druhé smluvní straně oznámení o odstoupení, bylo-li odstoupení oprávněné.</p> <p>5. V případě odstoupení objednatele od smlouvy z důvodu podstatného porušení smlouvy zhotovitelem nemá zhotovitel nárok na zaplacení ceny podle článku V. této smlouvy v plné výši. Zhotovitel je pouze oprávněn žádat po objednateli to, o co se objednatel zhotovováním předmětu díla obohatil. Odstoupením od smlouvy není dotčen nárok objednatele na náhradu případné škody a zaplacení smluvní pokuty.</p> <p>6. V případě odstoupení zhotovitele od smlouvy z důvodu podstatného porušení smlouvy objednatelem má zhotovitel nárok na zaplacení poměrné části ceny díla, odpovídající rozsahu provedeného díla. Odstoupením od smlouvy není dotčen nárok zhotovitele na náhradu případné škody a zaplacení smluvní pokuty.</p> | <p>c) the Contractor preventing the Client from carrying out inspections and tests of the work or part thereof.</p> <p>d) a repeated or gross violation of the rules of work safety, fire prevention, occupational health and safety or other safety regulations and rules by the Contractor or its subcontractor at the place of performance,</p> <p>e) the work contains defects that prevent its proper use for the purpose agreed in this Contract</p> <p>f) failure to comply with the terms of the warranty provided.</p> <p>3. A material breach of contractual obligations by the Client shall include, amongst other things, a repeated delay by the Client in the payment of any invoice (or part thereof) by more than one (1) month.</p> <p>4. Notice of withdrawal from the Contract must be issued in writing, stating the reason; the withdrawal takes effect on the date the notice of withdrawal is delivered to the other party, assuming that the withdrawal is justified.</p> <p>5. In the event that the Client withdraws from the Contract due to a material breach of the Contract by the Contractor, the Contractor shall not be entitled to the full payment of the price under Article V of this Contract. The Contractor is only entitled to claim enrichment gained by the Client in the performance of the subject of the work. Withdrawal from the Contract shall not affect the Client's right to claim compensation for any damages and the payment of a contractual penalty.</p> <p>6. In the event that the Contractor withdraws from the Contract due to a material breach of the Contract by the Client, the Contractor is entitled to payment of a proportionate part of the price of the work corresponding to the extent of the work performed. Withdrawal from the Contract does not affect the Contractor's right to claim compensation for any damages and the payment of a contractual penalty.</p> |
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| <p>7. Objednatel je oprávněn tuto smlouvu vypovědět i bez uvedení důvodu. Výpovědní doba činí dva kalendářní měsíce a počítá běžet prvním dnem kalendářního měsíce následujícího po měsíci, ve kterém byla výpověď doručena zhotoviteli.</p> <p>8. V případě ukončení smlouvy je zhotovitel povinen objednateli poskytnout na své náklady veškerou součinnost k řádné migraci dat do jiného informačního systému dle výběru objednatele či každého příjemce předmětu plnění.</p> | <p>7. The Client is also entitled to withdraw from this Contract without stating the reason. The notice period is two calendar months and commences on the first day of the calendar month following the month in which the notice was delivered to the Contractor.</p> <p>8. In the event that the Contract is terminated, the Contractor is obliged to provide the Client, at its own expense, with all the necessary assistance to enable the proper migration of data to another information system as selected by the Client or each beneficiary of the subject of performance.</p> |
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XV. Práva a povinnost smluvních stran

1. Objednatel se zavazuje poskytnout zhotoviteli nezbytnou součinnost a vyjadřovat se k návrhům na další postup, bude-li to nezbytné pro řádné zhotovení díla.
2. Zhotovitel se zavazuje při provádění díla postupovat v profesionální kvalitě a s odbornou péčí.
3. Zhotovitel se zavazuje dle této smlouvy řádně a včas předat dílo.
4. Zhotovitel je povinen dodat dílo a jeho části dle této smlouvy v dohodnutém množství, jakosti a provedení. Smluvní strany se dohodly na I. jakosti dodaného plnění.
5. Zhotovitel je povinen při realizaci díla dodržovat veškeré bezpečnostní předpisy, veškeré zákony a jejich prováděcí vyhlášky, pokud se vztahují k prováděnému dílu a týkají se činnosti zhotovitele, bezpečnosti práce, požární ochrany a ochrany životního prostředí. Pokud porušením těchto předpisů zhotovitelem vznikne škoda, nese náklady zhotovitel.

XV. Rights and Obligations of the Parties

1. The Client undertakes to provide the Contractor with the necessary assistance and to comment on proposals for further action, if this is necessary for the proper completion of the work.
2. The Contractor undertakes to carry out the work in a professional manner and with due professional care.
3. The Contractor undertakes to deliver the work in a due and timely manner in accordance with this Contract.
4. The Contractor is obliged to deliver the work and its parts according to this Contract in the agreed quantity, quality and execution. The parties have agreed that the delivered performance is to be of 1st class quality.
5. The Contractor is obliged to comply with all the safety regulations, all laws and their implementing decrees insofar as they apply to the work to be carried out and relate to the Contractor's activities, work safety, fire prevention and environmental protection. In the event of damage caused as a result of the Contractor's violation of these regulations, the Contractor shall bear the costs.



6. Objednatel má právo přesvědčit se kdykoliv v průběhu plnění díla o stavu prací na díle včetně kontroly jakosti díla nebo jeho částí a zhotovitel mu k tomuto musí vytvořit podmínky, případné náklady nese zhotovitel.
7. Zhotovitel se zavazuje umožnit osobám oprávněným k výkonu kontroly projektu, z něhož je zakázka hrazena, provést kontrolu dokladů souvisejících s plněním zakázky, a to po dobu nejméně 10 let od ukončení financování díla způsobem, který je v souladu s platnými právními předpisy České republiky a Evropské unie.
8. Zhotovitel je povinen za účelem ověřování plnění povinností vyplývajících z Projektu poskytnout při provádění kontroly součinnost příslušným institucím provádějícím kontrolu. Zhotovitel je dále podle ustanovení § 2 písm. e) zákona č. 320/2001 Sb., o finanční kontrole ve veřejné správě a o změně některých zákonů, ve znění pozdějších předpisů, osobou povinnou spolupůsobit při výkonu finanční kontroly prováděné v souvislosti s úhradou zboží nebo služeb z veřejných výdajů.
9. Zhotovitel je povinen bez zbytečného odkladu písemně informovat objednatele o skutečnostech, které mají nebo mohou mít vliv na plnění smlouvy, a to neprodleně, nejpozději následující pracovní den poté, kdy příslušná skutečnost nastane nebo zhotovitel zjistí, že by nastat mohla.
10. Zhotovitel je povinen řádně uchovávat veškeré dokumenty související s realizací díla a prokazující čerpání finančních prostředků po dobu nejméně 10 let od ukončení díla způsobem, který je v souladu s platnými právními předpisy České republiky a Evropské unie. Dále je povinen zajistit, aby také všichni jeho subdodavatelé, partneři, dodavatelé partnerů uchovávali veškeré dokumenty související s prováděním díla dle těchto podmínek.
11. Minimálně dva členové realizačního týmu zhotovitele se musí zúčastnit pravidelných
6. The Client has the right to check the state of the work at any time during the performance of the work, including checking the quality of the work or its parts, and the Contractor must put conditions in place to enable this; any costs shall be borne by the Contractor.
7. The Contractor undertakes to allow persons authorised to carry out checks on the project from which the contract is paid to inspect documents related to the performance of the contract for at least 10 years after the end of the funding of the work in a manner that complies with the applicable legal regulations of the Czech Republic and the European Union.
8. The Contractor is obliged to cooperate with the relevant inspection institutions to enable them to verify the fulfilment of the obligations arising from the project. Furthermore, according to the provisions of Section 2(e) of Act No.320/2001 Coll., on Financial Control in Public Administration and on the amendment to certain acts, as amended, the Contractor is obliged to cooperate in the performance of audits carried out in connection with the payment of goods or services from public expenditure.
9. The Contractor is obliged to inform the Client in writing without undue delay of any facts that have or may have an effect on the performance of the Contract, immediately, although no later than by the next working day after the relevant fact occurs or the Contractor becomes aware that it may occur.
10. The Contractor is obliged to properly archive all documents related to the execution of the work and proving the use of funds for at least 10 years after the completion of the work in a manner that complies with the applicable legal regulations of the Czech Republic and the European Union. It shall also ensure that all his subcontractors, partners and partners' suppliers also keep all documents related to the execution of the work in accordance with these conditions.
11. At least two members of the Contractor's implementation team must participate in



kontrolních dní v sídle objednatele, které budou probíhat na vyzvání objednatele.

regular inspection days at the Client's premises, which will take place at the Client's request.

12. Zhotovitel je povinen účastnit se na základě pozvánky objednatele všech jednání týkajících se předmětu smlouvy, řídit se při provádění plnění dle této smlouvy jeho pokyny a poskytnout mu požadovanou dokumentaci. Účast na těchto jednáních není považována za technickou podporu, údržbu, poradenství ani konzultaci a zhotoviteli za takové jednání nenáleží odměna.
12. The Contractor is obliged to participate in all meetings related to the subject of the Contract at the invitation of the Client, to follow the Client's instructions and to provide the required documentation. Participation in such meetings is not considered technical support, maintenance, advice or consultation and the Contractor is not entitled to remuneration for such meetings.
13. Zhotovitel provádí práce v České republice i v zahraničí na vlastní riziko, vlastní náklady a na vlastní odpovědnost. Objednatel nenese žádnou odpovědnost za škody vzniklé při řešení projektu nebo v souvislosti s řešením projektu zhotoviteli ani žádnému dalšímu subjektu.
13. The Contractor carries out work in the Czech Republic and abroad at its own risk, expense and responsibility. The Client bears no responsibility for damages incurred during work on the project or in connection with work on the project by the Contractor or any other entity.
14. V případě výskytu živelní pohromy, epidemie, válečného konfliktu apod. doloženého vyjádřením ZÚ Sarajevo, která znemožní realizaci předmětu plnění, přeruší zhotovitel neprodleně práce na realizaci předmětu plnění a předloží objednateli písemnou zprávu o průběhu řešení předmětu plnění, a to nejpozději do 30 kalendářních dnů ode dne, kdy k přerušení prací došlo. Zhotovitel je povinen pokračovat v realizaci předmětu plnění bez zbytečného odkladu po skončení překážek bránících v provádění prací, nebude-li objednatelem po dohodě se zhotovitelem stanoven jiný postup, včetně možného ukončení realizace předmětu plnění (zejména, nebude-li mít další plnění smysl, překážky v realizaci předmětu plnění budou trvat déle než šest měsíců apod.). O dobu přerušení prací budou posunuty termíny plnění stanovené v této smlouvě a jejich přílohách. V případě ukončení realizace předmětu plnění bude zhotovitelem uhrazena částka odpovídající dosud provedeným a neuhrazeným pracím.
14. In the event of a natural disaster, epidemic, war, etc., documented by a statement from the Sarajevo embassy, which prevents the implementation of the subject of performance, the Contractor shall immediately cease work on the implementation of the subject of performance and provide the Client with a written report on progress with the work on the subject of performance, no later than within 30 calendar days of the day when the work was interrupted. The Contractor is obliged to continue the implementation of the subject of performance without unnecessary delay after the impediments preventing the execution of the work cease to exist, unless the Client, in agreement with the Contractor, establishes a different procedure, including the possible termination of the implementation of the subject of performance (in particular, if there is no sense in continuing performance, the impediments preventing the implementation of the subject of performance will last longer than six months, etc.). The deadlines for performance set out in this Contract and its annexes will be put back by the period for which work is suspended. In the event that the implementation of the subject of performance is terminated, the Contractor



will pay the amount corresponding to the work performed and not yet paid for.

15. Zhotovitel se zavazuje realizovat předmět plnění této smlouvy v souladu s právními předpisy platnými a účinnými v zemi příjemce. Zhotovitel se zavazuje, že on, případně jeho poddodavatel, bude při provádění předmětu smlouvy disponovat příslušnými oprávněními či licencemi, které jsou vyžadovány právními předpisy v zemi příjemce v souvislosti s realizací předmětu plnění. Zhotovitel prohlašuje, že se s právními předpisy účinnými v zemi příjemce souvisejícími s realizací předmětu plnění náležitě seznámil ještě před podpisem této smlouvy a není mu známo nic, co by mu v realizaci předmětu plnění bránilo, což podpisem této smlouvy stvrzuje. Zhotovitel se zavazuje zajistit, že se poddodavatel, který je
15. The Contractor undertakes to implement the subject of this Contract in accordance with the legal regulations valid and effective in the beneficiary's country. The Contractor undertakes to ensure that, when performing the subject of the Contract, it or its subcontractor possesses the relevant authorisations or licences required by the legal regulations in the beneficiary's country in connection with the implementation of the subject of performance. The Contractor declares that, before signing this Contract, it has duly acquainted itself with the legal regulations effective in the beneficiary's country related to the implementation of the subject of performance and that it is not aware of anything that would prevent it from implementing the subject of performance, which it confirms by signing this Contract. The Contractor undertakes to ensure that a subcontractor that is
- a) ruským státním příslušníkem, fyzickou či právnickou osobou nebo subjektem či orgánem se sídlem v Rusku,
- a) a Russian national, natural person, legal entity or authority with its registered office in Russia;
- b) právnickou osobou, subjektem nebo orgánem, který je z více než 50 % přímo či nepřímo vlastněn některým ze subjektů uvedeným v písm. a) tohoto odstavce, nebo
- b) a legal entity, organisation or authority that is more than 50% owned, directly or indirectly, by one of the persons or entities referred to in point a) of this paragraph; or
- c) fyzickou či právnickou osobou, subjektem nebo orgánem, který jedná jménem nebo na pokyn některého ze subjektů uvedeným v písm. a) nebo b) tohoto odstavce,
- c) a natural person, legal entity or authority acting on behalf of or at the direction of any of the entities referred to in point (a) or (b) of this paragraph;
- nebude podílet na předmětu plnění v objemu větším než 10 % hodnoty předmětu plnění.
- will not participate in the subject of performance in a volume greater than 10% of the value of the subject of performance.
16. Smluvní strany se zavazují řídit ustanoveními mezinárodní smlouvy č. 25/2000 Sb. m. s., Úmluva o boji proti podplácení zahraničních veřejných činitelů v mezinárodních podnikatelských transakcích.
16. The parties undertake to comply with the provisions of international treaty no. 25/2000 Coll. Int. Tr, the Convention on Combating Bribery of Foreign Public Officials in International Business Transactions.
17. Smluvní strany se zavazují, že při plnění závazků a povinností vyplývajících z této smlouvy budou vždy postupovat a vystupovat ve vzájemné součinnosti a
17. The parties undertake that in the performance of their obligations and duties under this Contract they shall at all times proceed and act in a mutually



jednat tak, aby bylo zachováno a šířeno dobré jméno druhé strany a vyvarují se takových jednání, která by mohla ohrozit či poškodit dobré jméno druhé smluvní strany. Dále se zavazují, že žádná ze smluvních stran nezamlčí druhé smluvní straně žádnou okolnost, kterou se dozví během realizace práv a povinností vyplývajících z této smlouvy a která by mohla jakýmkoli způsobem ovlivnit nebo změnit záměr předpokládaný touto smlouvou

cooperative manner so as to preserve and promote the good name of the other party and shall avoid such actions as may endanger or damage the good name of the other party. Furthermore, they undertake that neither of the parties shall conceal from the other party any circumstance that comes to their attention during the execution of the rights and obligations arising from this Contract and that could in any way affect or change the intention assumed by this Contract.

18. Zhotovitel je povinen se účastnit jednání s příjemci předmětu plnění on-site v místě jejich sídel Bosně a Hercegovině, v rozsahu nezbytném pro realizaci díla, minimálně však v rozsahu 1 ManDay u každého příjemce plnění pro analýzu na místě (do termínu plnění dle M1) a 1 ManDay u každého příjemce plnění pro podporu akceptačního testování a školení odpovědného personálu na místě (od ukončení plnění dle M1 do termínu plnění dle Mf).

18. The Contractor shall participate in on-site meetings with the beneficiaries of the subject of performance at their registered offices in Bosnia and Herzegovina, to the extent necessary for the performance of the work, but at a minimum of 1 man-day at each beneficiary of performance for on-site analysis (by the M1 performance deadline) and 1 man-day at each beneficiary of performance to support acceptance testing and on-site training for the responsible staff (from the end of the M1 performance deadline to the Mf performance deadline).

XVI. Oprávněné osoby

1. Seznam oprávněných osob ve věcech plnění této smlouvy je přílohou č. 3 této smlouvy. Změna oprávněné osoby je možná písemným sdělením druhé smluvní straně. Tato změna se nepovažuje za změnu smlouvy vyžadující dodatek.

XVI. Authorised Persons

1. The list of persons authorised in matters relating to the performance of this Contract is attached as Annex 3 to this Contract. A change made to an authorised person by a written notice sent to the other party. Such a change shall not be considered a change to the Contract requiring an addendum.

XVII. Závěrečná ustanovení

1. Smluvní strany se budou bez zbytečného prodlení vzájemně informovat o všech změnách v adresách, telefonních číslech, apod.
2. Měnit smlouvu mohou smluvní strany pouze formou písemných dodatků, které budou vzestupně číslovány, výslovně prohlášeny za dodatek této smlouvy

XVII. Final Provisions

1. The parties shall inform each other without undue delay of any changes in their addresses, telephone numbers, etc.
2. The Contract may be amended by the parties only in the form of written addenda, which shall be numbered in ascending order, expressly marked as an addendum



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| <p>a podepsány oprávněnými zástupci smluvních stran.</p> <p>3. Zhotovitel nesmí bez předchozího souhlasu objednatele postoupit svá práva a povinnosti plynoucí ze smlouvy třetí osobě.</p> <p>4. Smlouva je vyhotovena ve 3 stejnopisech, které mají platnost originálu, z toho jeden stejnopis smlouvy obdrží zhotovitel a dva stejnopisy smlouvy objednatel. V případě elektronického podpisu bude jen jedno vyhotovení smlouvy s elektronickými podpisy obou smluvních stran.</p> <p>5. Tato smlouva je vypracována v českém a anglickém jazyce, přičemž v případě rozporu je rozhodné české znění.</p> <p>6. V případě rozporu mezi zněním Přílohy č. 1 smlouvy (Technická specifikace) a smlouvou, je rozhodné znění smlouvy.</p> <p>7. Vztahy vznikající ze smlouvy a v ní výslovně neupravené se řídí Právním řádem ČR, zejména pak příslušnými ustanoveními občanského zákoníku a autorského zákona.</p> <p>8. Všechny postupně číslované přílohy smlouvy jsou její nedílnou součástí. Seznam příloh smlouvy:</p> <p>Příloha č. 1 – Technická specifikace (P.I. Tender technical requirements and conditions, P.I_II. notation explanatory notes, P.I_II. system business environment)</p> <p>Příloha č. 2 – Položkový rozpočet</p> <p>Příloha č. 3 – Seznam oprávněných osob</p> <p>Příloha č. 4 – Specifikace osobních údajů</p> <p>Příloha č. 5 – Souhlas subjektu údajů</p> <p>Příloha č. 6 – Dodatek ze dne 2. 4. 2009 k Memorandu o porozumění mezi Ministerstvem zahraničních věcí České republiky a Ministerstvem zahraničních věcí Bosny a Hercegoviny ve věci spolupráce z 22. 6. 2006.</p> | <p>to this Contract and signed by the authorised representatives of the parties.</p> <p>3. The Contractor may not assign its rights and obligations under the Contract to a third party without the prior consent of the Client.</p> <p>4. This Contract has been drawn up in 3 copies, each of which with the force of the original, of which the Contractor receives one copy and the Client receives two copies. If signed electronically, there will be only one copy of the Contract with the electronic signatures of both parties.</p> <p>5. This Agreement is compiled in Czech and English, the Czech text being authentic in the event of divergence.</p> <p>6. In the case of discrepancies between the wording of Annex 1 of this contract (Technical Specification) and the contract, the wording of the contract is decisive.</p> <p>7. Relations arising out of the Contract and not expressly provided for herein shall be governed by the laws of the Czech Republic, in particular the relevant provisions of the Civil Code and the Copyright Act.</p> <p>8. All consecutively numbered annexes to the Contract form an integral part thereof. List of annexes to the Contract:</p> <p>Annex 1 - Technical Specification (P.I. Tender technical requirements and conditions, P.I_II. notation explanatory notes, P.I_II. system business environment)</p> <p>Annex 2 - Itemised Budget</p> <p>Annex 3 - List of Authorised Persons</p> <p>Annex 4 - Specification of Personal Data</p> <p>Annex 5 - Consent of the Data Subject</p> <p>Annex 6 - Amendment of 2 April 2009 to the Memorandum of Understanding between the Ministry of Foreign Affairs of the Czech Republic and the Ministry of Foreign Affairs of Bosnia and Herzegovina on Cooperation of 22 June 2006.</p> |
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XVIII. Platnost a účinnost smlouvy

Tato smlouva nabývá platnosti dnem jejího podpisu oběma smluvními stranami a účinnosti dnem zveřejnění v Registru smluv.

V Praze dne / *In Prague on*



za zhotovitele / *on behalf of the Contractor*

Ing. Zbyněk Smetana předseda představenstva

XVIII. Validity and Effectiveness of Contract

This Contract becomes valid on the day it is signed by both contracting parties and becomes effective on the day it is published in the Register of Contracts.

V Praze dne / *In Prague on*



za objednatele / *on behalf of the Client*

Ing. Michal Minčev, MBA

ředitel České rozvojové agentury / *Director of the Czech Development Agency*



Česká rozvojová agentura

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Příloha č. 1 / Annex 1
Technická specifikace / Technical Specification



Tender technical requirements and conditions

Vine and Wine Register in BIH

Česká rozvojová agentura

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1. Tender requirements - Business overview

The implementation of the Register of vine and wine helps to establish a favorable environment for the transition to the information society and to provision of IT support to the competent authorities in order to increase the food protection in Bosna and Hercegovina and ensure the trace ability of wine products and ensuring their designation legitimacy and protection, not only for enhancing market and consumer protection, but also for protecting the reputation of the country originating wines.

Considering the principles of modularity and expandability of establishment of the system, both subjects handling the wine, as well the wine and its vine origins themselves have to be recorded, as well as the number of information objects recorded in the system and the number of data for each of them can be increased.

In order to achieve this, the system has to be integrated into the current environment of the:

- Ministry of Foreign Trade and Economic Relations (MVTEO)
- Federal Ministry for Agriculture, Water-management and Forestry
- Ministry for Agriculture, Forestry and Water-management Republika Srpska
- The Department for Agriculture , Water-management and Forestry Brčko district BiH

especially when concerning the integration with the respective infrastructure systems (concerning user authentication where applicable).

Most importantly, as one may observe from the processes, the administration consists of following independent registers:

- register of vineyard harvesters (vineyard farmers, vine/wine growers, owners) and their periodical declarations of harvest - based on the terms from the regulation, the "vineyard" means a continuous area of land, declared by a single owner, planted with vines either aimed at the commercial production of wine products or benefitting from the exemptions for experimental purposes or for graft nurseries; "winegrower" means a natural or legal person, or a group of natural or legal persons, whatever legal status is granted to the group and its members, whose holding is situated within the Bosnia and Herzegovina territory and who holds an area with one or more vineyards; "harvester" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, who gathers the harvest of grapes from an area planted with vines in order to market those grapes for the production of wine products by third parties, or to process them into wine products in his holding, or have them processed on his behalf, with commercial purposes;
- register of wine producers (winemakers, wine cellar / production facilities operators, wine processors) and their periodical declarations of production and stock - where, based on the terms from the regulation, the "wine producer" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, who processes himself fresh grapes, musts or new wine still in fermentation into wine or must with commercial purposes, or has them processed on his behalf; "processor" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, by whom or on whose behalf the processing of wines is carried out, the result of which being: wines, liqueur wines, sparkling and semi-sparkling wines, aerated sparkling and semi-sparkling wines, quality sparkling wines or quality aromatic sparkling wines;
- register of wine merchants (traders, retailers, shops and other similar facilities operators) and their periodical declarations of sales and stock, where, based on the regulation, the term "merchant" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, other than private consumers or retailers, who holds stocks of wine products with commercial purposes or is involved in their trade and possibly also bottles them, except distilleries; "retailer" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, whose business activity includes the sale directly to the consumer of wine and must in small quantities defined by this Law and regulations derived from the Law, having regard to the special features of trade and distribution, but excluding persons who use cellars equipped for storing or facilities for bottling wine in large quantities, and those who engage in itinerant trading in wine transported in bulk;

Additionally, the entire solution shall provide following functionalities:

- public access to statistics and tracing lists (including wine classification records)

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- enology evidence (a so called "cellar book") which is an optional software tool (not authority-related, only as a tool for those who wish to use it) for the evidence of all manufacturing operations performed with each batch (lot) of wine production each wine producer has to keep (the form is not mandatory, the winemaker can keep these records for example in paper form, yet the aim if the register is to provide favorable environment for those being regulated, so this shall be one of the optional services)
- e-commerce platform (the possibility of a central wine e-shop where all those using the evidence above can simply publish their goods online and shall receive back e-mail with orders - the logistics of the package is then up to their facilities)
- synchronization between the entity's instances (see further in this text)

The entire software shall be split into following instances (installed parts):

- each entity shall have its own instance, operating on its own, sharing selected data in form of data extracts and precomputed statistics with the other instances through the middleware specified in the next paragraph
- "OSAS" aka "the middleware" - operational statistics and synchronization middleware - a part of the software operated by the state authority (MVTEO) providing the functionalities of public accessible trace lists and wine classification lists, subject registrations, statistics and single login entry point, eventually also the enology evidence (if not decided to be put as part of the entity installation, TBA)
- the e-commerce platform - preferably an independent ready-made e-shop platform fulfilling the requirements for integration and single-shop multi-suppliers clearing platform (may be implemented by the contractor as well)

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2. Tender requirements - ToR overview

In this document, the contractual terms and requirements follow.

For business system description, please see the attached "ANNEX X System business environment description" attached to this document, containing information on:

- organizational structure and roles of users and organizations (authorities) within the system and in the project
- processes being operated by the authorities that shall be aided (supported) by the system including their system-counterparts descriptions
- A functional breakdown of the system functions to-be.
- preliminary analysis of data-entities being used in the system
- Deployment expectations and surrounding environment of the system installation instances.

It is understood and agreed, that this ToR represents only one half of a joint project, consisting of following projects:

- **P.I. = project no. I. (GOV register and the middleware).**
- **P.II. = project no. II. (enological evidence and e-commerce).**

Each and every of these projects is tendered, contractually administered and financed separately from different budgets/resources and organizations, so different contractual requirements may apply.

Yet the business environment and entire solution background are common for the both projects, so for both projects the document "System business environment description" applies. The project split can be observed in chapter "Functional architecture - project split" of the aforementioned document.

This document here (Tender technical requirements and conditions) contains requirements directly intended for one of the projects only, but some of the requirements are shared (when they are applicable only to one project, it is stated within the text using the conditional brackets "[condition]").

The technological requirements and schedules have been carefully mirrored between the two ToR documents, yet if inconsistency shall arise, the rule of *PA006 inter-project cooperation* shall be applied.

Note 1: As based on the experience of previous comments and reactions, the awarding authority would like to emphasize, that the entire tender description is NOT based on any existing and/or preferred software package. The tender competition is entirely open and intended specifically for prospective contractor(s) who are active in the business of on-key software development and setup.

Note 2: As **some parts/modules** of the software MAY be covered by ready-made and existing software implementations, this can be done under following terms and conditions for each of the solution parts/modules in this list:

- e-commerce platform: may be set-up based on an customized existing opensource or paid/licensed ready-made platform/solution, provided all other terms and conditions of this document are met (especially see "licensing terms")
- enology evidence/cellar book: may be set-up based on an customized existing opensource or paid/licensed ready-made platform/solution, provided all other terms and conditions of this document are met (especially see "licensing terms"), yet it MUST (without any exceptions) cooperate with API of the governmental part of the register and the e-commerce platform as described further in this document and the licensing conditions requirements have to be met
- middleware part: may be set-up based on an customized/extended existing ready-made platform(s)/solution(s), provided all other terms and conditions of this document are met (especially see "licensing terms")
- The register itself (governmental part): Shall be preferably implemented as a turnkey solution (might be with high-level components/platforms/frameworks, but rather not based on "tweaked" existing software packages, unless they are matching the process/requirements very closely)

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Interdiction of superfluous function licensing

For all the above mentioned ready-made platforms/software packages it shall be ensured, that:

- Any surplus/superfluous functions that come with such pre-made software do NOT interfere with the main functions/processes required in this documentation
- The presence of such functions in the software package has no impact on the licensing price, e.g. when such surplus/superfluous functions would've been omitted, the license price would not change.

All other finer-grained submodules/components (such as for example report generating, graphical plotting, WYSIWYG text editors, batch (data) processing systems, backup systems, data manipulation backup/import/export and other similar) are certainly welcome as ready-made products as well, provided they meet the licensing and other specification requirements stated in this documentation, including the statement for surplus or superfluous functions.

3. Requirements catalogue - P.I.: Functional requirements

This part of the documentation describes the required functional aspects of the system in regard to the processes or agendas the system shall be supporting.

While one may observe the processes and their order, bindings and logical dependency in the appropriate documentation parts, here the requirements are merely a list of these processes or sub-processes, to ensure their implementation according the abovementioned specification.

3.1 P.I.: Functional requirements - (GOV VWR) Subjects

The primary evidence of the VWR is the evidence of the registered subjects. The following requirements describe the functionalities needed for the creation and editing of these registrations of subjects.

A specific attention is given to:

- difference between self-service/on behalf registration/edit and the possibilities of the authority administration editing
- difference between registering as an subject (generic user) and as registration of a subject within certain roles (vineyard harvester, wine producer, merchant) using the subjects facilities records
- [FBiH only] registering of geospatial data for the facilities and their verification (inspection-control by FAZ or other such future organization(s)).

FR001	FR001 Subject registration / editing (self-service+on behalf)
<p>When considering the registered subjects, for every subject (as self-service or being done on behalf by an authority) it must be possible to create and edit its own data (minimum data entities and data attributes as specified in the attached registration forms or in this document in the chapter describing data entities and their attributes) in accordance with the FRs following below.</p> <p>Note: These FRs apply, where appropriate, not only for self-service registration, but also for registration on-behalf being done by authority clerks. It is understood, that the creation of new subject (eg. registration) shall be an integral part of the authority administration functionality (instead of the clerk doing that in the public web).</p>	
FR001.1	FR001.1 Subject registration - subject creation
<p>[FBiH/Brčko only] Create new registration (while checking for any previous registrations, also those that may have been synced from the other entities (=instances)!) </p>	
FR001.2	FR001.2 Subject registration - subject creation - linking
<p>During registration it has to be (FBiH/Brčko: optionally; RS: mandatory) possible to identify and eventually pair (link) of the subject to a person from:</p> <ul style="list-style-type: none">• [FBiH] Phytosanitary register (only producers of planting materials)• [FBiH/RS] RPG (in RS: this is the only possible way how to create a registration in VWR – any anonymous user performing the registration shall be able to browse under specified criteria the RPG (criteria TBA) and load its data from there. A subject not being registered in RPG cannot create a registration in RS)• [RS] APIF	
FR001.2.1	FR001.2.1 Subject registration - subject creation - linking notified RPG
<p>A newly created RPG subject, being of specific RPG role (type of farmer/subject - wine producer/vineyard harvester), shall be notified in the VWR and an basic subject registration including user access should be created.</p> <p>The mechanism of user login credentials passing TBA based on detailed RPG data attributes specs.</p>	
FR001.3	FR001.3 Subject registration - subject role creation
<p>Each registered subject can be registered in multiple context roles - as a vineyard harvester and as a wine producer (winery).</p> <p>While the subject is registered in the entire register as all other ones, the register shall distinguish this by the GUI context (e.g. if the user is working in the vineyard register, wine register or trade register).</p>	

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FR001.4

FR001.4 Subject registration - role/facilities editing

When editing the optional "role" items (especially facilities registrations) during subject registration or subject edit, this editing is a kind of declaration as well.

See :

- "[FR007 Declaration creation and submit](#) "
- and
- "[FR011 Registration reports \(certificates\)](#) "

FR001.5

FR001.5 Subject registration - subject VWR role edit - facilities

Every subject (registration or editing of registration) should have the option of creating additional role declarations, in fact an editable list of facilities (based on their type and current GUI context):

- vineyard harvesters - vineyards
- wineries (wine producers) - facilities addresses
- merchants - trade facilities

These facilities shall be regarded as same as the registration of the subject in the specific roles; when editing this optional "role"/"facility" items during subject registration or subject edit, this action is a kind of declaration as well (it shall generate a registration declaration and report).

See :

- "[FR007 Declaration creation and submit](#) "
- and
- "[FR011 Registration reports \(certificates\)](#) "

FR001.5.1

FR001.5.1 [FBiH only] Subject - facilities advanced edit - vineyard plot geospatial data - edit (self-service, authority, FAZ)

This part shall be optional during registration/editing process. Each facility may have:

1. no information on geospatial data
2. information on single point geoposition retrieved from an address record (if present)
3. information on single point geoposition or a geoposition plot drawn by the registrant using [FR001.7 Subject registration - geoplot sketcher](#)

This information is available to ANY facility as an option (even a wine production winery can be drawn as a plot, why not, if the user wishes to do so). But there shall be difference how the data influences the status of the geospatial plot data itself and the status of the registration of the subject:

- wine producer/Merchant/Cellar book user: 1.-4.: automatically approved registration. The data itself is marked as "informational" only if not previously marked "validated"
- Vineyard harvester:

- in RS: Registration of subject is marked as "validated".

- in FBiH: If any of the data is "for validation", then the subject registration is marked as "before validation" (does not apply when the subject is already registered and validated(*)).

- in FBiH If all the used geospatial data is marked as "validated" OR the data is introduced/edited by FAZ OR the data is marked as "validated" by FAZ, then the subject registration is set as "registered validated" immediately.

*) The awarding authority is aware of the possibility of a "trick" when a vineyard harvester registers only one vineyard that is then approved by the FAZ, so that the vineyard harvester obtains his "approved registration" quickly and then uses this to introduce all the other vineyards while still being registered and approved/validated. That is an expected behaviour and is in no contradiction to the operation of the system - it is important that the vineyard harvesters get registered and validated as quickly as possible. The "later introduced" vineyards will be geopositioned either by a FAZ inspection-control during the visit on-site, or they will be validated later after they have been introduced (but this validation inspection-control will have probably lower priority since the vineyard harvester has been already approved).

FR001.5.1.1

FR001.5.1.1 [FBiH only] Subject vineyard plot geoposition - display&edit on a map (self-service, authority, FAZ)

The facilities geospatial data shall be viewable and editable on a map, using an integrated GIS mapping system as described in [IR001 Integration with GIS for geospatial data](#) .

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FR001.5.1.2**FR001.5.1.2 [FBiH only] Subject vineyard plot geoposition - edit by geospatial data import (self-service, authority, FAZ)**

The facilities geospatial data shall be editable by import (and eventual selection) of file-based data record. The detailed format and eventual better (than file system files upload) integration with a GPS handheld device TBA.

FR001.5.1.3**FR001.5.1.3 [FBiH only] Subject vineyard plot geoposition - mail report and approval (FAZ only)**

- After EVERY editing of geospatial data, the system shall send a report containing the information on the edited subject and facilities to predefined e-mail addresses (constant across the system, not data-dependent, TBA: may depend on some list (municipality, kanton) from facility address)
- The FAZ will then approve the data (see [FR001.5.1 Subject - facilities advanced edit - vineyard plot geospatial data - edit \(self-service, authority, FAZ\)](#)) and eventually the registration of the vineyard owner as well.

FR001.6**FR001.6 Subject registration - advanced edit (self-service+on behalf)**

The subject itself (or a local authority acting on behalf of the subject) must have following options to further edit/update its account:

- Cancel the registration
 - Cancel the registration of a role (inc. deleting the facility)
- For this operation the "[FR007 Declaration creation and submit](#)" applies as well.

FR001.7**FR001.7 Subject registration - geoplot sketcher**

As the registrant cannot be bothered with overcomplicated functions of GIS map/orthophoto point/plot selection, the system has to provide for him with a "geoplot sketcher" - a utility for sketching and geo-tagging a geographical (map-like, plan) drawing - for each and every vineyard being registered.

This utility has to provide the possibility, of a WYSIWYG graphical editor, working "out of the box" (eg. without any installation necessary) in the browser:

- the possibility to draw, modify(location, metadata), delete(entirely remove) a point ("spot")
- where the modification of a spot shall be done by: placing freely on the map, placing it according to geospatial coordinates, placing it relatively to any other selected spot OR LINE in terms of distance and heading (with respecting of the geographical projection being used)
- to connect spots between each other by a line
- possibility of marking a set of spots and lines as a polygonal shape
- to draw a circle based either on spot + diameter (in terms of metric distance or angular distance), on 2 spots one being the center of the circle and the distance to the other the semidiameter (radius), or a circle interposed on 2 spots
- providing proper settings and conversion between various metadata, including
- orientation (north heading)
- the measure
- geographical map projection (projections available: TBA mostly some equal-area, conformal, equidistant and retroazimuthal), including the display of helping mesh based on the metadata and providing the option to correct the geospatial or projected positions of the sketched points and other objects when converting between projections
- export of the entire data into geospatial data used by FAZ (or other organization having that role) within the verification and approval in a GIS overlay

Every line/spot/shape shall be markable as "helper" as well (so that it is not part of the export but is there, visually distinguished, in the sketch). Every line/spot/shape shall have the possibility of being named (with visualizing the name) and adding descriptive textual information.

FR0002**FR002 Subject editing (authority)**

Apart from data editable by the subjects, certain data (as described in the chapter of data entities) following subject and facilities data has to be editable by the authority:

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FR002.1

FR002.1 Subject - external link edit (authority)

a subject's registration (checking for registration from other entities as well) including:

1. manual update of the data from the Phytosanitary register/RPG/APIF,
2. associating with a subject from Phytosanitary register/RPG/APIF
3. marking data attributes as non-updatable from the external register (when the data in register is wrong, it shall be updated only after a new version of subject is set)
4. reflecting a subject merge (rectification of a situation when a subject has been recorded as two different ones, one being suspended and other being associated with both subjects from Phytosanitary register/RPG/APIF or a single one, including the transfer of registered facilities, declarations and documents),
5. reflecting a subject split (when two subjects have been recorded as one, so creating a new one, including the transfer of registered facilities, declarations and documents to one of them, associating the both subjects with the one or with both in the Phytosanitary register/RPG/APIF). (A split subject most probably won't be split across two external registers but since a subject may be linked to phytosanitary register as well to RPG, it may happen)

Note: No. 4. and 5. may be supported by just changing the external IDs manually by the authority administrator and eventually manual registering of a new subject / de-registration (registration cancelling/deletion) of a subject.

FR002.2

FR002.2 Subject - advanced edit (authority)

- Suspend/cancel the registration as whole
- Cancel the registration of a role (inc. deleting the facility)
- Delete/Deactivate the subject
- Delete/Deactivate the facility

For this operation, the "[FR007 Declaration creation and submit](#)" and "[FR011 Registration reports \(certificates\)](#)" applies as well, only the declaration document human-readable form may have a different form (e.g. the certificate will be always the same, only containing the new data - either pre-rendered or generated on-the-fly) but the declaration representing this operation done by the authority shall clearly state, that it was not submitted by the registrant, unless it was done on his behalf by the authority (in such a case there is the scan of the physical forms as part of the registration change declaration)).

FR002.3

FR002.3 Subject - advanced edit - approval (authority)

The authority must have following possibilities to set the subject status:

Subject registration levels:

- Subject registered in the system (anyone)
- [FBiH only] Subject registered and preliminary (temporally) approved as harvester (before validation)
- Subject approved as harvester and registered as producer/harvester/merchant

Note: Most of the setting happen automatically:

- Subject registered in the system => immediately after the subject is registered (even without any role) or when all subject registration roles (facilities) are cancelled by the subject or authority
- [FBiH only] Subject approved as vineyard harvester (before validation) => immediately after the subject is registered as vineyard harvester (note: there is no more automatic fallback into this status after the vineyards declarations change, only manually by FAZ/authority edit)
- Subject approved as grower and registered as producer/harvester/merchant => [RS/Brčko] immediately / [FBiH only] after approval (TBA, may be different across entities) when registered as producer/merchant; after FAZ approval when registered as vineyard harvester.

FR003

FR003 Subject - synchronization/publishing

The subjects data

FR003.1

FR003.1 Subjects - synchronization/publishing - update from other instances

All subjects data marked as "shared" (see "Data entities"), shall be periodically synchronized through the OSAS middleware, that means:

- providing new/updated data to the middleware (for data with time-based versioning only the current latest version is enough)
- receiving data updates/creating from the middleware

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- synchronizing the enumerations/lists used (referenced from) the data, where synchronization process shall take into account 1. local differences in the lists, 2. incorporate as read-only those items originating from a different installation instance (different entity).
- upload of pre-calculated aggregated reports data
- [if *Wine classification* editing interface part of the local instance] Synchronization of *Wine classification* data

FR003.2

FR003.2 Subjects - synchronization/publishing - update from external systems

Those subjects, paired (linked) of the subject to a person during creating/edit from:

- [FBIH] Phytosanitary register
- [FBIH] RPG
- [RS] APIF

shall be periodically updated through the same mechanism (API) as used in the update from other instances.

FR004

FR004 Subjects/facilities list search and display

The governmental authority must have the possibility of:

- Search all the subjects (based on criteria detailed during the analysis)
- List the found subjects (listing attributes (=columns) as per analysis), inc. the mode when the list is showing recent synchronization problems (subjects with sync. errors) to be resolved by the operator

(Note: There are two other subjects-list search possibilities in the register:

- the public one in the operational statistics and synchronization middleware for subjects or wine classification
- the internal one for linking of subjects, vineyards, harvest/production declaration

These differ slightly from this requirement here as this requirement here expects the full list of the subjects and attributes, while the search options in abovementioned functionalities are limited.)

FR004.1

FR004.1 Subjects list search - synchronization problems

When the data is checked in the central register, the system must display errors of data:

- being marked as invalid.
- attributes not obtained
- subjects merged/split (in case of split the operator must decide what subject he refers to; the other one shall be synchronized automatically)

FR004.2

FR004.2 Subjects/facilities list search - other subjects context

The system has to provide the possibility of the search of list of subjects/facilities

- having no roles or roles other than vineyard harvester, wine producer, merchant.

FR004.3

FR004.3 Facilities (secondary: subjects) list search - vineyard harvesters' context

The system has to provide the possibility of the search of list of facilities (secondary option: subjects) only in the context of vineyards (secondary option: vineyard harvester) as if this was a separate sub-register of the VWR.

This shall be done based on the subject types enumeration and/or facilities registered.

FR004.4

FR004.4 Subjects list search - wine producers' context

The system has to provide the possibility of the search of list of subjects only in the context of wine producers (as if this was a separate sub-register of the VWR).

This shall be done based on the subject types enum and facilities registered.

FR004.5

FR004.5 Subjects list search - merchants context

The system has to provide the possibility of the search of list of subjects only in the context of merchants (as if this was a separate sub-register of the VWR).

This shall be done based on the subject types enum and facilities registered (if any).

FR004.6

FR004.6 Subjects list search - facilities context

The system has to provide the possibility of the search of list of facilities only, nevertheless:

- the resulting output shall be (based on user switch) aggregated and displayed per-subject, detailed spec. TBA during analysis
- the result will navigate to the subject (opening the facility selected)

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- the search filter may be incorporated in other subjects searches as well, but this list of facilities has to be always a separate one as well, especially considering geospatial data filters)

FR004.7

FR004.7 Detailed data display

Any resulting list search item should navigate to the detailed display of the data, based on the same interface (API or GUI) logic/structure as the interface for editing (registration, edit etc.) has.

The possibility of editing should be disabled in case the subject doing the search does not have the right to do so. That applies to:

- local administrator or administrator on any declarations (administrator can re-do and re-submit a declaration from scratch, but cannot edit any declaration data directly)
- local administrator or administrator on any declarations (including facilities and role registrations, as well subject data apart from those mentioned in previous FRs: status of subject, deletion, [FBiH only] FAZ on geospatial data etc.)
- user on already submitted data or on data bound to any other subject
- user on documents/files created by the authority (administrator), that does not apply to ordering them in folders as he sees fit
- local administrator or administrator on documents/files created by the user (can order them into folder as see fit)

The attributes displayed should be limited based on the role:

- user: all data connected to his subject, not important of origin
- local administrator: all data (of subjects belonging into his jurisdiction)
- administrator: all data of all subjects including synchronized data from other entity (marked as '#' shared in data entity diagrams/lists)
- inspection-control (FAZ): all data of all subjects from the entity they are currently logged in, including geospatial data
- inspection (inspection): any data of any subject (when working in the system of an opposite entity, they will see only the data marked as #shared for inspection - the only way how to see the full dataset is to log in into the other-entity system instance (if the inspector is entitled to do so).

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3.2 P.I.: Functional requirements - (GOV VWR) Declarations and documents

FR005	FR005 Declarations
<p>The system shall provide the possibility of listing, searching and creation/editing/deleting of declarations:</p> <ul style="list-style-type: none">• in context of every subject• a list of all declarations (the resulting output shall be displayed as a simple list or aggregated and displayed per-subject, detailed spec. TBA during analysis)	
FR006	FR006 Declaration types and statuses
<p>The register shall allow that every subject recorded should perform following declarations (yearly submitted reports) :</p> <ul style="list-style-type: none">• Harvest declaration (vineyard harvester)• Production declaration (wine producers)• Trade declaration (merchants, wine producers if trading also with purchased 3rd party products)• Stock declaration (merchants, wine producers) <p>The register shall allow that every subject recorded should perform following registrations (sets of facilities registered and linked to the subject specific role(s)):</p> <ul style="list-style-type: none">• vineyard harvester registration = vineyard facilities registration• wine producer registration / merchant = wine cellar or other wine production/storage/sales facilities registration	
FR007	FR007 Declaration creation and submit
<p>For every subject (as self service or being done on behalf by an authority) it must be possible to create and edit all the types of declarations data (minimum data entities and data attributes as specified in the attached registration forms or in this document in the chapter describing data entities and their attributes).</p> <p>When a declaration is created (either empty from scratch or based on (pre-filled with) data from a previous one - selected in documents or from uploaded structured data file), it is saved as a "draft". Multiple drafts may exist for the same declaration and season (business year, reporting year, vintage). The authority may see the draft if it wishes to but normally, they are hidden and not accounted for in statistics, reports etc.</p>	
FR007.1	FR007.1 Declaration creation and submit - export possibility
<p>The subject may also export the declaration in form of structured data and import it back.</p>	
FR007.2	FR007.2 Declaration creation and submit - deleting draft
<p>The subject may delete it (draft only!) entirely.</p>	
FR007.3	FR007.3 Declaration creation and submit - submission
<p>After a declaration is considered finalized, the subject may "submit it" definitively. After that it is no more editable and becomes legally binding immediately.</p> <p>The only way how to change a submitted declaration is to submit a "corrective" declaration. The corrective declaration substitutes (and invalidates) the previous declaration in full extent (based on the unique declaration ID of the previous one), partial substituting is not possible, yet the system has to provide a mean how create a declaration based on a previous one.</p> <p>The same as above applies for subject registration/roles(facilities) changes, with following exceptions:</p> <ul style="list-style-type: none">• A registration-change declaration is either prefilled with currently valid data or started from scratch, however the resulting document (and its files) is always a differential one only (unless explicitly requested by the user to perform a "full" registration change).• The changed data in the RDBMs are time-tagged (see blue-line marked data entities in the data entities chapter), never destroyed/overwritten directly (if deleted, they are only time-tagged and no "current" version is created)	
FR008	FR008 Documents register (storage and search/review)
<p>The system shall allow general recording, evidence and search of documents, that means:</p> <ul style="list-style-type: none">• Their search• Their list with actions (adding, editing)• Editing of (replacing the file(s), editing metadata)	

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- Appending file(s) to document
- Opening (downloading) the documents' associated files

all the above mentioned operations for following user-roles:

- (for authority (inc. inspection), administrator, subject) in context of every subject
- (for authority (inc. inspection), administrator) a generic module especially for managing public documents and authority documents (see specification of "Generic documents and files and folders" below).

Please note: A document DOES NOT EQUAL 1 FILE - a document may consist of multiple files!

Please for the sake of this register consider following logical structure:

- document container ('folder') - hardwired = predefined container folders for containing other folders/documents OR document container ('folder') - custom = container folders for containing other folders/documents specified within the "root" or other document container by an administrator or user

each *document container* shall contain:

- other document containers (custom only)
OR
- documents (a kind of a filling folder, one name, identification, description etc.)

each *document* shall contain:

- one (or multiple*) binary data files upload-able/downloadable

To avoid doubt: The documents shall be an independent sub-register of the register, since a document may exist without any other entity being associated to it (for example denied applications).

FR009

FR009 Documents: Declarations as documents

Every declaration, after save / submission, shall be (apart from being stored in the structured data of the DB) rendered as a document and as such stored in the subjects' document storage appropriate folder ("Save" = "Declaration drafts", "Submit" = "Declarations"; each document as multiple file formats, at least one as structured data file - JSON XML or similar, and one human-readable document file (PDF, Word, Excel etc.) + attachment files). This applies for the certificates of registration as well, see "FR011 Registration reports (certificates)" (Please note: there is a difference between a "certificate of registration" (=report) and "declaration of registration"! The difference stated above is only for the certificates of registration. The declarations of registration are described in "FR007 Declaration creation and submit" and "FR002.2 Subject - advanced edit (authority)" while the certificates of registration are described in "FR011 Registration reports (certificates)")

FR009.1

FR009.1 Declarations as documents - files

Apart from files required for each declaration, there may be additional files as "attachments" uploaded manually for each document (and this shall be possible to do from the declaration GUI or API as well).

FR010

FR010 Documents: Generic documents and files and folders

Apart from those documents resulting from operations in the register (declarations, registration certificates) the system has to make possible for the user/authority to store any given type of binary file as a document linked to a subject.

The documents of the subject should have a folder-like organization and shall provide:

- "Declarations" folder (organized into "Harvest", "Production", "Trade", "Stock" sub-folders with document names starting "YYYYMMDDHHMM_" (year, month and so on..) the same applies on the files)
- "Declaration drafts" folder (organized into "Harvest", "Production", "Trade", "Stock" sub-folders with document names starting "YYYYMMDDHHMM_" (year, month and so on..) the same applies on the files)
- Certificates folder (organized into "Latest" and "Archive", where any regeneration of "Latest" document moves the previous version into "Archive", document/file names starting "YYYYMMDDHHMM")
- "Public {entity name}" folder (read-only for subjects, editable by authority, should contain forms templates and other publicly available documents (and their files) that shall be synchronized to (or from) the operational statistics and synchronization middleware, it shall be available to anyone visiting the middleware web and this folder only should, if possible, be not stored in a RDBMs but should be linked to a file storage share (SMB/CIFS, NFS, FTP etc)) - this is the only folder, where an constraint 1 DOCUMENT = 1 FILE applies
- Authority documents folder with a sub-folder for each subject should be there, if containing some data, so that the origin/destination of the documents is easily distinguishable, that folder content is only viewable by the

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subject and either local authority or the entity/ federation authority, but then the internal structure may be organized into sub-folders at subjects' will, a subject can deactivate (in gui presented as delete) only own documents/files, authority can delete/change its own documents only until sometime, after that only "deactivate" is possible; any change - new document or document change should be notified to the subject and eventually to the authority)

Note: All the folder names pre-defined above have to be localized based on language selection of the user currently logged-in.

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3.3 P.I.: Functional requirements - (GOV VWR) Reports

The system should be able to generate reports following in the requirements below:

FR011	FR011 Registration reports (certificates)
Subject documents (certificates) <ul style="list-style-type: none">• Subject approved as vineyard harvester (before validation) (a temporary certificate)• Subject approved and validated as producer/harvester/merchant (certificate)	
FR011.1	FR011.1 Registration reports (certificates) - creation after submission
Every certificate, after submission only (not save!), shall be (apart from being stored in the structured data of the DB) rendered as a document and as such stored in the subjects' document storage appropriate folder "Certificates"; as human-readable document file (PDF, Word, Excel etc.)	
FR011.2	FR011.2 Registration reports (certificates) - accessibility
This reports may be accessible: <ul style="list-style-type: none">• either rendered on-the-fly per download request of the user (but in that case the document rendered has to be stored in the subject documents "Certificates" folder as well!)• or pre-rendered and stored in the documents storage of the subject during registration creation (this applies to the registration status change as well - especially after geospatial data validation) (Please note: there is a difference between a "certificate of registration" (=report) and "declaration of registration" (=declaration RDMBs data and linked document with files)! The different approach stated in bullets above is only for the <u>certificates</u> of registration. The <u>declarations</u> of registration are described in " FR007 Declaration creation and submit " and " FR002.2 Subject - advanced edit (authority) " while the <u>certificates</u> of registration are described here in this requirement)	
FR012	FR012 Statistical reports (public&precomputed&syncned)
<ul style="list-style-type: none">• registered totals: subjects count (by type)• registered totals: vineyards count, surface sum (by region, by vineyard facility attributes of age category, method of use, irrigation, substrate, backrest, tree height (categories from-to), number of wires, trellising type, number of vines, planting distance in lines, planting distance of plants, breeding form, avg altitude (categories from-to), slope of the field, exposition)• registered totals (in a time-frame): Data on count/surface new plots under vineyards ((by variety, grapes designation type, (all, red, white)) and by region)• declared totals: harvested last year tons sum (by variety)• declared totals: amount of production hl/t [in last or selected year] [per: vine variety/wine type - note that this may be any level of the varieties tree! but most typically PGI, PDO or without PGI/PDO, specifically source varieties that are prohibited (www.vivc.de)]• declared totals: current (last year) stock hl sum (by variety, by PGI, PDO, without PGI/PDO)• TBA (may be ~+6 more)	
FR012.1	FR012.1 Statistical reports (public&precomputed&syncned) - output
These reports are to be pre-computed (automatically or on user request) as kind of machine-readable data. They have to be: <ul style="list-style-type: none">• visualizable in the same manner as the "operational statistics and synchronization middleware" would display them to the public• precomputed, stored (may be a specific, non-subject-related document folder accessible to the authority/administrator only) and synchronized within the next synchronization batch to the "operational statistics and synchronization middleware"	
FR012.2	FR012.2 Statistical reports (public&precomputed&syncned) - aggregation
Please note: The data being aggregated and computed can be observed from the "Data entities" chapter of this documents (data entity diagram and lists, attributes marked as '~' or 'Package' or '+Package'), however it is to be understood, that the data will be then aggregated once more from multiple instances of the system (if the aggregation does not group by geographical- or entity- based attributes).	

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Data (attributes) marked as '+' (public) in the entity diagram may be part of the computed statistics unless they meet the requirement for the aggregation level further in this text(*):

The aggregation of data must greater or equal to:

- the resolution of given enumeration attributes (they are not supposed to be aggregated more in the pre-compute)
- geographical region/municipality
- subject types

that means, in the data output, there must not be any distinguishable group by-s of:

- users
- subjects (identifiers, contacts, names, addresses more detailed than region/municipality (that includes ZIP code as well), geospatial/cadastral data, etc.)
- documents
- single declarations (unless the data is based on only one declaration for that resolution) or their identification attributes

*) The data marked as '+' public in a non-aggregated form are to be searchable and returnable in no connection with the statistical/aggregated data, but only as part of the "[FR015 Public registration search and list](#)" and "[FR018 Wine classification publication](#)" outputs.

FR013

FR013 KPI/QA reports (entity instance only)

- List of vineyard harvesters who did not submit harvest declaration of the given business year/vintage (may be as well "of the current business year/vintage")
- List of vineyard harvesters who submitted harvest declaration of the given business year/vintage (may be as well "of the current business year/vintage") after the closure date (inc. days of delay)
- List of wine producers who did not submit production declaration of the given business year/vintage (may be as well "of the current business year/vintage")
- List of wine producers who submitted production declaration of the given business year/vintage (may be as well "of the current business year/vintage") after the closure date (inc. days of delay)
- List of wine producers who did not submit stock declaration of the given business year/vintage (may be as well "of the current business year/vintage")
- List of wine producers who submitted stock declaration of the given business year/vintage (may be as well "of the current business year/vintage") after the closure date (inc. days of delay)
- List of merchants who did not submit trade declaration of the given business year/vintage (may be as well "of the current business year/vintage")
- List of merchants who submitted trade declaration of the given business year/vintage (may be as well "of the current business year/vintage") after the closure date (inc. count of days of delay)
- List of merchants who did not submit stock declaration of the given business year/vintage (may be as well "of the current business year/vintage")
- List of merchants who submitted stock declaration of the given business year/vintage (may be as well "of the current business year/vintage") after the closure date (inc. count of days of delay)
- list of registrations by state (input: list of states) submitted in given dates (main feature: unapproved registrations older than X), input(dates from, to, region/rayon, responsible user/group)
- list of declarations (input: type) submitted in dates (input for year, from, to, can pre-fill "from" based on deadline; subject id (selectable by search of name etc.), facility id (selectable by search of address, subject etc.)
- list of non-existent declarations of existing subjects by (input: subject operations type) and by (input: declaration type, non-existent in given dates input(dates from, to, deadline year, region/rayon, responsible user/group, subject id searchable by name, address etc.) (main feature: unapproved registrations older than X),
- [FBiH only] [FAZ] Plots Net pov.: (No. of vines x m2 / vine) + 10% Cultivation form Age of vines Estimated yield / vine / plots
- [FBiH only] [FAZ] Estimated yield
- TBA (may be ~+6 more)

These reports are to be computed on user request and displayed in any human-readable form. A machine readable export is required at least in the form of CSV, other formats may be added as well.

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FR014

FR014 Risk reports (entity instance only)

- Vineyard harvester harvest yield: the vineyard harvester and vineyard kg/surface, (sugar*kg)/surface [per vineyard [[per variety][per raw material type]]] for given year
- Wine producers production yield: the wine producer [and batch] [and originating vineyard] hl/surface,/batch] [[per vineyard] [[per variety][per raw material type][per product type]]] for a given year
- list of declarations (input: type) submitted in dates (input for year, from, to, can pre-fill "from" based on deadline; subject id (selectable by search of name etc.), facility id (selectable by search of address, subject etc.)
- list of non-existent declarations of existing subjects by (input: subject operations type) and by (input: declaration type, non-existent in given dates input(dates from, to, deadline year, region/region, responsible user/group, subject id searchable by name, address etc.) (main feature: unapproved registrations older than X),
- harvest declarations: vineyards having yield >Xt/ha for each declaration entry (input: X (tons per ha), subject, facility (only vineyards), region, date from-to or declaration season)
- production declaration: must efficiency (hl of must/t of grapes processed in %) of all declaration entries (input: lower threshold, subject, facility (only wineries), region, date from-to or declaration season)
- TBA (may be ~5-6 more)

These reports are to be computed on user request and displayed in any human-readable form. A machine readable export is required at least in the form of CSV, other formats may be added as well.

FR015

FR015 Report templates

The reports should be based on (system-wide or each user having its own) editable:

- templates (template of data output (columns) of the report and query into the DB, may be in form of SQL, the query shall contain parameters)
- report definitions, which are pre-defined parameter value sets for a template. A parameter value may be (apart from a constant of an atomic data type - string, int, dec...) of the type "on generation" e.g. always selectable by the user running the report, "time-based" (e.g. derived from the current server time), "user role or geographical-based" (e.g. derived from data concerning the user - his ID, access to the records he administers etc. or the location the user is bound to - as a subject or as local administrator)

Non-administrator users (that means also municipal/local authorities, in fact all users not having system-wide all-data access) shall not have the right to define "templates" but may define own "definitions".

Templates and definitions may be exportable and each user may upload this definition to his own reports-definition space. (non-administrator user may do this only with definitions using system-wide templates, upload of templates shall not be possible).

Note: The defining/upload of templates may be made possible to non-administrators only if the system exposes such data model to the users of reports, that does not make it possible to circumvent the filtering on the data the user is allowed to see (neither row-filter (local admin or user seeing only their records) or column-filter (based on role)). This applies only in that case, when providing such functionality by the contractor does not increase the price of the system implementation (e.g. the system provides the functionality as it is for the same price).

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3.4 P.I.: Functional requirements - (Operat. stats and sync. - GOV VWR) Registrations publications, search and synchronization

FR0016	FR016 Public registration search and list
<p>The public portion of the system shall make certain data available to the anonymous public access showing:</p> <ul style="list-style-type: none">• selected data (list) of registered subjects (displaying only public data - see data (attributes) marked as '+' in the data entity diagrams/lists chapter)• selected data (list) of registered wine trace paths (identifier of wine origin) - based on wine production "lot" IDs, referring to all the raw material sources used, ending either 1. at a subject who sold the raw material to the producer, OR 2. at a vineyard of the harvest declaration item(s) that was/were declared as being material used for the production OR 3. at the vineyard(s) that were declared as being source material used for the production (where no. 3. is rather specific case)• selected data (list) of registered wine trace paths (identifier of wine origin) - based on wine stock or trade IDs, traced either to 1. any of the abovementioned "wine production" traces OR (in case of trade) 2. to a subject who sold the product to the merchant OR (in case of trade) 3. to a vineyard of the harvest declaration item(s) that was/were declared as being material used for the traded item (where no. 3. is rather specific case, yet a product produced in foreign country might get back to a merchant without a production declaration ID, of course, but it still might have the harvest declaration IDs, in such a case the system should display a warning, that it cannot rule out other additions or mixtures)	
FR0017	FR017 Registration exchange
<p>The public operational statistics and synchronization part of the system has to ensure the exchange of information about:</p> <ul style="list-style-type: none">• registered subjects and their users and roles,• their registered facilities (inc. vineyards and wineries)• their declarations• and attributes (data-entities) thereof <p>in both directions (from the instance of the system = publishing, to the system = synchronization of published registrations from other instances), this includes also operations to handle administration interventions (split, merge of registered subjects, metadata correction)</p> <p>The data being synchronized between the entities can be found in the data entity chapter diagrams and lists, marked as '#' or '#insp'.</p>	
FR017.1	FR017.1 Registration exchange - single point API for RPG
<p>The middleware should provide (for the entity-based installations) a centralized API for accessing the RPG register including the receipt of:</p> <ul style="list-style-type: none">• new RPG registrations• subscribed data changes notifications (and the subscription as well)	
FR018	FR018 Statistical reports publication
<p>The operational statistics and synchronization part shall publish selected pre-computed reports (statistical reports) for anonymous public access :</p> <ul style="list-style-type: none">• count of registered vineyards / vineyard harvesters• count of registered wine producers• amount of production hl/t [in selected year] [per: vine variety/wine type - note that this may be any level of the varieties tree!] <p>(For details see FR012 Statistical reports (public&precomputed&synced) and related)</p>	
FR019	FR019 Wine classification publication
<p>The system shall provide means for listing, searching and editing a list of "wine classification" - a process where a wine batch is laboratory-examined and affirmed as a wine of specific category.</p>	

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FR019.1	FR019.1 Wine classification publication - list item create/edit
For the role of specific governmental authority, the system shall provide the possibility to create/edit the records shown in the list. This shall be done in the operational statistics and synchronization middleware implementation of the system.	
FR019.2	FR019.2 Wine classification publication - list search and display
For anyone (anonymous public access role) the system shall provide the functionality of: <ul style="list-style-type: none">• displaying/browsing/listing/ordering the list of classified wines• filtering/searching the list by any of its value items (wine label, winery ID + name + address, season, product type, classification date)• displaying single record of the item• possibility to navigate to the track-list of the production batch id/production ID (FR016 Public registration search and list)	

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3.5 P.I.: Functional requirements - (GOV VWR) Omitted requirement IDs

(FR020-FR041 omitted by purpose, they identify the requirements in P.II.)

3.6 P.I.: Functional requirements - General - entire software

(FR044.2 omitted as it is exclusively for P.II.)

FR042	FR042 Contextual help
Each and every input field shall have an detailed longer pop-up help text (editable in the translation file/lists administration) in all the localization languages of the software.	
FR043	FR043 Shared data edit alert
Whenever a user (anyone - authority, administrator, registrant in self-service) in the context of a specialized sub-register (vineyard harvester, wine producer, merchant) is editing such data, that would pose a change in another sub-register (for example: the name or ID of the subject, or deleting a facility), the system must give an alert (preferably even as interactive validation rule on the page, but latest on data submit/save) to the user, that he/she/it is altering also the registration within other role.	
FR044	FR044 Application user sign-on
The register shall allow for user authentication and authorization accordingly to the data model of authorization and authentication entities. When signing in, that shall be started from the "operational statistics and synchronization middleware", where the user account shall be identified (under what entity it belongs to, in case of inspection and [FBiH only] inspection-control accounts (FAZ) this - the "context" shall be selected by the user) and the login redirected to the entity-installed instance of the system. There the login and further operation shall continue.	
FR044.1	FR044.1 Application user sign-on (system-wide administrators)
Specific situation is for: <ul style="list-style-type: none">the system-wide administrators, who may enter not only the entity-installed system but also the middleware part (especially for the administration of enological evidence)Inspectors from various bodies. They should be able to login IN THEIR OWN entity system instance, but using these credentials enter other instance or the middleware (provided they have an appropriate role assigned there). (see "Administration" - user roles administration note).	
FR045	FR045 General sync (without publication of new)
The synchronization must also be performed due to an automatic / scheduled event, without the event of publication of new subject, its editing or search. The unavailability of the "operational statistics and synchronization middleware" part of the system must not prevent any of the "local" operations (local = in the entity-installed system instances).	
FR046	FR046 Addresses
When the attribute is any geographical address, this should be input using a selector from an internal addresses register. The editing (adding new address records or changing it attributes, as well deleting) of the addresses register has to be enabled.	

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3.7 P.I.: Functional requirements - API and Administration

FR047	FR047 API provision
<p>While the contractor is encouraged to build any GUI on top of a well-designed and maintained API architecture, it may happen that some of the GUI functionalities shall handle directly the RDBMs if not all. In that case, following are the minimum functionalities, that MUST be provided by an (usually authenticated) API:</p> <ul style="list-style-type: none">• any repeated data entry (especially annual declarations; submit only)• reading of any lists/registers whose values are being used as data in any API operations (the management may be in GUI only though)• any cross-system used functionalities <p>typically:</p> <ul style="list-style-type: none">• from enological evidence into GOV VWR - (declarations, facilities) - IMPORTANT: This should be done not against "middleware" API, but directly against the relevant local entity instance)• from GOV VWR middleware into enological evidence (such as listing all declaration IDs, declaration related subjects data listing, enums/lists etc.)• from entity-installed system instance into "operational statistics and synchronization middleware" (back and forth) <p>[RS] A specific requirement is then a specific set of functions needed for the "Subsidies register" in APIF (access to vineyards).</p> <p>Note: The API authentication itself may be omitted from the single login entry point requirement in FR044 Application user sign-on.</p> <p>Note: When providing data containing any addresses as attributes, then the register/middleware HAS TO PROVIDE not only the ID of the address, but its fully structured textual representation as well (in case of enology evidence the consuming system shall have not the addresses register synchronized, unless agreed differently in initial analysis).</p>	
FR0047.1	FR047.1 Federated sign-on API
<p>For the usage of single login entry point, the system has to provide:</p> <ul style="list-style-type: none">• an authentication endpoint as pre-agreed during initial analysis with the contractor of P.II for federated login• user data (including IDs and logins) synchronization	
FR048	FR048 Administration
<p>The system shall have a GUI part accessible for administrators of the system only, used to maintain:</p> <ol style="list-style-type: none">1. [register+middleware] the integrity and purity of the records (including synchronization errors)2. [register+middleware] editing of enumerations and other registry lists (note: enumerations and other lists are to be edited in the middleware authoritatively, where the local register installations may override/add certain items, see functional description)3. [register+middleware] editing of the register of addresses; based on the IR001 Integration with GIS for geospatial data may also include the administration of updates/data batch imports from the Statistical agency.4. [register RS] editing of AAA settings (roles (=MS AD groups) assignment to their rights (=functions within the system); roles creation and user account assignments into roles if the access to the respective MS AD OUs permit)5. [register FBiH, Brčko + middleware MVTEO] editing of local (system internal) AAA settings (roles assignment to their rights (=functions within the system); roles creation and user account assignments into roles; users creating/deleting/edit)6. [register + middleware] Administration of reports definition (register: 6a. internal reports as well 6b. published reports, middleware: 6a. the specific reports on the "aggregated" data from the data of 6b. reports published a and synchronized from the entity instances)7. [middleware] Wine classification lists <p>Note 4./5.: The assignment of "roles" is meant for LOCAL ROLES ONLY. The authentication of an user from other systems shall be possible, but the local system (entity instance, middleware) may remain "inaccessible" since the user has no role there. So while the user lists (and IDs including login) have to be shared (and the GUI shall provide a convenient method of filtering "other instance" users out), the roles shall be assigned only locally by the local administrators.</p>	

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FR048.1	FR048.1 Administration - submission year (vintage)
<p>The system shall have a GUI part accessible for administrators of the system only, used to create/open/close the reporting (submission) years (vintages) for:</p> <ul style="list-style-type: none">• Declaration of harvest• Declaration of production• Declaration of stock• Declaration of trade <p>There shall be a functionality on notification of the operation, e.g. sending out emails to all registered subjects and contacts, that a vintage/submission year/season has been opened, prolonged or closed (note: this shall not be linked directly to the operation itself, while it shall be an independent functionality just to open a window with predefined text, allowing the administrator to change it and send it out or schedule the sending out).</p>	

4. Requirements catalogue - Non-functional requirements

This part of the documentation specifies all other "general" constraints of the system, that the system should follow and respect in all its parts.

4.1 Non-functional requirements - Architecture (AR)

These requirements specify those needs that are somehow limiting or specifically asking for a concrete design of the modules and their interconnections of the system at various levels of its architecture (SW, HW and even orgware if necessary).

Detailed concepts of the architecture may be specified in separate diagrams in the appropriate parts of the documentation if necessary.

AR001	AR001 Modularity and scalability
<p>Any platform used for any layer/part of the system should provide possibility of</p> <ul style="list-style-type: none">horizontal scalability (increasing performance and/or availability by adding nodes of the same purpose and functionality on the same "level" or "layer")vertical scalability (increasing performance and/or availability by splitting the operation into multiple nodes one dependent on the services on another; note: this includes but is not limited to techniques such as ORMs, microservices, correct usage of object-oriented architecture design patterns etc. where considered appropriate by the contractor) <p>the abovementioned done either by design of the platform itself or by design of the system being implemented on it.</p> <p>The design of the system should provide reasonable level of modularity one may expect, done mainly by architecture design, especially but not limited to techniques such as:</p> <ul style="list-style-type: none">the minimizing of in-between entities/libraries/modules/parts relations and dependenciesclean and documented dependency tree or graph (see Documentation requirements)design patterns and proper using of interfaces, inheritance and other means of correct object-oriented designetc.	
AR002	AR002 Architecture layers
<ul style="list-style-type: none">The system shall provide its functionalities using internal webservices, which shall be consumed by most of the GUI functions or external GUI or WS functions. Some GUI functions (administrative ones) may work directly with the database RDBMS or LDAP.The presentation layer shall be separated from the application/RDBMS layer as much as possible and as expected by best practices.The internal implementation of presentation layer, if dependent/generated on application layer, shall preferably make use of the MVC-based techniques and frameworks.	
AR003	AR003 Platform and RDBMS
<p>As required per IT strategy of the Bosna and Hercegovina, the server-side components must be Microsoft based technologies:</p> <ul style="list-style-type: none">MS-SQL as RDBMSIIS-runnable platform (e.g. any server-side scripting/runtime platform, that can be operated reliably in an enterprise environment as an Windows Server IIS module - this includes not only native ASP.NET but also PHP, Apache Tomcat JRE JSPs and other ISAPI-compatible technologies*) for the GUI/WS (server-side application layer)Microsoft Windows services for daemons (may launch other binaries/interpreters) <p>Client components (if used depending on the User interface requirements) shall be compatible and fully working on Microsoft Windows 7 32/64bit (any language version!) and above.</p> <p>Should any other RDBMS be used (as supporting only! and in accordance with the AR009), than the architecture of the data tier/layer (data storage, database) is to be designed in such a fashion that allows later usage of any data mining / warehousing / business intelligence tools by the customer (does not mean instant usage, some DWH</p>	

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construction/pumps etc. is to be done, of course). These DWH tools are not required to be a part of the delivery of the project, however if any other data storage then a generally recognized RDBMS is proposed, the contractor has to provide information about the possibility of usage of data mining / warehousing / business intelligence tools above such a RDBMS.

A generally recognized RDBMS = any RDBM that:

- is accessible using the standard queries of SQL language on any kind of abstraction layer of data in tables having columns (attributes) with the possibility of relations between them
- is accessible through a network service above TCP/IP level having also its ODBC interface implementation.

**) Please review other requirements of this documentation carefully, as there might be some Windows-integrated features (integrations, Sign-Ons etc.) that have to be usable/supported by the platform plugged into IIS as well.*

AR004	AR004 Hyper-V compatibility
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Any used or delivered binary must be:

- [MVTEO, Brčko] Hyper-V platform compatible
- [FBIH] VMWare (ver. XXXXX) compatible
- [RS] VMWare (ver. 6.7.0) compatible

(in the means of any server-side component running in virtualized OSes).

AR005	AR005 Provided interface
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All the WS functions specified in this document and/or specified later by the detailed analysis done by the contractor have to be made publicly available, if presented as part of the public WS.

AR006	AR006 Operation environment architecture
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The system should be set up according to given requirements and conditions as specified during analysis, respecting the deployment diagrams in this document (where the analysis requests should prevail), and that in at least 2 environments:

- testing environment (does not meet response-time requirements as specified, with exception of those moments, when such acceptance tests are to be performed, that are measuring the performance)
- production environment (that has to meet response time as specified in appropriate requirement)

During the development of the system, the environments shall be regarded as follows:

From beginning of the project up to 2-3 months before Mf

- the testing environment: won't exist
- the production environment: will be called "Mf testing environment" and is to be used by the contracting authorities for testing purposes – the acceptance tests will be based on the performance and behavior of the application being tested on this environment. Up to Mf (or any other moment, when production data shall be filled or the connectivity to production registers established) the contractor shall have free access to the "Mf testing environment", after the Mf (or any later moment as described above) the testing environment shall be converted to "production environment" and the access of the contractor may be limited

After the 2-3 months before Mf (or any later moment as described above):

- the (newly created) testing environment is to be used for acceptance tests as described above (inc. performance tests, for this, the testing environment virtual infrastructure configuration may be temporally matched to the configuration of the production environment, where the licenses and the required resources configuration have to cover this scenario), while a second instance of the application (or a third, fourth...) for development purposes is possible, if allowed by the application system being used by the contractor and/or as far covered by the licenses, for example those that have been calculated for the coverage of the performance tests (this means also separate virtual servers, if necessary, however sharing the same resources as the rest of the testing environment)
- production environment: shall be already used as described in the project schedule, may be without the possible direct access by the contractor.

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Note: The term “environment” may refer either to a virtual infrastructure (Infrastructure as a Service, provided within the infrastructure of any entity in BiH) or any other instance (tenant) of the platform services of the platforms forming the BiH platform(s).

AR007

AR007 Network protocols

- Every part (of the client application) that is connecting to the application server is to employ secure protocols running on the top of the standard TCP/IP protocols (e.g. is user-friendly securable by certificates and/or means of asymmetric cryptography, routable, VPN tunnel-able etc.). Should any other network/transport/connection/relational/presentation protocol be employed, it has to meet the requirements specified by the features of the TCP/IP stack or these features have to be ensured programmatically within higher levels of protocols including the application one (if possible, by the specification of the app. protocol, if not, such protocol cannot be used as substitute for the requirements above))

AR008

AR008 Connection reliability

Client - Server connection must not rely on stable network connections (especially in case of dial-up VPNs).

AR009

AR009 Software licenses

Should the solution proposed by the candidate require any licenses, these licenses have to be calculated within the delivery price and provided as a part of the project, with exception:

- Microsoft Server 2008 R2/2012 R2 [MVTEO:] and above (see MVTEO in OR003 Required HW resources specification); [RS] Microsoft Server 2019
- MS SQL 2008 Standard [MVTEO:] and above (see MVTEO in OR003 Required HW resources specification); [RS] Microsoft SQL Server 2017 Standard

the licenses mentioned above are to be specified with respect to hardware limitations of each of the entity.

For any other licenses following shall apply:

- The licenses calculated and provided within the delivery have to have NO limitation when regarding the migration on different hardware, since this process is under automatic control of the underlying virtualization platform.
- These licenses provided have to be life-long. Licenses with a validity period specified (such as maintenance/assurance or extended support) are not allowed.
- The licenses have to be able to cover the requirements of both environments in accordance with requirement "Operation environment architecture".

AR010

AR010 Software licensing

The entire solution being part of the delivery is foreseeing the handover of the license for any kind of use to the final user of the software (the government of Bosna and Hercegovina, its entities and their respective agencies). Thus:

- any tool necessary for the development and/or build or deployment of the solution has to meet requirements as specified in AR009
- AND the output of the work of the contractor that might form a licensable piece of work must be licensed to the final user.

AR011

AR011 Backup solution

Backup: The provided infrastructure does not provide any other means for backup. It is solely the responsibility of the contractor, to provide a solution for:

- backing up of the entire data and application space of the system in such a manner that a restoration by administrator/IT administrator within 24 hours of time is possible,
- and propose a system of types and scheduling of backups of data assets of the system as part of the “Analysis and system design document” including the provision of the necessary tools (and their licenses) as part of the delivery.

RTO (time needed for recovery of services after disruption) - application&DB: < 1 business day

RPO (time of maximum data loss - longest time between backups) - DB: 2 hours

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AR012	AR012 Entity unique identification decentralization
<p>The system must enable the operation of multiple instances of itself being able to synchronize all entities, sub-entities and their attributes (as required and described per FRs) across all the instances through the central point. A unique, decentralized identification of the entities is therefore required; however, it must provide also the possibility for user-friendly IDs of any format *)</p> <p>The central part of the software must allow to be set up as standalone or may be set-up as part of installation of any of its instances providing the other functionalities.</p> <p>*) Authors note to avoid any doubt: While it is not forbidden nor discouraged to rely on techniques such as UUID/GUID and/or similar approaches, the user should not be bothered by their usage in daily operation, so the user-side IDs should use a different suitable format.</p>	
AR013	AR013 Synchronization techniques
<p>The technology for the synchronization and publishing as mentioned in FR003.1,FR004.1, FR004.7, FR010, FR0012.1, FR017, FR018 is up to the discretion of the contractor (such as but not limited to: application synchronization, database level synchronization etc.).</p>	

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4.2 Non-functional requirements - Integration (IR)

These requirements specify the list of other parts/systems that the application(s) should integrate with. If this integration is not only process-based, but also software based, then the appropriate architectural concepts and/or interfaces specifications can be found in the appropriate part of the documentation.

The information space of Vine and Wine register is required to rely on interaction with automated information systems, which form the following information resources:

IR000	IR000 Integration P.I. and P.II.
<p>The P.I. parts of the system shall be integrated to P.II. parts of the system and vice versa, as specified in the functional requirements / API provision and other relevant specification.</p> <p>This requirement is excluded from the possibility of IR999 Integration fallback</p> <p>This requirement foresees and the contractor understands and agrees, that the API of this integration may change during the entire project until 4 months prior to Mf.</p>	
IR001	IR001 Integration with GIS for geospatial data
<p>The register, where geospatial data is to be displayed or edited, has to do so by usage of:</p> <ul style="list-style-type: none">• A FBiH cadastre GIS API (if available)• Google Earth GIS• any other provided GIS solution by the contractor (please review licensing requirements carefully!!!)	
IR002	IR002 Addresses register
<p>If it shall be possible, the internal register addresses shall draw its data from the Statistic agency and or CIPS register.</p>	
IR003	IR003 MS AD LDAP SSO(RS mandatory, FBiH/Brčko optionally)
<p>Microsoft Active directory LDAP:</p> <ul style="list-style-type: none">• For authentication of users accessing the register• For download of respective groups the user is part of• For creating/deleting/renaming the MS AD groups (in specified OU) from within the administration GUI of the register.	
IR004	IR004 Phytoregister SSO (FBiH/Brčko/MVTEO)
<p>Phytoregister (existing register already running on the various sites) internal:</p> <ul style="list-style-type: none">• For synchronization of users being then authenticated within the VWR	
IR005	IR005 RPG (subject data + optional SSO)(FBI)
<p>[FBIH] The system shall access the RPG register for initial data linking and loading of a subject being registered and regularly for data updates.</p>	
IR006	IR006 APIF (RS)
<p>[RS] There shall be two directions of integration:</p> <ul style="list-style-type: none">• APIF as source of data about a subject (source for registration, subject updates) - the processes as RPG (subject linking, registration, data update)• APIF accessing the VWR register for obtaining information on vineyards.	
IR998	IR998 Means of access
<p>The external systems will be accessible using methods according to documentation given to the contractor after signing of the contract and relevant documents and use them in scenarios as defined above and/or during detailed analysis.</p> <p>The scenarios may include not only basic / automated / batch identification and data completion on the subjects/entities, but also automatic updates, resulting integrity cross-checks and warnings etc. based on the use-cases of the respective registers and their possibilities/requirements.</p>	

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IR999	IR999 Integration fallback
<p>If any of the (integrated) registers (apart from <u>IR000 Integration P.I. and P.II.</u>) should not perform according to requirements needed by the register, following measures are to be taken by the contractor and other parties involved (one after another or in parallel, as the situation requires):</p> <ul style="list-style-type: none">• Specification of the under-performing system and negotiation for diagnosing bottlenecks and other issues in the implementation or in the underlying infrastructure that might cause the problems. For this negotiation the presence (preferably on-site) of the contractor is required.• Rectification of the state using optimization on the side of the register (such as for example but not limited to asynchronous calling with the possibility of listing the tasks for (user) reaction on the returned asynchronous calls, limitation of the minimal set or range of input parameters etc.)• Rectification of the state using batch processing (again with user-accessible lists of errors / ambivalences to be decided/fixed) and/or the possibility to input these values as “text-only” (without the synchronous verification on the respective register)• Cancelling of the integration of register with the respective external register – as a written amendment to the contract only – including the delivery of any changes needed to ensure the operation of the system according to all other specification within the scope and original budget of the project up to a degree the contractor can be fairly asked. (This does not apply for those "linked" registers (RPG, Phytosanitary), that are only as an authoritative data source providing same data as already implemented and administered in the VWR itself, including their SSO if provided. In such case the integration can be cancelled without any further substitutive functionalities addition into the register). <p>This applies especially for Single-Sign-on solutions: In case of RS the MS LDAP and in case of FBIH the RPG and Phyto register. Especially when it comes to RPG/Phyto register: there are cases foreseen, when the user/subject being registered in the VWR is NOT registered in these systems (merchants for example, but may be also vineyard owners not drawing any subsidies). For such cases the system HAS TO HAVE its own internal SSO (that applies to authority/governmental users in FBIH/MVTEO as well).</p>	

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4.3 Non-functional requirements - Interfaces (GUI/WS..) and user requirements (UR)

These are general requirements for the structure and layout of the interfaces the software shall be employing to communicate with its outer world, including the users.

UR001	UR001 Web application
<ul style="list-style-type: none">For any parts/modules used by more than 3 users or more than 2 users on geographically distant location or more than 2 users in different organization or environments it is required, that the client application is a web application (providing a web interface to the users) <p>(Note: The client-side application MAY contain any security/validation and other relevant business-functionalities especially for interactivity reasons, provided that the very same are being employed on the server side.)</p>	
UR002	UR002 Supported browsers
<p>All web-browser-based parts of the delivery shall support following browsers (rendering engines):</p> <ul style="list-style-type: none">browsers based on the <i>Trident</i> core engine (IE)browsers based on the <i>Blink/Gecko</i> core engine (Chrome, Firefox, Opera, Edge) <p>(all in current version and one previous major version, as long as supported by the manufacturer to the date of the delivery milestones (Mf/Mw) that are stated in the project schedule requirements).</p>	
UR003	UR003 Multiple instance
<p>The software should allow for each user to open and run more the one instance, without the instances interfering with each other.</p>	
UR004	UR004 Multilingualism
<p>The system, including the prototype/pilot/testing semi-products, delivered at any stage of the project, has to have a bi-lingual user interface (implemented in a manner allowing easy localization of UI texts into next language (XML, DLL...)).</p> <p>The minimum required languages for the delivery shall be featuring:</p> <ul style="list-style-type: none">"English" (script: Latin)"Bosnian" (script: Latin/Cyrillic)"Croatian" (script: Latin)and "Serbian" (script: Latin/Cyrillic) <p>version of all descriptions, labels, short texts and context help tooltips (mock-up prototype delivered by M1 may be in English only), this also applies for selection lists, all above (in "Bosnian" and "Serbian") able to feature both scripts (Latin/Cyrillic).</p>	
UR005	UR005 Autocompleting
<p>Any value being edited that is based on an enumeration list has to provide an auto-completion feature when being edited in a graphical user interface.</p>	
UR006	UR006 Display size and resolution - workstation screens optimization
<p>The GUI has to be fully working (e.g. fully visible without horizontal scrolling (unless necessary as given by functional requirements) and/or any kind of additional magnification and/or objects layering/overlapping and design-responsive to any resolutions as stated here) on the monitors of client PC workstations:</p> <ul style="list-style-type: none">Physical screen sizes: 15" and aboveResolution: starting at 1024px horizontally and 768px vertically.Aspect ratios: 4:3, 16:9, 16:10, 1:1, 3:4, 9:16 and 10:16	
UR006.1	UR006.1 GUI responsiveness and mobile devices UI
<p>The GUI shall provide a layout-responsive design for the usage (e.g. visible and allowing to carry out all actions (where possible) without objects layering/overlapping and design-responsive to any resolutions as stated here) of portable mobile client devices (such as tablet, smartphone; incl. <i>dpi</i> dependency):</p> <ul style="list-style-type: none">Physical screens size: from 6" up to any (even hand-luggage sized)	

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- Resolution: any
- Aspect ratio: any
- Shaped/Cut-out displays: fully rectangular displays optimizations only, w/o cut-outs

This applies especially for:

- OSAS middleware - public statistics and trace paths (P.I.: FR017, FR017, FR018, FR019)
- Enology evidence (P.II.: FR020-FR025)
- E-commerce platform customer frontend (P.II.: FR030-FR035)

UR007

UR007 Credits

The logo of the “Czech development agency” has to be visible on at least ~6% of surface of splash screens/title pages/graphical materials and at least ~4% of documents accompanying the software, all of them in accordance to the „Graphical manual” as published on the <http://www.czechaid.cz/wp-content/uploads/2016/09/Graficky-manual-CR-pomaha-a-loga.zip>

UR008

UR008 Externally loaded 3rd party references

When the application uses any 3rd party components, such as but not limited to cascading style sheets, scripts, fonts, images etc. then these have to be bundled together on the same installed instance provider as the application. Referencing from 3rd party external sources is not permitted. The bundled components have to allow such bundling and redistribution within their license.

UR009

UR009 Accessibility

Especially public parts of web pages, that means specifically:

- OSAS middleware - public statistics and trace paths (FR016, FR017, FR018, FR019)

shall be graphically and functionally designed and styled in such a fashion, to fulfil the requirements of:

- Directive [\(EU\) 2016/2102](#) of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies and related [Commission Implementing Decision \(EU\) 2018/2048 of 20 December 2018](#) on the harmonized standard for websites and mobile applications drafted in support of Directive (EU) 2016/2102 of the European Parliament and of the Council specified especially in the

- **European normative act EN 301 549 V2.1.2 (2018-08)** and other norms, that are published (in accordance to the [Regulation \(EU\) No 1025/2012](#) of the European Parliament and of the Council of 25 October 2012 on European standardization), by the published reference (links) in the Official Journal of the EU as required by the Commission Implementing Decision (EU) [2018/2048 of 20 December 2018](#) on the harmonized standard for websites and mobile applications drafted in support of Directive (EU) 2016/2102 of the European Parliament and of the Council (Official journal L 327, 21.12.2018, PDF page 84—86)

yet only to such an extent, under which the realization of such accessibility would not impose a disproportionate burden on the expected budget of the project. as per Article 5 of the Directive [\(EU\) 2016/2102](#) of the European Parliament and of the Council of 26 October 2016.

For further information see also: <https://digital-strategy.ec.europa.eu/en/policies/web-accessibility>

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4.4 Non-functional requirements - Performance (PR)

List of required performance measures.

PR001	PR001 Number of users
Expected no. of concurrent users (parallel requests handled in same time-frame given for such requests): <ul style="list-style-type: none">internal max 20 <u>per instance</u>, does not apply for the public version	
PR002	PR002 Number of workstations
PCs that could be eligible to run the system: <ul style="list-style-type: none">internal users: 500pcs+.external users: any	
PR003	PR003 Network bandwidth usage
<ul style="list-style-type: none">Working without any uncomfortable delay (see "Response time") on ADSL lines from 1MBit (latencies may exceed 200ms) download upwards up 4MBit (60% of clients may reach the highest theoretical download speed;) (This delay should be solved also for including documents (files) uploads - implemented as non-blocking asynchronous GUI background batch tasks if necessary.)	
PR004	PR004 Response time
<ul style="list-style-type: none">It is required, that the local GUI software response to the user actions is immediate (= such a short time, that an average human cannot tell the time period, thus under approx. 40 msec).The response for a user action requiring any data loading (does not apply for enumerations that can be reasonable preloaded) shall be either within 3 seconds (inc. GUI rendering, excl. those factors the contractor objectively could not influence in a direct or indirect manner) or has to be followed by a blocking waiting dialog with cancellation possibility or implemented as a non-blocking batch system with possibility (GUI) of management of the tasks in a cue.Any process/action/requirement resulting in processing time longer than tens of seconds (e.g. 1-2 minutes or more, such as report generating) has to be defined and implemented as an automated batch process with a GUI enabling the user control of the queue (manual start, scheduling, log/output lists for obtaining the results (if not agreed otherwise) and a list of running batches with the possibility of termination), as proposed and agreed in the "Analysis and system design documentation". This does not necessarily apply for reports where appropriate.	

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4.5 Non-functional requirements - Security (SR)

What threats and risks should the system address and how, including ACLs etc.

SR001	SR001 Information integrity and authenticity
<p>The requirement of information integrity means a condition of data, when they preserve their content ensuring its expected level of integrity, accessibility and efficiency and are interpreted unambiguously despite of- and protected from- unpredictable influences causing their loss, denaturation, distortion and unauthorized use, where and up to the extent the contractor may be held liable for (esp. but not limited to the design of transactions, data manipulation, storage and backup solutions and their configuration design and operation during any kind of maintenance tasks). The requirement of information veracity is the degree of data compliance of data stored in computer memory to the actual condition of the objects in a specific area of the system that they represent. This means especially the fact that the system has to ensure not to distort and/or omit/loose data being committed into it without corresponding reporting of the error or condition preventing to keep the data authenticity.</p>	
SR002	SR002 Information confidentiality & non-repudiation.
<p>Means the system has to be designed in such a way that it is providing means and resources for:</p> <ul style="list-style-type: none">• enabling the personal liability (under the laws in force) of employees working in the system for unauthorized use and dissemination of personified confidential information (e.g. access control, logging)• and preventing them to extent or execute their authorization beyond its original designation. <p>Non-repudiation means the system has to be designed in such a way that it is providing means and resources for:</p> <ul style="list-style-type: none">• preventing any person in any role or with any kind of access permissions, in a malevolent intention or by mistake, to delete, alter or hide traces thereof, of a system state (or data values) based on which a (contractually, by law, regulatory or other) binding statement has been issued or is being continually provided (such as for example registration/declaration certificates/acknowledgements etc.).	
SR003	SR003 AAA
<p>Authentication and authorization of the system shall be done against</p> <ul style="list-style-type: none">• RS: MS AD mandatory;• FBiH/Brčko: Internal database of users, however the users have to be integrated with the current Phytoregister (see IR004) (optionally: with MS AD)• PHPA: Internal database of users. (optionally MS AD/Phyto register)	
SR004	SR004 Authorization groups
<p>Groups aggregating the various register functionalities (allowed for the specified group) shall be mirrored and created in the respective MS AD OU (RS). Groups into the Phyto register shall not be synchronized.</p>	
SR005	SR005 Data record access management
<p>All records have to be accessible only based on the organizational structure that means, that any operator may see only those records created (and "owned") by him, his colleagues from the same department or of his subordinate departments, if not specified otherwise for his/her user-role.</p>	
SR006	SR006 Network-level security prerequisites expectations
<p>The application might not be set up in any secure and consistent enterprise environment (the operators for the various organizations may not be using any kind of unified infrastructure) – this applies also for example to the local storage of configuration (if applicable) of the client application etc.</p> <p>The public part of the application may be set up against the open public non-restricted access network (on technological level) thus any part of the application reachable before and also after performing authentication has to be secured against all known attacks against- and weaknesses of- all the platform whose services are exposed to the public, directly or indirectly. A suitable segregation of the computing nodes (DMZs, multi-layer networks separated by FWs etc.) should be done where appropriate (especially when protecting either personal/user data and those data entities/attributes that form the meaningful information the register is about to supervise/authorize).</p>	

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4.6 Non-functional requirements - Operation and maintenance (OR)

These requirements specify what limitations and constraints the system should respect concerning its further operation and maintenance. This includes but is not limited to:

- warranty terms
- SLAs
- administration/configuration files/possibilities
- etc.

OR001	OR001 Operating environment
<p>The contractor is obliged to use the platform (Infrastructure as a service) of virtual servers provided by the</p> <ul style="list-style-type: none">• Virtual platform in RS• Virtual platform in FBiH• Physical/Virtual platform in MVTEO <p>and integrate into them as required by the platform and its operators.</p> <p>Preliminary structure of the deployment may be observable from the deployment diagram in chapter of "Business system description".</p>	
OR002	OR002 Network architecture
<p>All inner functions of the software shall be accessible through multiple network types, including non-secured public networks, as well internal networks of the governmental organization.</p> <p>Outer functions (cross-instance between the instance and central publishing part etc.) shall be accessible either through public Internet or through VPN.</p>	
OR003	OR003 Required HW resources specification
<p>The contractor has to specify (for those solutions, that should rely on the Infrastructure as a Service) the required hardware and OS platform resources:</p> <ul style="list-style-type: none">• as part of the tender proposal• as part of the "Analysis and system design document" at M1• with latest update 1 calendar year before production environment start planned in the schedule• It is expected, that the specification gives the total amount of servers/CPU/RAM/storage and their respective breakdown on single servers.• The contractor is entitled to require any changes to his virtual data center at any time provided it does not exceed the total amount of resources reserved and the frequency rate of such changes remains in a reasonable limit per month.• The required configuration of resources has to be able to cover the requirements of both environments in accordance with Operation environment architecture requirement. <p>There are following maximum limitations on the hardware resources required by the contractor:</p> <ul style="list-style-type: none">• RS/FBiH (per each entity): 6 cores, 12GB RAM, keeping the number of discrete OS/virtual machines at a reasonable minimum. - FBiH: Capacity may be determined according to the results of the tender and requirements of the software.• Brčko: As separate instance on FBiH or MVTEO platforms (note: the number of users is negligible here)• MVTEO: Resources disponibility of: 1. HV cluster 6 node, 6 proc, 12 core, 480GB RAM, MS Win Srv 2019 Data Center, IIS 10; 2. DB cluster 2 node, 2 proc, 16 core, 512GB RAM, MS SQL 2019 Standard; storage 5TB	
OR004	OR004 SLA
<p>This contract does not expect any operation; thus, it does not define any SLAs with the exception of warranty SLA.</p>	
OR005	OR005 Warranty SLA
<p>(See linked document)</p>	

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OR006	OR006 After-warranty support
1 year after the end of warranty period a free support for the BIH ¹ programmers shall be present (remote only).	

¹ BIH programmers are considered to be any IT personnel hired on future VWR maintaining jobs by authorities in BIH

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OR005 Warranty SLA

During the warranty period (2 years minimum, see "Output and actions schedule milestones"), the contractor is obliged to provide solutions in following time frames:

Error grade	Reaction time (using el. communication)	Commence of rectification - a. event occ.:	Regime	Solution time (or providing a temporary solution) - after event occurrence:
A	4 hours (anytime)	<i>not specified</i>	7×24	8 hours anytime
B	4 working hours	<i>not specified</i>	5×8	5 working days or longer, if agreed by the contracting authority
C	4 working hours	<i>not specified</i>	5×8	10 working days or longer, if agreed by the contracting authority

Error grade "A" means such an error that halts the operation of the system completely or prevents the execution of any of the key processes (use-cases) of the system within any step of these processes. A temporary solution of an A-grade error is regarded as a (reported) B-grade error.

Error grade "B" means such an error that either allows the operation of the system however with difficulties or using alternate or more complicated methods/approaches or prevents the execution of support processes (use-cases) within any step of these processes.

When a B-grade error preventing the execution of typically administrative processes results in the impossibility of execution of any of the key processes by any party, it is regarded as an A-grade error.

A temporary solution of a B-grade error is regarded as a (reported) C-grade error.

Error grade "C" means any other errors or the claiming of other agreed and not delivered features etc.

*) Even in case that an error may require the physical presence of the contractor's representative on-site, these times may be not prolonged unless agreed in advance as a contract amendment.

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5. Requirements catalogue - Other (software) requirements

The project-based requirements.

5.1 Other (software) requirements - Software legal requirements (LR)

LR001	LR001 Legitimacy and respect for human rights
The creation and operation of the system should be in accordance with the national and European legislation (specifically as enlisted in respective requirements below), international treaties and agreements, where and up to the extent the contractor may be held liable (specially concerning design and the execution of functionality of the system).	
LR002	LR002 Control
Stands for the system's ability to support and provide means for the totality of organizational and technical measures for the system, ensuring high quality of state information resources, high reliability and correctness of their use in accordance with the law and ensuring operational and convenient access to information for the user, according to its access level;	
LR003	LR003 State identification of objects (persons) of registration
It is required, that the system fully supports the state identification of objects of registration, which provides for existence of a single identification index for each of them (if not required otherwise by respective exceptions as defined in the functional requirements).	
LR004	LR004 Applicable law
<p>Especially following laws shall be considered:</p> <ul style="list-style-type: none">• Zakon o upravo postupku 2/98 and 48/99• Law on strong alcoholic beverages (Zakon o jakim alkoholnim pićima SL.gl. RS 81/15)• Law on wine (Zakon o vinu SL.gl. RS 80/15) or followers thereof and related regulations• Determination and Allocation of Viticulture Regions (SR BiH OJ, 24/84)• Law on wine and wine (FBiH no. 55/12) or followers thereof and related regulations• Law on Wine, Brandy and Other Grape and Wine Products (BiH OJ, 25/08)• Law on Wine and Brandy (Brčko District BiH OJ 35/05, 19/07);• Commission Delegated Regulation (EU) 2018/273 of 11 December 2017 supplementing Regulation (EU) No 1308/2013 of the European Parliament and of the Council as regards the scheme of authorizations for vine plantings, the vineyard register, accompanying documents and certification, the inward and outward register, compulsory declarations, notifications and publication of notified information, and supplementing Regulation (EU) No 1306/2013 of the European Parliament and of the Council as regards the relevant checks and penalties, amending Commission Regulations (EC) No 555/2008, (EC) No 606/2009 and (EC) No 607/2009 and repealing Commission Regulation (EC) No 436/2009 and Commission Delegated Regulation (EU) 2015/560• for specific modules (parts of the application) as stated by UR requirements: Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies and related Commission Implementing Decision (EU) 2018/2048 of 20 December 2018 on the harmonized standard for websites and mobile applications drafted in support of Directive (EU) 2016/2102 of the European Parliament and of the Council specified especially in the <u>European normative act EN 301 549 V2.1.2 (2018-08)</u>	

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5.2 Other (software) requirements - Testing requirements (TR)

How (using what tools and techniques and what processes and organization) shall the resulting product be tested. May also contain acceptance criteria as whole.

TR001	TR001 Test cases requirements
	<ul style="list-style-type: none">• All tests/test cases have to reference either a requirement specified already in this Contract/Tender documents or a requirement provided during the analysis. One requirement may result in multiple tests, and one test may cover multiple requirements, if necessary (e.g. the level-of-detail should provide at least such a detail, that each test-case belongs to each function/requirement or small groups thereof). (Note: this does not apply, if necessary, for the “global” (non-functional) requirements, which may be tested either<ol style="list-style-type: none">1. within another test case (but this has to be stated as a requirement being tested by the test)2. separately within an acceptance test or3. within a test without a scenario: a mere “statement” test, such as “according to chapter XYZ in the documentation the application has 3 tires” or “(...) the system has a software application with functionalities covering each of the 3 modules”))• Each test has to provide a step-by-step manual for performing the relevant test, including all input values and expected outputs.• If a test may fork into multiple variants based on the data input, all possible inputs (or at least their groups – classes of values) have to be tested.• Each test case (especially in the printed version being used as annex for the acceptance Mf) has to provide free space, where the result and final resolution (passed/passed with objections/failed) can be noted.• The test cases are to be described in English language (except the labels/buttons/software I/O texts and data I/O).• The first testing will be done by the contractor, but the test scenarios will be accessible, and the second times run by the CRA and BIH entity/district parties as selected during the acceptance procedure. <p>The above mentioned does not intend to influence nor it may not replace any internal testing procedures of the contractor.</p>
TR002	TR002 User acceptance tests
	<p>Based on the test cases the system will be tested by CRA and BIH entity/district parties or the respective departments during the acceptance procedure for Mf and Mw.</p>

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5.3 Other (software) requirements - Migration requirements (MR)

What data/knowledge from previous instances of the product (application) shall be maintained and migrated into the new version (if any).

MR001	MR001 No migration
<p>The project at this development stage does not foresee any data migration from no previous software versions or other data sources.</p> <p>This is without prejudice to (this shall not affect):</p> <ul style="list-style-type: none">• any requirements for altering design or project actions in such a manner to make this possible• or any requirements emerging in later stages of the project or later follow-up projects. <p>(Note: It is expected that the current 36 registrations of Wineries register in RS shall be retyped manually by the customer - authority.)</p>	

6. Requirements catalogue - Risks to be addressed

Note: Issues and requirements in this chapter are here for:

- information to the candidate
- as cooperation advice, since the solutions used by 3rd party to address or solve these risks / issues may result into other requirements for the software. The chosen candidate has to cover these solutions as far as they can be fairly held liable within the contract.

	RR001 Legislative framework of the business is not stabilised yet
The legislature, especially the regulations, aren't clear yet, neither did they pass through the entire legislation processes of the respective governmental bodies.	
	RR002 (Declaration) forms templates are not stabilised yet
The forms have advanced in their definition substantially since the beginning of the project, yet with regard to the current political situation there may be changes still ahead. These should not alter the forms templates in any substantial way, but certain attributes/structure changes may occur.	
	RR003 The business-process responsible authority for Wine classification is not yet known
The business entity (authority) that shall be responsible for performing the "Wine classification" has not been incorporated into the project yet.	
	RR004 Detailed availability of hardware platforms not known
It is known, that there will be hardware platforms available for running the system, yet their detailed availability is currently unknown: <ul style="list-style-type: none">• RS: The capacity should be there and structure is known.• FBiH: The capacity shall be determined according to the results of this tender.• Brčko: Might be installed and operated on one of the FBiH or MVTEO platforms. While this project does NOT expect any hardware delivery, it is influenced by the hardware capacities asked by the project software and their availability.	
	RR005 Inspectors access
Every entity has their own inspectors, yet it is still unknown for sure, if there any need for a cross-entity inspectorates data read shall arise. Therefore the "Authentication" functionalities and systems are to be designed as flexible as possible, preferably using open standards.	

7. Requirements catalogue - Other (project) requirements (general)

7.1 Other (project) requirements (general) - Project legal requirements (PL)

PL001	PL001 Contractor subject requirement
The contractor has to be an active subject, established with accordance with its country's legislation, being able to fulfil the liabilities represented by this documentation and not undergoing any winding-up, liquidation or bankruptcy petition process.	
PL002	PL002 Contractors behavior
Any project-related action or step (including any kind of business communication) of the contractor has to meet: <ul style="list-style-type: none">• Czech law• Bosna and Hercegovina law inc. local entity-based deviations• International laws and contracts• Polite and respectful manners of business relations	

7.2 Other (project) requirements (general) - Project management requirements (PM)

What managerial approaches and processes should be followed and what results achieved within the project of:

- development
- maintenance and operation
- testing
- implementation and setup
- handover
- etc.

Including DR&CP (Disaster recovery & Contingency planning) scenarios etc.

PM001	PM001 Project management responsibility
The contracting authority expects that the project is being managed and coordinated by the successful candidate, using any of the currently recognized formal project methodologies.	
PM002	PM002 Project documents repository
It is expected, that the candidate will also create and maintain in a central repository all the documents, that shall be output of the project, as prescribed by the list of documents (according to templates in POxxx requirements) and as prescribed by this document. Any documentation containing information of or about the following authorization classes must not be stored in repositories publicly or 3rd party accessible (this includes also data storage services such as Google Drive, Microsoft OneDrive, Drop Box etc.): <ul style="list-style-type: none">• "secret" or "top secret"	

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- "confidential"

- "protected"

where:

- secret or top secret = information of data or data being classified to the specified degree by national legislation, additional requirements for the subjects handling such data may apply, however this project does not foresee handling of any of such data
- confidential = information of or data, whose disclosure may directly reveal substantial information that might lead to any kind of abuse, gaining unjustified profit or predominance of one party above another one, this concerns also private (personal) data of physical persons including sensitive data about them. Data giving hint to-, forming or directly representing the meaning for whose control and record keeping the system is mainly designated are also considered confidential.
- protected = information being not publicly available, yet their knowledge gives or might give either direct or substantial indirect opportunity, facilitation or aid for gaining access to information with higher level of protection (e.g. confidential, secret or top-secret).
- non-public = information (or data) not belonging to either of the previous categories, however requiring protection and non-disclosure since they are not meant for publication (e.g. the scope of their intended addresses or other persons meant to deal with them is enumerable by a finite list of persons, contacts, groups, roles etc.). If not belonging into any of the previous categories, the "business know-how" and similar belong to this category.
- public = information or data belonging to neither of the previous categories, that can be or are being made available or accessible to anyone without preceding knowledge or designation of the scope of those subjects.

7.3 Other (project) requirements (general) - Cooperation requirements (PC)

The candidate shall indicate in his proposal, what kind and range of cooperation he expects from the contracting authority. This should be done for the following parts of the project:

PC001	PC001 Project management
Cooperation needed for project management	
PC002	PC002 System design, implementation, testing, acceptance
Cooperation needed for system design, implementation, testing and acceptance	
PC003	PC003 Production deploy & operation
Cooperation needed for system production run within the warranty period	
PC004	PC004 Risks
Cooperation needed for acceptance, mitigation, transfer or prevention of risks (in such case a risk analysis has to be performed, listing all threads possible, the likelihood of their occurrence, impact analysis and the proposed type of reaction).	
PC005	PC005 Other cooperation
Other cooperation needed inc. training	

7.4 Other (project) requirements (general) - Project outputs requirements (PO)

A note on the structure and list:

The meta-model diagram of documentation as well its descriptions are featuring the expected obligatory structure and minimum content of each of the items (minimum information given, e.g. elements and their relations used or minimum table-of-contents outline).

Note on the mandatory / optional items:

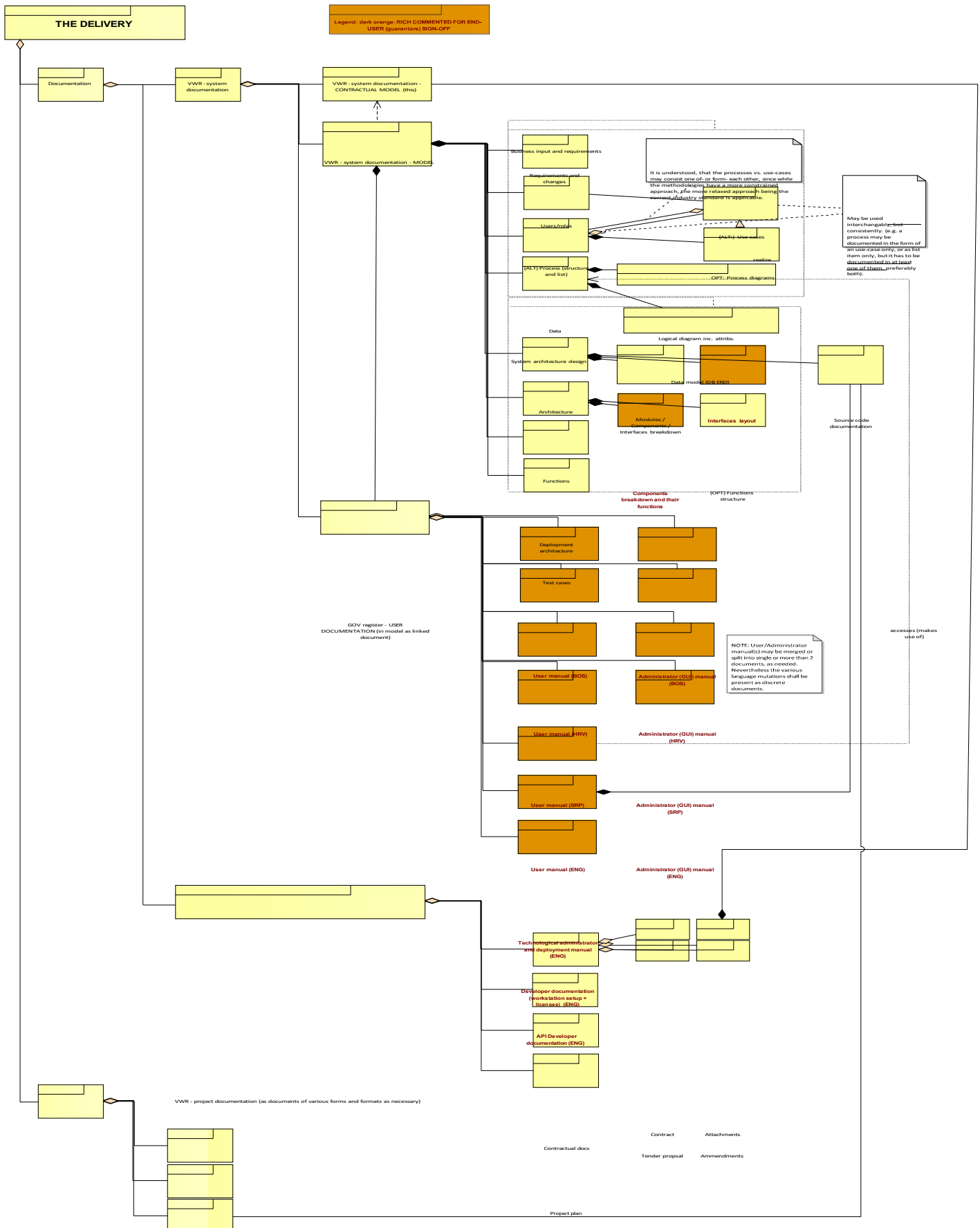
While an item in the following text or in the referred model may be labelled as "Optional" (or "OPT"), its inside textual description describing its outline may bear the tags "Mandatory". This is no way contradictory, it only means, that "SHOULD the documentation item be used (if necessary) THAN (and only then) it shall follow at least those outlines or mandatory elements/links required in its description."

The contractor may append any other diagrams/models/notation recognized as necessary during the project.

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7.4.1 Diagram: Delivery content - P.I.: Delivery content



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Co-operation
requirements

Meeting minutes

Delivered software

Installed instances

Updates and patches

Source codes

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➤ **(ALT) Process (structure and list)**

Containing:

- Mandatory: Processes (actions/activities ... formal name depending on notation used) being supported by the SW and their respective relations (Composition/Aggregation)

LOD:

- Up to the level of assignable user rights (assignable functions) to the respective roles in the administration.
- Note: Should be linkable to "Components breakdown and their functions")

Notation:

- ArchiMate any ver. - Business layer / Application layer; UML any version: Activity diagram; Structured lists

➤ **(ALT:) Use-cases**

Containing:

- Mandatory: User roles
- Mandatory: Use-cases performed by the respective roles
- Optional: Use-case structure ("include" etc.)

LOD:

- Up to the level of assignable user rights (assignable functions) to the respective roles in the administration.
- Note: Should be linkable to "Components breakdown and their functions")

Notation:

- pref.: UML any ver. - Use-case diagram
- also possible: ArchiMate any ver. Business/Application layer; Structured list.

➤ **(OPT) Functions structure**

The structure of functions interacting with each other and/or accessing other services.

Containing:

- Mandatory: Application Components/Services/Functions and their structure and interactions
- Opt.: Any other Application layer objects (concepts)

LOD:

- no specific preferences

Notation:

- ArchiMate any ver. Application or eventually Technology layer

➤ **Administrator (GUI) manual (BOS)**

Use-case by use-case description of administrator actions and the ways of performing thereof (HOW-TOs) or the very same based on the modules and functionality tree of the software.

➤ **Administrator (GUI) manual (ENG)**

Use-case by use-case description of administrator actions and the ways of performing thereof (HOW-TOs) or the very same based on the modules and functionality tree of the software.

➤ **Administrator (GUI) manual (HRV)**

Use-case by use-case description of administrator actions and the ways of performing thereof (HOW-TOs) or the very same based on the modules and functionality tree of the software.

➤ **Administrator (GUI) manual (SRP)**

Use-case by use-case description of administrator actions and the ways of performing thereof (HOW-TOs) or the very same based on the modules and functionality tree of the software.

➤ **API Developer documentation (ENG)**

(no specific requirements)

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➤ Components breakdown and their functions

Links of functions to their respective application modules/parts.

Containing:

- Mandatory: Application modules (structure) and their respective functions
- Opt.: Any other Application / Technology level objects (elements/concepts)

LOD:

- no pref, should be linkable to either "Use-cases" or "Process (structure and list)"

Notation:

- pref.: ArchiMate any ver. - Application layer

RICH COMMENTED FOR END-USER (guarantors) SIGN-OFF, may be joined into one document / model with Interfaces layout.

➤ Co-operation requirements

Containing required role, its description and schedule as per PC001

➤ Data

IMPORTANT NOTE: With no prejudice to tool and notation used, however any data model featuring relations and having attributes noted within the class/entity objects (such as but not limited to: class diagram, tables and columns, RDBMs generated documentation etc.) HAS TO meet following requirement: The relation lines have to start/end (being anchored) on the line of attribute of primary or foreign key being used in that relation.

➤ Data model (DB ERD)

Containing:

- Objects/views/procs, their attributes, constraints and relations, all with description of their meaning

LOD:

- 1:1 to technological (SQL-level view) representation in the RDBMS used.

Notation:

- no pref.

IMPORTANT NOTE: With no prejudice to tool and notation used, however any data model featuring relations and having attributes noted within the class/entity objects (such as but not limited to: class diagram, tables and columns, RDBMs generated documentation etc.) HAS TO meet following requirement: The relation lines have to start/end (being anchored) on the line of attribute of primary or foreign key being used in that relation.

➤ Deployment architecture

Containing:

- Architecture components representable as artefacts, e.g. packages deployable on nodes; nodes and infrastructure describing a technologically configurable environment, including network architecture + ports used between components.

LOD:

- To be usable for administrators/deployment team and infrastructure opponency

Notation:

- pref.: ArchiMate any ver. - Technology layer

➤ Developer documentation (workstation setup + licenses) (ENG)

- Development prerequisites needed for the code to be run (including 3rd party tools installers where possible or necessary from the point of view of the licensing terms) inc. processes and means of keeping track of changes and patching changes made during the warranty period.
- Development environment setup guide (may include virtual machines images, services mock-ups etc., however these do not substitute the step-by-step guide)
- License numbers / registration data for components that should require such a number or registration.
- May contain also a clone-able virtual image of a developer workstation

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➤ Functions

The functionality of the respective modules/components of the system (ArchiMate - app layer (preferred) OR UML Component)

➤ Interfaces layout

Interfaces layout of GUI, WSs, APIS...

For webservices:

- Methods list
- their I/Os attributes
- exceptions.

For GUI:

- rich textual description of the functionalities,
- can be also provided in the form of the User / Administrator manual.
- Schemas up to the detail of data attributes (depicted as input fields labels and list/table headers) and functionalities,
- featuring at least one example representing also the graphical layout (template) for each type of functionality.

RICH COMMENTED FOR END-USER (guarantors) SIGN-OFF, may be joined with Components breakdown in one document/model.

➤ Legend: dark orange: RICH COMMENTED FOR END-USER (guarantors) SIGN-OFF

Any of the dark orange elements denotes a deliverable where:

- in case of a model rich textual description should be provided, enabling to deliver the information to end-user even when he or she is not familiar with the notation (e.g. typically: the diagram description should state the very same information as depicted on the diagram including not only the various objects/elements, but the description should convey also the information represented by the various relations between the objects)
- in case of textual documents these are to be written for non-professional end-users (in case of manuals) or non-developer/programmer users (in case of document for technological administrators) or (in case of developer/programmer documents) in a friendly and easy-to-understand way.

➤ Logical diagram inc. attribs.

Containing:

- A full list of data entities existing throughout the entire system and their relations, including full list of their attributes (logical perspective, not physical) (UML class diagram).
- Optionally: data entities may be additionally represented multiple times with specification of variants of each used for persistence, data flow within the I/O of various interfaces etc. (for example: while a person may have the set of 20 attributes, this data entity may be represented not only as "general one" having 20 attributes, but also as a data entity of some say WS or GUI, where only 10 of the attributes are used).

LOD:

- Data entities on logical level up to their atomic attributes, where the word "atomic" means "representable as some electronically recognized data type"

Notation:

- pref.: UML any ver. Class diagram RICH COMMENTED FOR END-USER (guarantors) SIGN-OFF
- any other - Crowfoot, Coad/Yourdon, generic ERD, tables/lists...

IMPORTANT NOTE: With no prejudice to tool and notation used, however any data model featuring relations and having attributes noted within the class/entity objects (such as but not limited to: class diagram, tables and columns, RDBMs generated documentation etc.) HAS TO meet following requirement: The relation lines have to start/end (being anchored) on the line of attribute of primary or foreign key being used in that relation.

➤ Modules / Components / Interfaces breakdown

Architecture of modules/components of the system and their relations

Containing:

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- Mandatory: Components
- Mandatory: Composition/aggregation links
- Optionally: Services etc., realization/assignment and other links.

LOD:

- Application parts(modules) up to discrete I/O sets (screens, templates, controls, reports...) See PO006

Notation:

- pref.: ArchiMate any ver. - Application layer
- alt.: UML any ver. - Component diagram

➤ OPT: Process diagrams

Containing:

- The processes descriptions/flows, branching, data flows

LOD:

- no specific requirements

Notation:

- No specific requirements, try to avoid ArchiMate business layer, rather UML Activity/Sequence/Sync diagrams or BPMN.

➤ Requirements and changes

Containing:

- Mandatory: Requirements, issues and the changed/added requirements with "trace" relations in between them.

LOD:

- All requirements/issues/changes independently on their respective LOD,

Notation:

- SEA Requirements model

➤ Source code documentation

Source codes files / configuration projects and resource's structure overview and description

Containing:

- The source code files + meta data (project files for IDE etc.) including comments
- any kind of structured overview of the file's groups and their link to respective modules (architecture modules - LOD 1. in PO006)) + their inner logical program design structure (classes, object model)

➤ Technological administrator and deployment manual (ENG)

Deployment and technological architecture manual, including

1. full step-by-step manual for installation of the application (including basic schemas of application layout and setup possibilities, if applicable),
2. the documentation of all the configurable variables in any configuration repositories (such as but not limited to: the Microsoft Windows registry, any text/xml/csv/tabbed/json and similar files, the database, configuration repositories of any kind in any proprietary software including the RDBMS being used, templates/reports and the available variables for the report templates configuration; if a 3rd party software is used, then the documentation may be covered by the documentation of the 3rd party software itself, however an addendum has to be made about how the configuration influences the delivered software).
3. Network architecture and ports used between the components (may use the "Deployment architecture" diagram)
4. Backup & recovery plan containing:
 - Analysis of data assets (may be part of data models)

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- Architecture of backup solution(s) being employed
- Data assets <--> backup solution(s) (which asset is backed up by what solution and with what frequency, type of backup etc.)
- Steps to check the backups being done correctly (per type of backup solution) or (should this require manual operation) the manual for performing these steps.
- Steps to recover each data asset (per type of backup solution)

➤ Test cases

- All tests/test cases have to reference either a requirement specified already in this Contract/Tender documents or a requirement provided during the analysis. One requirement may result in multiple tests, and one test may cover multiple requirements, if necessary (e.g. the level-of-detail should provide at least such a detail, that each test-case belongs to each function/requirement or small groups thereof).
(Note: this does not apply, if necessary, for the “global” (non-functional) requirements, which may be tested either
 1. within another test case (but this has to be stated as a requirement being tested by the test)
 2. separately within an acceptance test or
 3. within a test without a scenario: a mere “statement” test, such as “according to chapter XYZ in the documentation the application has 3 tires” or “(...) the system has a software application with functionalities covering each of the 3 modules”)
- Each test has to provide a step-by-step manual for performing the relevant test, including all input values and expected outputs.
- If a test may fork into multiple variants based on the data input, all possible inputs (or at least their groups – classes of values) have to be tested.
- Each test case (especially in the printed version being used as annex for the acceptance Mf) has to provide free space, where the result and final resolution (passed/failed with objections/failed) can be noted.
- The test cases are to be described in English language (except the labels/buttons/software I/O texts and data I/O).
- The first testing will be done by the contractor, but the test scenarios will be accessible and the second times run by the- departments² or CRA as selected during the acceptance procedure.

The above mentioned does not intend to influence nor it may not replace any internal testing procedures of the contractor.

➤ User manual (BOS)

Use-case by use-case description of actions and the ways of performing thereof (HOW-TOs) or the very same based on the modules and functionality tree of the software.

➤ User manual (ENG)

Use-case by use-case description of actions and the ways of performing thereof (HOW-TOs) or the very same based on the modules and functionality tree of the software.

➤ User manual (HRV)

Use-case by use-case description of actions and the ways of performing thereof (HOW-TOs) or the very same based on the modules and functionality tree of the software.

➤ User manual (SRP)

Use-case by use-case description of actions and the ways of performing thereof (HOW-TOs) or the very same based on the modules and functionality tree of the software.

➤ Users/roles

Structure of the organization affected and the resulting software roles.

Containing:

- Mandatory: Independently on independently on their LOD, entire list of roles (and their permitted functionalities - see Use-cases/Processes) must be present

² Departments means appropriate service within specific ministry

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LOD:

- Up to roles (and their assignable functions - see Use-cases/Processes) that shall be set up in the software.

Notation:

- pref.: ArchiMate any ver. Business layer
- also possible: UML - Use-case any ver.; Structured list.

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7.4.2 Project outputs requirements (PO) - General

PO000	PO000 Project outputs
The structure and requirements for project outputs refer to the appropriate diagram " Diagram: Delivery content "	
PO001	PO001 Output forms - methodical
<p>Any diagrams or schemes being part of the project output in neither technological representation should be created:</p> <ul style="list-style-type: none">Using a formal notation such as the preferred UML (1.1 and above) or BPMN, EPC or ArchiMate (version 3.x preferred). <p>OR</p> <ul style="list-style-type: none">(Especially for smaller/high-level schemas or schemas intended for end users) Using any notation, supposing all the elements used within the schema are covered in the appropriate legend.	
PO002	PO002 Output form - technological
<p>The system documentation described as "MODEL" shall be delivered</p> <ul style="list-style-type: none">as a shared model (no important what technique, if a mailed/shared eapx/feap file, XMI imports/exports including those realized using the CVS integration or shared SEA cloud or database)as a model report (DOC(X) or PDF with reasonable size, split into multiple documents and reasonable comments period) <p>with an exception of those marked in dark orange color in the diagram (Data-logical diagram, Interfaces layout schemes/designs and Components breakdown and their functions), that are to be delivered as readable by non-it personnel (a specific SEA report template fulfilling this requirement is also acceptable).</p> <p>The system documentation described as "USER DOCUMENTATION", while it may be stored in the model as empty packages containing linked documents only, shall be delivered as:</p> <ul style="list-style-type: none">Human written and non-IT specialist readable Office format documents (PDF, DOCX, XLSX, PPTS, JPEG/PNG/BMPs or open software variants thereof). <p>The documentation described as "PROJECT DOCUMENTATION", being stored separately, shall be delivered in those formats the contractor sees fit, if not able to export / preview in software without a license or free of charge, the contractor has to provide at least 4 licenses to the contracting authority for the entire duration of the project including its warranty period.</p>	
PO003	PO003 Trackback
<p>For all SEA model elements applies:</p> <p>All these have to be traced back either to any meeting or other kind of dialogue within the analysis phase or to the original requirements within this Tender annex. Should any chapter/requirement of this annex prove as obsolete, this has to be mentioned explicitly in the "Analysis and system design document".</p>	
PO004	PO004 Language
<p>All project outputs shall be in English language, with exception:</p> <ul style="list-style-type: none">Software I/O on GUI as per UR004User and administration manuals, same multilingual rules apply as UR004	

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7.4.3 Project outputs requirements (PO) - Analysis and system design documentation

This document has to address following aims:

- The “central point” for capturing of requirements, architectural concepts and decisions
- The reference (may be auto-generated) for (public as well private/protected etc.) modules, classes/source files, methods, variables and data entities (persistently stored as well used inside the run-times)

It is required, that the “Analysis and system design document” exists in the following versions, e.g. is created and updated (maintained) at least for following stages of the project:

- Finalization for the project acceptance (delivered by Mf) – this version should incorporate seamlessly all the changes done during the project implementation & testing and has to reflect exactly the state of the software/system as accepted during the acceptance phase.
- Finalized version + differential change lists (annexes) AND entirely updated document if any warranty corrections should be done (delivered by Mw) – Documents recording the changes that have resulted from any warranty claims. Change lists should refer to relevant warranty claims or have their own acceptance clause, the updated document(s) (inc. source code) are to be delivered only as electronic version with all the factual changes resulting from changelogs have to be reflected.

The minimum content is as follows:

PO005	PO005 (updated until M1, Mf, Mw) Business input and requirements
<p>Consisting of (horizontal spec.):</p> <ul style="list-style-type: none">• Requirements catalogue, issues and the changed/added requirements (SEA "Custom diagram"),• and thereof resulting users/roles (UML or ArchiMate)• carrying out their respective use-cases and/or process(es) on the data, (UML/ArchiMate, BPMN where necessary)• enlisted as a full list of data entities existing throughout the entire system and their relations, including full list of their attributes (logical perspective, not physical) (UML class diagram). <p>Optionally: data entities may be additionally represented multiple times with specification of variants of each used for persistence, data flow within the I/O of various interfaces etc. (for example: while a person may have the set of 20 attributes, this data entity may be represented not only as "general one" having 20 attributes, but also as a data entity of some say WS or GUI, where only 10 of the attributes are used).</p> <p>Minimum level-of-detail (LOD - vertical spec.):</p> <ul style="list-style-type: none">• All requirements/issues/changes independently on their respective LOD• user/roles independently on independently on their LOD, entire list of roles (and their permitted functionalities) must be present• data entities on logical level up to their atomic attributes, where the word "atomic" means "representable as some electronically recognized data type"	
PO006	PO006 (updated until M1, Mf, Mw) System architecture design
<p>Consisting of (horizontal spec.):</p> <ul style="list-style-type: none">• Architecture (breakdown) of modules/components of the system and their respective functionality (ArchiMate - app layer (preferred) OR UML Component)• Interfaces design/layout of GUI, WSs, APIS containing: For webservices: methods list, their I/Os attributes and exceptions. For GUI: rich textual description of the functionalities, schemas up to the detail of data attributes (depicted as input fields labels and list/table headers) and functionalities, featuring at least one example representing also the graphical layout (template) for each type of functionality.• Detailed data documentation for each of the module (data structure in the database, data structure of I/O messages etc. - note: the diagram may contain only the DB persistence, the other may be and are encouraged to be part of the respective documentation of WSes, system classes (such as MVC - Model) etc.) (ERD / UML Data modelling diagrams)	

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- Deployment diagram (how the respective modules/components are deployed and where (ArchiMate technol. layer (preferred) OR UML deployment diagram)
- Test cases (UML testing)

Note: As one may reason from the text above, the architecture design documentation is required only in the form of a "static" perspective. However, a dynamic (process-oriented) documentation has to be added where the collaboration of multiple parts of the system may not be easily deduced. However, this dynamic view documentation does not have to be comprehensive (done for each of) for all the functions/functionalities/cases/processes intended within the system.

Minimum level-of-detail (LOD - vertical spec.):

- Architecture of modules/components of the system = a "module" is considered up to a component having the size of single I/O screen/report or its part devoted to a single or prevailing data entity, proposed minimum LODs:
 1. General overview of modules (= system and its main parts forming different binaries to be setup on different servers)
 - 2.(or up to 3.) Module's structure (what pages/templates/ function groups/WSs/robots or automated agents triggered events etc. the part consists of)
 - OPT: 3. (or up to 4.) Inside parts structure (control sets/custom control/ custom sub-templates/WS methods) does each page/function group/WS consist of.
- their respective functionality = full list of functions that the part (on level 1.-2. above, optionally: 3.-4.) provides, the LOD of the functions is let up to the discretion of the contractor
- Data (physical representation) up to their atomic attributes, where the word "atomic" means "representable as some electronically recognized data type"
- Deployment diagram = components representable as artefacts, e.g. packages deployable on nodes, nodes and infrastructure describing a technologically configurable environment
- Test cases (UML testing) = at least in such a detail, that each test-case belongs to each function/requirement or small groups thereof.

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7.4.4 Project outputs requirements (PO) - Manuals

As annexes to the Analysis and system design document, following system manuals are to be delivered as addition to the abovementioned documentation (each in all languages as indicated by the abbrev. in braces):

PO007	PO007 (until Mf, updated if necessary, until Mw) The user manual (ENG/BOS/HRV/SRP)
Fully describing all of the functionalities and processes covered by the software and the ways of their usage designated for all roles of end-users, excl. user-side administrators.	
PO008	PO008 (until Mf, updated if necessary, until Mw) The user manual for administrator
Fully describing all of the functionalities and processes covered by the software and the ways of their usage designated for the user-side administration tasks (such as for example the editing of registry or selection lists if not covered by a (manual for a) specific GUI).	
PO009	PO009 (updated until Mf, Mw) Technological administrator and deployment manual
<ul style="list-style-type: none">• Deployment and technological architecture manual, including<ol style="list-style-type: none">1. full step-by-step manual for installation of the application (including basic schemas of application layout and setup possibilities, if applicable),2. the documentation of all the configurable variables in any configuration repositories (such as but not limited to: the Microsoft Windows registry, any text/xml/csv/tabbed/json and similar files, the database, configuration repositories of any kind in any proprietary software including the RDBMS being used, templates/reports and the available variables for the report templates configuration; if a 3rd party software is used, then the documentation may be covered by the documentation of the 3rd party software itself, however an addendum has to be made about how the configuration influences the delivered software) and3. Network architecture and ports used between the components (may use the "Deployment architecture" diagram).4. Backup & recovery plan containing:<ul style="list-style-type: none">• Analysis of data assets (may be part of data models)• Architecture of backup solution(s) being employed• Data assets <--> backup solution(s) (which asset is backed up by what solution and with what frequency, type of backup etc.)• Steps to check the backups being done correctly (per typ of backup solution) or (should this require manual operation) the manual for performing these steps.• Steps to recover each data asset (per type of backup solution)	
PO010	PO010 Developer documentation (workstation setup + licenses)
<ul style="list-style-type: none">• Development prerequisites needed for the code to be run (including 3rd party tools installers where possible or necessary from the point of view of the licensing terms) inc. processes and means of keeping track of changes and patching changes made during the warranty period. + Development environment setup guide (may include virtual machines images, services mock-ups etc., however these do not substitute the step-by-step guide)• Documentation for (developer) licenses delivered (license/registration/invoice numbers and registration/activation codes, proof of origin if available, other information/software/hardware needed for activation, acquiring, email user access login/password/etc. for account the licenses have been registered to if not provided by beneficiary)• Source codes files / configuration projects and resource's structure overview and description (UML: any kind of structured overview of the files groups and their link to respective modules (architecture modules - LOD 1.)) + their inner logical program design structure (classes, object model).	

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PO011	PO011 API Developer documentation
<p>Public and internal API (each as separate document!) developer documentation, one for each type of an endpoint (SOAP/DLL/COM, header files, network endpoints etc.) describing:</p> <ol style="list-style-type: none">1. Methods exposed (including their link to relevant requirements and the processes it belongs to)2. Their I/O data and their attributes up to atomic items (primitive datatypes), including their allowable ranges and content types/forms; in case of numbers or lists influencing the flow of the handling of the data also with documentation on the specific values and the consequences on the process for each of them.3. Their exceptions and errors that can be thrown/returned, their possible reasons (as a short textual fault analysis guide) and possible solutions.	

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7.4.5 Project outputs requirements (PO) - Project documentation

PO012	PO012 (continuous updates) Project documentation
	<p>The project (management) documentation shall consist of:</p> <ul style="list-style-type: none">Contractual docs (e.g. the contract, its attachments, amendments and contractor proposal in the tender) NOTE: While the electronic copy of these document shall be accessible within the repository, the contractor does not have to provide it back to the awarding authority when delivering the delivery at any milestone.Cooperation requirements plan (required role + schedule) - may be done also as a set of (outlook or other similar PIM) invitations with at least one month in advanceRepository of meeting minutes.Project plan as per PO013 including schedule
PO013	PO013 (continuous updates) Project plan
	<p>A project plan has to be created and further maintained by the candidate (contractor), containing at least the following information:</p> <p>A) An organizational a managerial structure of the project, consisting of:</p> <ul style="list-style-type: none">Roles of project participantsand their mutual relationsand their competencies within the project and outside the project (towards the broader scope of stakeholders around the project).The name of physical persons acting within these roles (employees or equivalent of the contracting authority as well the contractor). <p>B) The project schedule (based on the required schedule as described in these terms and requirements), including the milestones of the project, that have been identified and set during the preliminary as well main analytic phases. It is required, that at least following phases and their items are scheduled within the schedule (the following list does not cover those phases/items, which arise or might arise from other requirements):</p> <ol style="list-style-type: none">(phase) Analysis: (item) physical presence for analysis phase on-site(phase) Analysis: (item) creation of the "Analysis and system design documentation"(phase) Analysis: (item) creation and opponency of schemas/mock-ups or beta-version of the GUI of the final system and the "Analysis and system design document"(phase) Analysis: (milestone) Acceptance of the "Analysis and system design document"(phase) Testing: (item) physical presence for supporting the (acceptance) testing phase on-site(phase) Testing: (item) Acceptance testing by the contracting authority(any appropriate phase) training periods(phase) Support: (item) Support (remote or on-site in Bosna and Hercegovina (any entity/city), when needed) for warranty claims that might emerge during the production usage of the system within the warranty period agreed within the contract. <p>C) List and contents (and preferably templates) of relevant project documents</p> <p>D) Project meeting types and schedules</p> <p>E) Other project-dependent processes and their agendas including the required cooperation by the contracting authority</p>

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7.4.6 Project outputs requirements (PO) - Software

As annexes to the Analysis and system design document, following software are to be delivered:

PO014	PO014 (continually) Software - installed instance
<p>As a part of the delivery, the software has to be installed (and covered by all licenses required):</p> <ul style="list-style-type: none">• (until M1) Mock-ups /beta-version prototype in any remote-access capable environment provided by the contractor, based on the "Analysis and system design document" initial writing version• (until Mf) Set up in designated testing/production environment as beta version / launch version.• (until Mf) Documentation for licenses delivered (license/registration/invoice numbers and registration/activation codes, proof of origin if available, other information/software/hardware needed for activation, acquiring, email user access login/password/etc. for account the licenses have been registered to if not provided by beneficiary)• (until Mw) Code changes applied and delivered according to the warranty period changes. + testing protocols for those (regression) tests that are relevant to these changes.	
PO015	PO015 (continually, optionally) Software - updates and patches
<p>It may be, that by recommendation, no 3rd party employees will have access to the production environment. In such case following documents and sources have to be provided for each patching/update of the production software (typically bugs correction during the warranty period), this also applies for client-side software if necessary:</p> <ul style="list-style-type: none">• Patch binaries/install packages in a form best ready for the installation with the smallest number of steps required (for example: source code is all right, if the installation means the copying of scripts into the web-app directory or compilation with heavy optimization for the target platform that cannot be done in the development environment or is required due to security reasons or considerations; however pre-compiled binaries for Copy&Paste or registration or one-click install – such as but not limited to installation scripts/projects - are preferred)• Patch manual – step by step guide for installing the patch, including the editing of configuration files etc.• Patch tools – any tools necessary for the execution of the steps described in the manual• Client-side software only: Installation tool suitable for user-side install done by operator with little or no IT-related knowledge or suitable for remote/bulk deployment on the target platform. <p>The delivery mentioned above may be omitted if agreed otherwise with the CRA/PHPA/departments during the analysis.</p>	
PO016	PO016 (updated until Mf, Mw) Software - source codes
<ul style="list-style-type: none">• As a part of the delivery, the entire source codes created or being used within the development of the software in any way, unless licensed separately as 3rd party closed binaries, have to be handed over during handover/acceptance (Mf, Mw). <p>All source codes have to meet following requirements:</p> <ul style="list-style-type: none">• Commented in such a level of detail, that at least blocks of code performing complex functions are being described. The comments have to be exclusively in English language.• They all meet the same form of indenting, brackets usage etc.• All variables (including any persistent data such as DB structure description elements and including runtime data such as method parameters or API attributes) have to be named in English language (when the variable name is representing any meaningful information, this does not apply for indexing variables, technological/helper files/stacks/pointers counters etc.) <p>This does not apply for those packages/scripts/objects and other entities of the systems, where such commenting is not possible or some of the concepts (such as variables, bracketing/indenting etc.) are not being used.</p> <ul style="list-style-type: none">• Any changes made during the warranty period have to be handed over as well (as changelog, differential patches or similar), including one last handover of the entire (patched) code at the end of the warranty period or the whole set of patches once more.• During the warranty period of at least 2 years the contracting authority (or any 3rd party in contracted by them) is/are not entitled to make any changes of the software without providing the relevant differential patch being shared and accepted by the contractor by means as described and approved in the "Analysis and system design document" by the contractor.• The contractor is then required to patch his version of source codes (or similar packages/projects/configurations) in order to be able to provide warranty changes.	

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| <ul style="list-style-type: none">• The contractor is not to be held liable for any bugs resulting from within these patches. For clarity the word “resulting” means in the context of this paragraph that either the patched lines/segments of code/configuration entities either throw an unexpected/unhandled error or they alter the data of the application in such a way, that any other lines/segments/configuration entities, even the original ones, throw an unexpected/unhandled error due to this concrete data value. “Data” means not only persistent ones (files, database etc.), but also the runtime data (variables, temporary files, calling parameters of functions/methods, network transported data etc.) within any part of the software application system. |
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7.5 Other (project) requirements (general) - Minimum project actions (tasks) requirements (PA)

PA001	PA001 Project actions general
The contractor shall ensure and perform all steps necessary to reach the goal and aim of the project - the delivery of the system as required by the requirements specified in this document. Above this, following mandatory steps cannot be omitted:	
PA002	PA002 Analysis on-site
It is required, that the contractor provides at least one physical presence on-site (Sarajevo/Banja Luka/Brčko in Bosna and Hercegovina) for performing the process of analysis within the proposed scope.	
PA003	PA003 Analysis in Czech Republic
It is required, that the contractor performs at least one physical presence in Czech Republic (Prague) for performing the process of analysis within the proposed scope.	
PA004	PA004 Acceptance testing on-site
It is required, that the contractor provides at least one physical presence on-site (Sarajevo/Banja Luka/Brčko in Bosna and Hercegovina) in order to support process of testing within the proposed scope.	
PA005	PA005 User training on-site
<p>It is required, that the contractor performs an on-site training in local languages (see UR004 Multilingualism w/o English) for following target audience:</p> <ul style="list-style-type: none"> • 5 system key-administrators if at least 1 nominated by the BiH³ side (IT administrators/developers as well data/user administrators of total max. 5 persons) • 20 key-users (local trainers/support for further users) if at least 1 nominated by the BiH side in the total length of at least 2 days (1 day if no users or no administrators are nominated, 0 days if no users nor administrators are nominated), covering at least following themes: <p><u>IT administrators/developers:</u></p> <ul style="list-style-type: none"> • Source code structure and blueprints/patterns used and employed • System architecture and design (inc. DB entities and relations and key sets of namespaces/packages/classes) • Internal API of the application (inc. DB objects such as stored procedures, triggers etc.) • Application installation and setup parameters (configuration, registry, command line parameters) • Trainees' questions <p>(All the above-mentioned themes especially in such a manner, so that is explaining combination and influence between the various parts of the system.)</p> <p><u>Administrators – data/app:</u></p> <ul style="list-style-type: none"> • Explanation of the admin GUI • Administrative tasks and the performing thereof inc. the demonstration of the impacts in the user-side • Trainees' questions <p><u>Users:</u></p> <ul style="list-style-type: none"> • The application GUI and generic tasks/procedures - handling all the processes as per functional requirements. • The use-cases and the performing thereof; inc. the methodology and methodical remarks • Advanced tasks accessible to the users but not necessary for everyday usage • Demonstration of admin GUI and the impact on the user-side of the application 	
PA006	PA006 Inter-project cooperation.
Every contractor is obliged to provide full support, assistance and resources to the opposite party (contractor) when agreeing, implementing and other interactions between the P.I. and P.II. This includes as well unforeseen schedule changes if one may be held fairly liable for such a change within the given budget.	

³ "Nominated by BiH side" assume personnel that is employee of ministry not associate or specialist temporarily hired by ministry

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8. Requirements catalogue - Tender proposal requirements

The technical part of the contractor (tender contestant) proposal should contain:

	(optional)Tender009 DWH realization
In case the RDBMs is not a not standard one, it is required that the description of realization of a data warehouse (DWH) for OLAP on such a solution (how facts and dimensions are recorded and read).	
	(optional)Tender010 License pricing and maintenance/assurance
If any additional licenses are to be acquired for the solution, the tender proposal has to enumerate: <ul style="list-style-type: none">• the price for such a license• any kind for a maintenance / assurance for 2 years	
	Tender001 Preliminary architecture
Preliminary architecture (as per PO006 - modules breakdown) (may be based on the diagrams being part of this document) specifying concrete platforms, techniques, concepts and 3rd party tools the contractor is expecting to use in order to deliver the various parts/modules of the solution.	
	Tender002 Preliminary data architecture
Preliminary data architecture (as per PO005 or PO006 - data documentation/entities) (may be done as non-contractually obligatory database data model) refining as observed and analyzed from the data diagram and functional requirements.	
	Tender003 Interface schemas
3-5 schemas of selected interfaces (as per PO006 - Interfaces design) with statement what parts/characteristics are typical for the platform used and which may be customized as part of the project, featuring at least one (general) graphical layout example of either previously done applications or designed specifically for the contract presenting the proposed graphical design.	
	Tender004 Backup solution
Proposed backup solution and its architecture and processes.	
	Tender005 Project management and testing
Project procedures and testing (internal) the contractor is intending to employ within the project.	
	Tender006 Patching cooperation
Project procedures the contractor is intending for the patching and cooperation with the developers during the warranty period (when both sides - the users, developers and the contractor - may alter the code).	
	Tender007 Project plan
Preliminary project plan (as per PO013) featuring yellow "TODO" in those places the contractor cannot be yet sure of and additionally including: <ol style="list-style-type: none">1. gaps and questions currently open from the point of view of the contractor,2. cooperation requirements as per PCxxx (including preliminary risk analysis if applicable).	
	Tender008 Preliminary HW requirements
As per OR003 the required HW for deploying the solution has to be specified.	

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9. Tender requirements - Glossary

Abbrev. or term	Meaning and/or description
AAA	Authentication, Authorization and Audit
ACL	Access List - a list of users and their authorizations.
AD	Microsoft Active Directory - a set of Applications and services used to control users, computers, resources and their roles and access within a so called "Windows Domain" network.
administrative decision	A legal act of issuing an official decision, carried out by the governmental/entity-level/municipal governing authority.
ADSL	Asymmetric Digital Subscriber Line - a data communications technology that enables data transmission over copper telephone lines.
API	Application Programming Interface - An interface designed to be accessed, deserialized and used by automated electronic means such as computer programs etc.
APIF	Agencija za posredničke, informatičke i finansijske usluge - Agency for broker, information and financial services of RS, www.apif.net
Application	A software application used to support some process.
AR	Architectural requirement / Architecture requirement
ArchiMate	A notation for software/hardware/orgware inventarization, organization and design.
B/Byte MB/MegaByte	Unit for information data size. T/G/M/k used in customary business manner, unless specified together with Ti/Gi/Mi/ki (1024^n), then the T/G/M/k are used as IEC 1000^n.
BiH	The entire state of Bosna and Hercegovina
Brč	The Brčko District - a single administrative unit of local self-government existing under the sovereignty of Bosnia and Herzegovina.
canton	Organizational sub-division unit of FBiH.
CVS	Concurrence version system(s) - system for storage of (usually textual) data, mostly source code and related files, handling concurrence access and versioning.
ČR	Česká republika - a country in central Europe.
CRA	Česká rozvojová agentura - Czech development agency - an organizational unit of the Czech government in ČR, funding specific projects.
data entity	A data record/sentence, whose attributes relate to the same real-world object. Not to be confused with the term "entity" of the business-political scope in the country Bosna and Hercegovina.
data-entity	see IT "data entity"
date	When used as data type may represent either a calendar date or a calendar date and time type of data.
DB	Database - may refer either to the data itself or an entire RDBMs and its services.
deactivate	Please see "delete"
decision	see "administrative decision"
delete	Please carefully evaluate the usage of word "delete", there are data-entities, that do not foresee real removal of data when "deleting" them, just invalidating them (deactivating the data record, so it does not appear in GUI lists). There may be gui lists whose filtering options may allow for filtering/displaying the deactivated data as well.
dep.	Department
Deployment	Making some application or entire IT system operational and available for its users to use its functionalities.
entity	One of the two entities (autonomous country parts) forming the state of Bosna and Hercegovina. As third self-governed district (can be considered as 3rd site/instance in terms of IT system) there is the district of Brčko. Note: In order to avoid confusion with the word "entity" used in RDMS or other data-related contexts, this project uses for such a RDBMs or data-related entity the term "data entity", see glossary.

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enum	Enumeration - a fixed set of (most typically) integer values with each of them having a specific meaning. It may be also represented as a code-list table or other technology representation of such data-entity).
ERD	Entity Relationship Diagram - a diagram showing entities of an ontology (eventually with or w/o their attributes) and their mutual relations.
E-SSO	Enterprise Single-Sign-On - a (SW) solution for centralized user authentication and authorization management within a network/organization.
EU	European union
Excel	Microsoft Office Excel - software for spreadsheet processing.
FAZ	(FAZM, FAI, FAIM) Federalni Agromediterranski Zavod Mostar (Federal Agromediterranean Institute in Mostar) https://www.faz.ba/en
FBiH	One of the two entities forming BiH: the Federation of Bosna and Hercegovina
file	Set of electronic data belonging together
FR	Functional requirement
geoposition	Data describing the geographical position.
geospatial	Data (technological or logical) describing a geographical position or (more typically) a geographical space/area (formed from multiple positions and relations thereof).
GIS	Geographic Information System - a system used for storing, displaying and management of geographic data (maps etc.) and various layer of geospatial information based on the base (map, geographic grid etc.) layer.
GPS	Global Positioning System
GPS coordinate	A generic data form of geographic latitude/longitude in any of the usual formats DD (decimal degrees), DMC (degrees, minutes, seconds) etc.
GUI	Graphical User Interface - interface of a software designed to be used by humans by displaying information in a graphical form typical for common inter-human understanding.
HW	Hardware
Hyper-V	Virtualization environment of the Windows platform (MS) used to run multiple "virtual" computers on one single computer hardware.
I/O	Input/Output
I/Os	plural form of I/O: Inputs / Outputs
ID	Identifier / identification number
inc	abbrev. Included/Include/Including
inspection	see inspection-control
inspection-control	Because of the ambivalent term of "inspection", the documentation is using two different terms to distinguish between these two concepts: "inspection" (a single sole word) = the process of governmental check of the operational legitimacy of the subject, done by the federal "Inspection". This process may result into administrative decisions of remediation or corrective duties, penalties or even cancellation of registration/operation of the subject (a close-down). "inspection-control" = a process conducted by the FAZ, focused on the compliance of the land-estate registration part (especially vineyards). The resulting corrective measures are focused on the corrected and approved plot geospatial information in the registry.
int	Integer - a binary data structure representation of an integer number.
Internet	An open computer network on a global level, using common protocols with their numerical and identification ranges and assignments being administered by the IANA authority and its sub-accreditees.
IR	Integration requirement
IT	Information technology
KM	Konvertibilna Marka - Bosnia and Hercegovina convertible mark - local currency in BiH
LDAP	Lightweight Directory Access Protocol - a protocol used to access tree-organized data structures, typically structures of user account data (such as MS AD).

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LOD	Level-of-detail - how detailed is the subject depicted.
LR	(software) Legal requirement
M*	Any project Milestone - can be any milestone from the project schedule table.
merchant	a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, other than private consumers or retailers, who holds stocks of wine products with commercial purposes or is involved in their trade and possibly also bottles them, except distilleries; "retailer" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, whose business activity includes the sale directly to the consumer of wine and must in small quantities defined by this Law and regulations derived from the Law, having regard to the special features of trade and distribution, but excluding persons who use cellars equipped for storing or facilities for bottling wine in large quantities, and those who engage in itinerant trading in wine transported in bulk;
Mf	The project final Milestone when the warranty period starts (see project schedule table).
MfA	Ministry for Agriculture, water-management and forestry in FBiH
middleware	See "operational statistics and synchronization middleware"
MoA	Ministry of agriculture (either RS or FBiH)
module	A part of an application.
MR	(data) Migration requirement
MS	Microsoft - a major global software provider.
MS AD	see "AD"
MVC	Model-View-Controller - a programming paradigm e.g. how a software application source code is internally organized and understood by its programmers.
MVTEO (MOFTER)	BiH - Ministry for foreign trade and economic relations (some documents may feature the abbrev. "MOFTER")
Mw	The project ending Milestone when the warranty period finishes (see project schedule table).
network	Multiple computers and other electronic devices interconnected together by a common electric and logic protocol.
operational statistics and synchronization middleware	A single-instance part deployed and operated on the MVTEO infrastructure used as a broker for data synchronization between the entity-deployed instances, as well as a single-entry point for login/registration and displaying public aggregated statistics, lists of subject and registered classified wines.
OR	Operating / Operational requirement
orgware	Set of organizational measures (administrative decrees, people, their organization by roles and responsibilities and procedural standards etc.) achieving some common goal.
ORM	Object-Relational Mapping - a technique representing RDBMs (or other data-storage) objects as code classes with create-retrieve-update-delete or other business functionality, making the client-database communication transparent.
OS	Operating system - basic application to provide user interaction with a computer, especially the service of loading and launching other applications.
OSAS	See.: operational statistics and synchronization middleware
OU / MS AD OU	Organizational unit - a logical data unit containing data of an MS AD
OW	see "orgware"
P.I.	One of the two joint projects for the entire system of Vine and wine register - project no. I. (GOV register and the middleware). For details please see "System business environment description" document, chapter "Functional architecture - project split".
P.II.	One of the two joint projects for the entire system of Vine and wine register - project no. II. (Enology evidence and E-commerce platform). For details please see "System business environment description" document, chapter "Functional architecture - project split".
PA	Project action requirement
PC	Project cooperation requirement/specification

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PHPA	National plant protection agency of MVTEO BiH
PL	(project) Legal requirement
PM	Project management / Project management requirement
PO	Project Output requirement
PR	Performance requirement
pref	abbrev. of "Preference", "Preferences", "Preferred" or "Preferably"
prefs	abbrev of "Preferences"
productset	A term established in this documentation for use in the project to described the data-entity "productset" of "enology evidence" part of the system (see definition of the Class diagram in "Data entity" description chapter.) Note: The logic of the word "productset" is comparable to terms "LOT" or (production) "batch", yet these terms are slightly ambivalently understood in the target business environment BiH GOV, so in order to prevent misunderstanding the author of ToR has deliberately chosen an artificial neologism. It is advisable to pay attention to this problem as well when concerning the "LOT"/"Batch" data attributes of Wine classification and Production declaration data-entities .
px	pixels - a basic unit of graphical display of a computer output on a computer screen
Q/A	Question / Answer
QA	Quality assurance
RAM	Random access memory - a fast volatile computer memory holding data and software being currently executed.
RDBMS	Relational database management system - an IT Application used to store and retrieve data entities interconnected together (referenced between themselves).
Register	In the scope of this document: the aggregate of technical, organizational and other measures to provide the record and evidence of the data in question.
registrant	The subject (legal/physical person of business entrepreneur) who has the legal obligation to be registered in the Register based on meeting certain conditions/criteria.
remove	please see "delete"
reportset	A term introduced in this documentation for use in the project describing a "set of (administrators') setup of filters, table queries and columns including their user-friendly names" used as first and main (entry point) selector of displaying of information from the "product sets" of "enology evidence" in the system.
Rešenje	Local term for the act of "administrative decision".
RPG	Registar poljoprivrednih gazdinstava - Register of agricultural subjects/farmers/persons in FBiH https://fmpvs.gov.ba/registar-poljoprivrednih-gazdinstava/
RS	One of the two entities forming BiH: the Republika Srpska.
script	How various characters/letters are depicted on a computer screen (based on their originating handwriting such as "Latin", "Cyrillic" etc.)
SLA	Service level agreement - measurable parameters how fast / in what deadlines / what quality or durability and continuity some service should be delivered.
SQL	Structure Query Language - a language specified and maintained by the appropriate authority used to manipulate data and data structures in RDBMs.
SR	Security requirement
SW	Software
TBA	To-Be-Announced = the details of the entity / theme introduced in previous text will be stated later or shall be investigated as part of the analysis in the project early stages.
Tender###	Tender proposal description requirement
TODO	To be done = missed residual document creation notes. In case where it does not obfuscate any vital information or any possible variant of specification that might be stated in place of a "TODO" text cannot lead to substantial project/product changes ignore and treat as TBA. In case where this might strongly influence the tender proposal and/or budget, please raise a question to the awarding authority.

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TR	Testing requirement
trace paths	A term introduced in this documentation do described a set of data-entities and/or functionalities of the system used to provide the traceability through various paths of declarations(production, harvest), facilities(vineyards) and subjects in order to provide the best-effort information of the origin of the product (usually wine).
UML	Unified Modelling Language - a set of visualization objects and rules of usage and meaning thereof used to capture and communicate the description of their counterparts in an IT orgware-software-technology system (e.g. a notation used for software design), specified and managed by the Object Management Group, currently in version 2.5.1
UR	User requirement (non-functional requirement applicable the entire application).
ver	abbrev. Version
vineyard harvester	a natural or legal person, or a group of natural or legal persons, whatever legal status is granted to the group and its members, whose holding is situated within the Bosnia and Herzegovina territory and who holds an area with one or more vineyards; "harvester" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, who gathers the harvest of grapes from an area planted with vines in order to market those grapes for the production of wine products by third parties, or to process them into wine products in his holding, or have them processed on his behalf, with commercial purposes
web-shop	An application (usually providing a web GUI) designed and providing functionalities for displaying, searching, choosing and purchasing of goods by (the web-pages) visitors aka customers.
wine producer	a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, who processes himself fresh grapes, musts or new wine still in fermentation into wine or must with commercial purposes, or has them processed on his behalf; "processor" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, by whom or on whose behalf the processing of wines is carried out, the result of which being: wines, liqueur wines, sparkling and semi-sparkling wines, aerated sparkling and semi-sparkling wines, quality sparkling wines or quality aromatic sparkling wines;
WS	Web-service - a type of API accessible over a network.
WSes	plural form of "Web service" (Web Services)



**Tender ToR P.I/II.: system
business environment
description**
Vine and Wine Register in BIH

Document information

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1. Tender requirements - Business overview

The implementation of the Register of vine and wine helps to establish a favourable environment for the transition to the information society and to provision of IT support to the competent authorities in order to increase the food protection in Bosna and Hercegovina and ensure the trace ability of wine products and ensuring their designation legitimacy and protection, not only for enhancing market and consumer protection, but also for protecting the reputation of the country originating wines.

Considering the principles of modularity and expandability of establishment of the system, both subjects handling the wine, as well the wine and its vine origins themselves have to be recorded, as well as the number of information objects recorded in the system and the number of data for each of them can be increased.

In order to achieve this, the system has to be integrated into the current environment of the:

- Ministry of Foreign Trade and Economic Relations (MVTEO)
- Federal Ministry for Agriculture, Water-management and Forestry
- Ministry for Agriculture, Forestry and Water-management Republika Srpska
- The Department for Agriculture , Water-management and Forestry Brčko district BiH

especially when concerning the integration with the respective infrastructure systems (concerning user authentication where applicable).

Most importantly, as one may observe from the processes, the administration consists of following independent registers:

- register of vineyard harvesters (vineyard farmers, vine/wine growers, owners) and their periodical declarations of harvest - based on the terms from the regulation, the "vineyard" means a continuous area of land, declared by a single owner, planted with vines either aimed at the commercial production of wine products or benefitting from the exemptions for experimental purposes or for graft nurseries; "winegrower" means a natural or legal person, or a group of natural or legal persons, whatever legal status is granted to the group and its members, whose holding is situated within the Bosnia and Herzegovina territory and who holds an area with one or more vineyards; "harvester" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, who gathers the harvest of grapes from an area planted with vines in order to market those grapes for the production of wine products by third parties, or to process them into wine products in his holding, or have them processed on his behalf, with commercial purposes;
- register of wine producers (winemakers, wine cellar / production facilities operators, wine processors) and their periodical declarations of production and stock - where, based on the terms from the regulation, the "wine producer" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, who processes himself fresh grapes, musts or new wine still in fermentation into wine or must with commercial purposes, or has them processed on his behalf; "processor" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, by whom or on whose behalf the processing of wines is carried out, the result of which being: wines, liqueur wines, sparkling and semi-sparkling wines, aerated sparkling and semi-sparkling wines, quality sparkling wines or quality aromatic sparkling wines;
- register of wine merchants (traders, retailers, shops and other similar facilities operators) and their periodical declarations of sales and stock, where, based on the regulation, the term "merchant" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, other than private consumers or retailers, who holds stocks of wine products with commercial purposes or is involved in their trade and possibly also bottles them, except distilleries; "retailer" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, whose business activity includes the sale directly to the consumer of wine and must in small quantities defined by this Law and regulations derived from the Law, having regard to the special features of trade and distribution, but excluding persons who use cellars equipped for storing or facilities for bottling wine in large quantities, and those who engage in itinerant trading in wine transported in bulk;

Additionally, the entire solution shall provide following functionalities:

- public access to statistics and tracing lists (including wine classification records)
- enology evidence (a so called "cellar book") which is an optional software tool (not authority-related, only as a tool for those who wish to use it) for the evidence of all manufacturing operations performed with each batch (lot) of wine production each wine producer has to keep (the form is not mandatory, the winemaker can keep these records

for example in paper form, yet the aim if the register is to provide favourable environment for those being regulated, so this shall be one of the optional services)

- e-commerce platform (the possibility of a central wine e-shop where all those using the evidence above can simply publish their goods online and shall receive back e-mail with orders - the logistics of the package is then up to their facilities)
- synchronization between the entity's instances (see further in this text)

The entire software shall be split into following instances (installed parts):

- each entity shall have its own instance, operating on its own, sharing selected data in form of data extracts and precomputed statistics with the other instances through the middleware specified in the next paragraph
- "OSAS" aka "the middleware" - operational statistics and synchronization middleware - a part of the software operated by the state authority (MVTEO) providing the functionalities of public accessible trace lists and wine classification lists, subject registrations, statistics and single login entry point, eventually also the enology evidence (if not decided to be put as part of the entity installation, TBA)
- the e-commerce platform - preferably an independent ready-made e-shop platform fulfilling the requirements for integration and single-shop multi-suppliers clearing platform (may be implemented by the contractor as well)

2. Tender requirements - Local situation overview

The following chapter recapitulates the situation overview of the current state of the software methods for supporting of the register of vine and wine in Bosna and Hercegovina ("BiH" in the following text), especially from the perspective respecting basic analyse of process overview. Thereafter it provides prepositions for the possible architectural solutions of the systems being deployed.

During the study visit a preliminary analysis has been done, revealing following information:

- The country is administratively as well geographically parted into 3 parts, which consists of 2 autonomous entities and 1 autonomous district, namely "*Federation of Bosna and Hercegovina*", "*Republika Srpska*" and the "*Autonomous district of Brčko*" (in green on the map below), each of them running their own registration of vineyards and wineries.

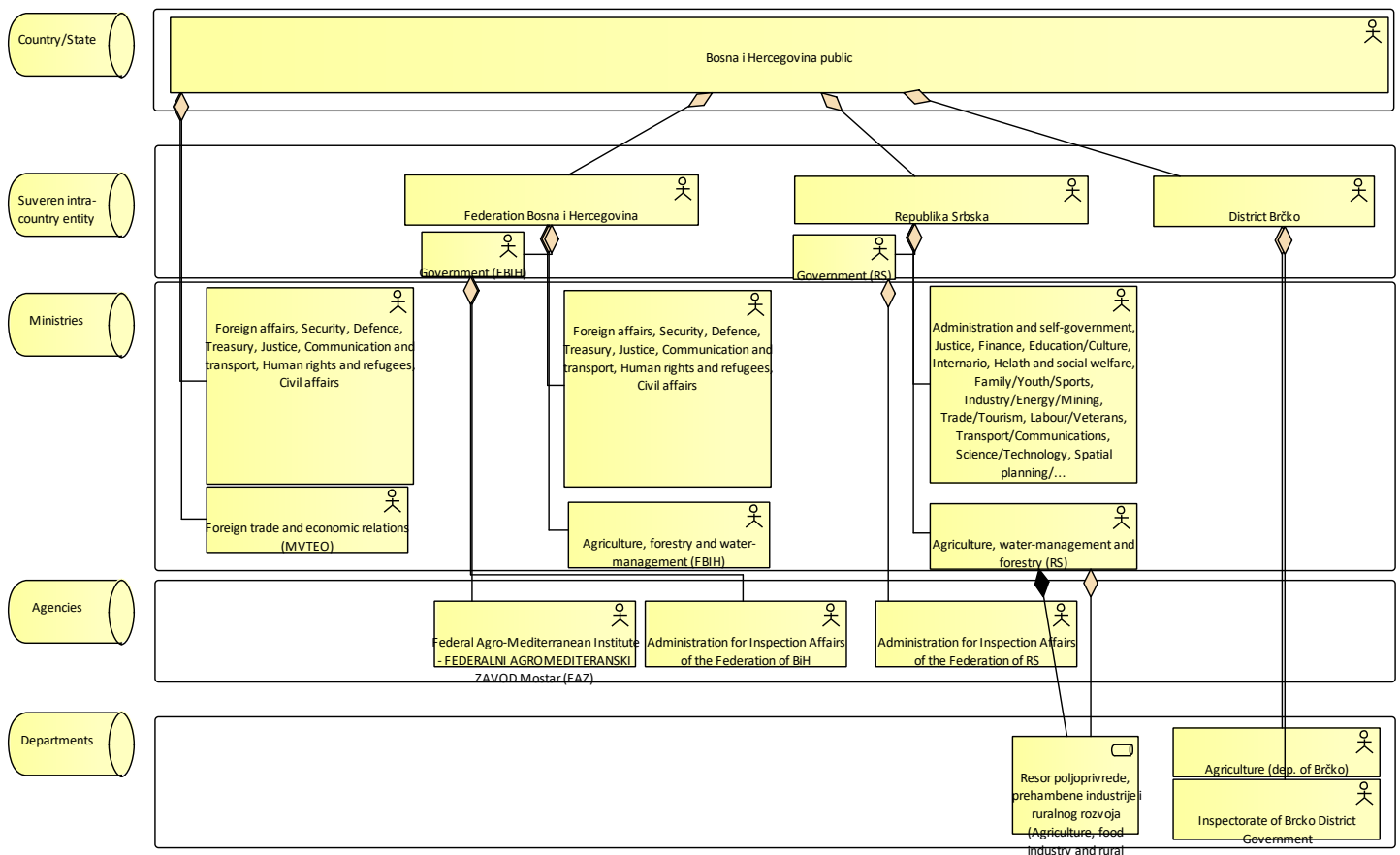


- As one may observe from the processes associated with the respective administration bodies, the processes are based on the legislation of the two entities, which - in the area of winemaking - is based on the originating EU law.
- Within certain areas, the country is running its government agencies as central ones for all the three entities. In this case within the scope of this project this is done for certain processes (the aggregation and publishing of the wine entities and production origin of registered subjects).

As one may observe from the information captured in the document, these processes are very similar, bearing only certain local changes.

3. Organization & processes - Organization - basic information

3.1 Organization schema



The country (state establishment) consists of 2 partially autonomous entities and 1 partially autonomous district:

- fBiH - Federation Bosna i Hercegovina = the federation of 10 cantons, situated mainly in the central part of the BiH and broadening to full extent at its south-west border with Croatia plus a small regions in the north of the country. Together with the country-wide government and administrative, its administrative is situated in the country's capital city of Sarajevo.
- RS - Republika Srpska = split into two parts, situated at the south-east and northern border, with its administrative situated in its largest city Banja Luka.
- Brčko = Autonomous district of Brčko - an autonomous district situated in the northern part of the country at the intersection of the borders of the previous two entities, maintaining also its own administration located in the city.

➤ **Inspectorate of Brcko District Government** (::«ArchiMate_BusinessActor»)

An independent governmental body (agency). Its structure mimics the district administration structure and areas (industry, transport, industry, food....).

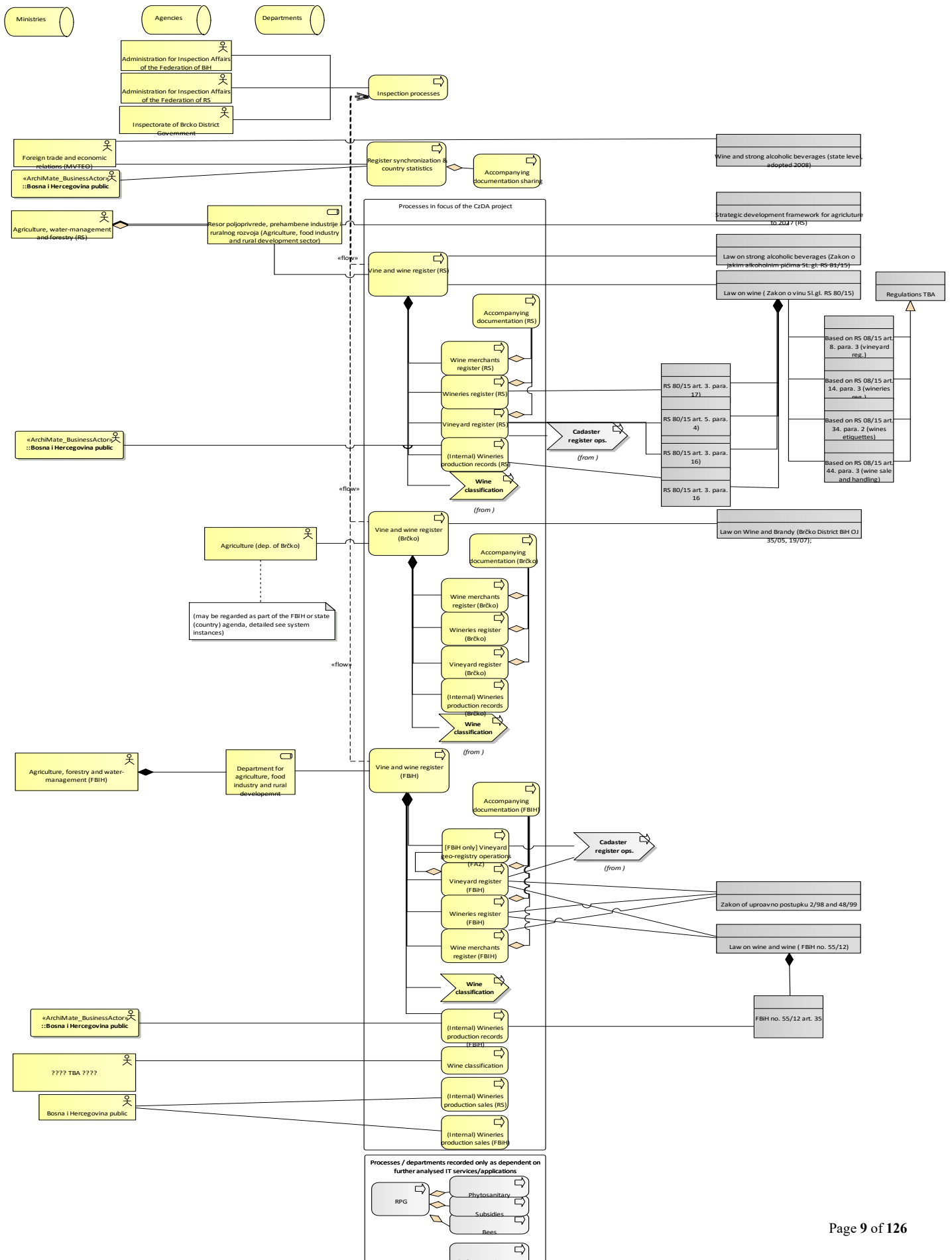
➤ **Administration for Inspection Affairs of the Federation of BiH** (::«ArchiMate_BusinessActor»)

An independent governmental body (agency). Its structure mimics the ministerial structure and areas (industry, transport, industry, food....) but is segmented into local branches as well. Not every branch may have all areas covered.

➤ **Administration for Inspection Affairs of the Federation of RS** (::«ArchiMate_BusinessActor»)

An independent governmental body (agency). Its structure mimics the ministerial structure and areas (industry, transport, industry, food....) but is segmented into local branches as well. Not every branch may have all areas covered.

3.2 Organization-Processes (w. law objects)



➤ **Accompanying documentation (Brčko)** (::«ArchiMate_BusinessProcess»)

The legal obligation of Brčko foresees that any transportation of ANY wine-related products/raw materials (apart from certain exceptions, like no-owner change transport up to 70km etc.) have to be reported in, captured within and equipped with "accompanying documents", each having own unique ID by the authority.
This processes is not yet being executed in the governmental administration.

➤ **Accompanying documentation (FBIH)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBIH foresees that any transportation of ANY wine-related products/raw materials (apart from certain exceptions, like no-owner change transport up to 70km etc.) have to be reported in, captured within and equipped with "accompanying documents", each having own unique ID by the authority.
This processes is not yet being executed in the governmental administration.

➤ **Accompanying documentation (RS)** (::«ArchiMate_BusinessProcess»)

The legal obligation of RS foresees that any transportation of ANY wine-related products/raw materials (apart from certain exceptions, like no-owner change transport up to 70km etc.) have to be reported in, captured within and equipped with "accompanying documents", each having own unique ID by the authority.
This processes is not yet being executed in the governmental administration.

➤ **Accompanying documentation sharing** (::«ArchiMate_BusinessProcess»)

As the legal obligation of all entities and districts foresees that any transportation of ANY wine-related products/raw materials (apart from certain exceptions, like no-owner change transport up to 70km etc.) have to be reported in, captured within and equipped with "accompanying documents", each having own unique ID by the authority, these have to be shared between the entities.
This processes is not yet being executed in the governmental administration.

➤ **Inspection processes** (::«ArchiMate_BusinessProcess»)

An independent body from each of the entity (Inspectorate) is performing processes of inspection on the declared data and business subjects behaviour.

Note: These processes are not supported by the VWR system itself (they are being run in an completely independent system), the VWR system only provides support in terms of:

- providing data read access to the data declared by the subjects within
- providing (optional) document submission (inspection results)
- providing subject registration statuses (suspended, cancelled) or deletion, yet these are being performed NOT by the inspectors themselves, they provide the footing materials for that, yet the administrative decision is made and mirrored in the system by the authority responsible for the system (and wine sector) operation itself.

➤ **Wine classification** (::«ArchiMate_BusinessProcess»)

The corresponding authority that is providing administrative decision on the wine classification based on laboratory result, shall record this into a specific GUI of the system, where it shall be made publicly available in the operational statistics and synchronization instance of the system.

➤ **Wineries register (FBIH)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBIH foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) involved in the wine making and commercialization process, meeting certain criteria (production volume etc.), have to be registered in a governmental register.

In FBIH this register is currently being run in the form of municipality-based paper filing.

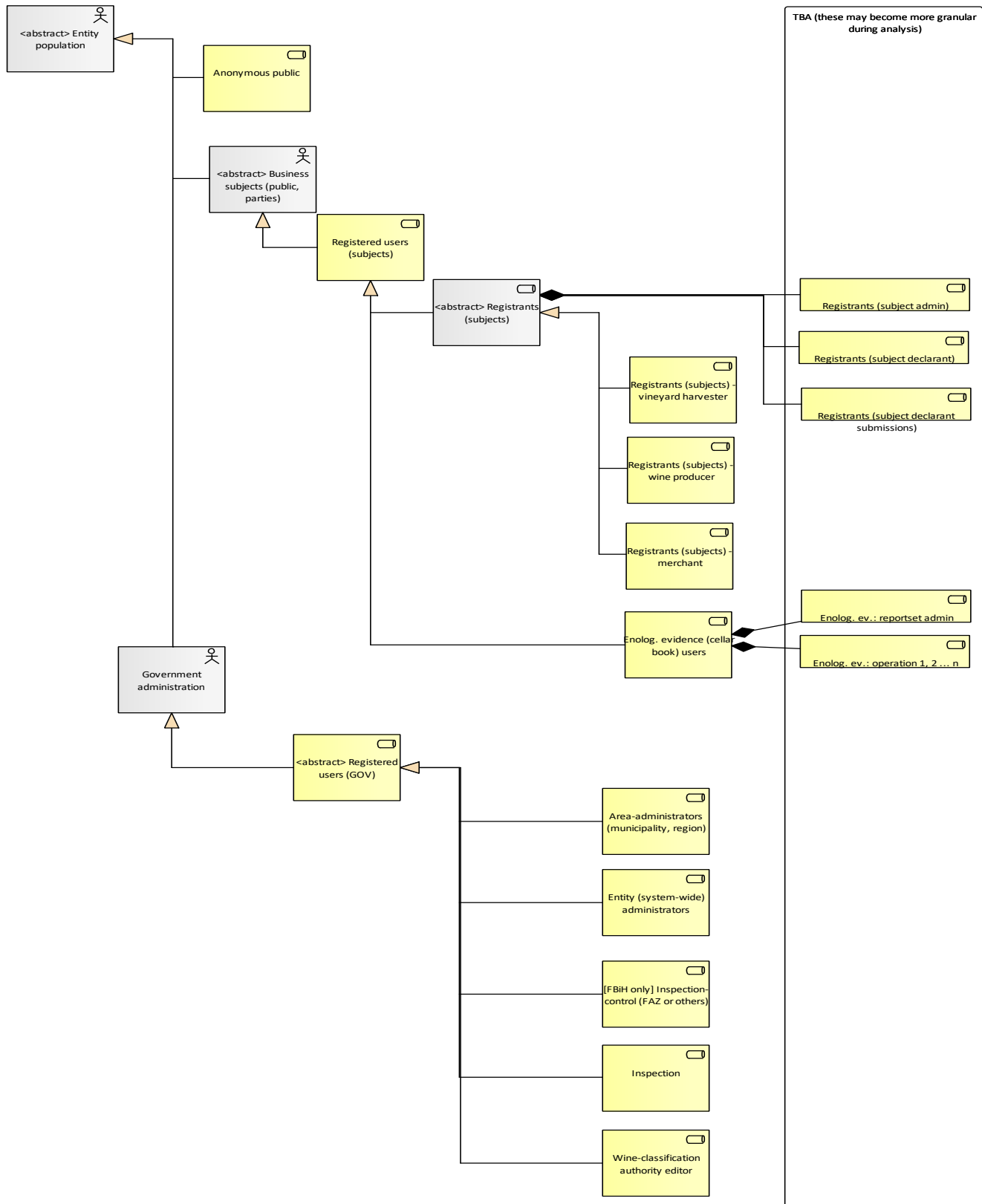
➤ **Wineries register (RS)** (::«ArchiMate_BusinessProcess»)

<p>The legal obligation of RS foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) involved in the wine making and commercialization process, meeting certain criteria (production volume etc.), have to be registered in a governmental register.</p> <p>In RS, this register is currently being run in the form of an entity-wide single Excel sheet containing a total of 40 records.</p>
<p>➤ Inspectorate of Brcko District Government (::«ArchiMate_BusinessActor»)</p> <p>An independent governmental body (agency). Its structure mimics the district administration structure and areas (industry, transport, industry, food....).</p>
<p>➤ FBiH no. 55/12 art. 35 (::«ArchiMate_BusinessObject»)</p> <p>enological evidence</p>
<p>➤ RS 80/15 art. 3. para. 16 (::«ArchiMate_BusinessObject»)</p> <p>enological evidence</p>
<p>➤ RS 80/15 art. 3. para. 16) (::«ArchiMate_BusinessObject»)</p> <p>the vineyard register</p>
<p>➤ RS 80/15 art. 3. para. 17) (::«ArchiMate_BusinessObject»)</p> <p>the wineries register</p>
<p>➤ RS 80/15 art. 5. para. 4) (::«ArchiMate_BusinessObject»)</p> <p>Grape producers have to report their harvest until 30th of November each year.</p>
<p>➤ Zakon of uproavno postupku 2/98 and 48/99 (::«ArchiMate_BusinessObject»)</p> <ul style="list-style-type: none"> ▪ The administrative procedure is driven by the law: Zakon of uproavno postupku 2/98 and 48/99
<p>➤ Vine and wine register (Brčko) (::«ArchiMate_BusinessProcess»)</p> <p>The processes and procedures operated by the entire register in Brčko.</p>
<p>➤ Vine and wine register (FBiH) (::«ArchiMate_BusinessProcess»)</p> <p>The processes and procedures operated by the entire register in FBiH.</p>
<p>➤ Vine and wine register (RS) (::«ArchiMate_BusinessProcess»)</p> <p>The processes and procedures operated by the entire register in RS.</p>
<p>➤ [FBiH only] Vineyard geo-registry operations (FAZ) (::«ArchiMate_BusinessProcess»)</p> <p>The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing and commercialization process, meeting certain criteria (vineyard surface even for non-premium vines etc.), have to report any changes in the data of their registration.</p> <p>This processes is not yet being executed in the governmental administration.</p>
<p>➤ Administration for Inspection Affairs of the Federation of BiH (::«ArchiMate_BusinessActor»)</p> <p>An independent governmental body (agency). Its structure mimics the ministerial structure and areas (industry, transport, industry, food....) but is segmented into local branches as well. Not every branch may have all areas covered.</p>
<p>➤ Administration for Inspection Affairs of the Federation of RS (::«ArchiMate_BusinessActor»)</p> <p>An independent governmental body (agency). Its structure mimics the ministerial structure and areas (industry, transport, industry, food....) but is segmented into local branches as well. Not every branch may have all areas covered.</p>

4. System to-be (tender terms and conditions) - Roles

Note: This package (chapter) is an extension of the general analysis chapter "Roles" of the "System as-is" and describes the roles in the system from the business point of view. These may change (TBA) during analysis (more fine-grained tuning), yet their basic structure as described here is most probably set for sure.

4.1 Roles



There are (apart of the anonymous public), two main groups of roles of people (users):

- the registrants - the users being registered upon their registration and being obligated to provide declarations as required by the appropriate law (or being users of the cellar book).
- the administration - the users recruiting solely from the force of domain governmental administration clerks, responsible mainly for the data entry on behalf of registrants (paper forms), data validation, maintenance and control or inspection.

➤	<abstract> Business subjects (public, parties) (<abstract> Entity population::«ArchiMate_BusinessActor»)
	(abstract data-entity for completeness and integrity of the model)
➤	<abstract> Entity population (::«ArchiMate_BusinessActor»)
	(abstract data-entity for completeness and integrity of the model)
➤	Government administration (<abstract> Entity population::«ArchiMate_BusinessActor»)
	(abstract data-entity for completeness and integrity of the model)
➤	[FBiH only] Inspection-control (FAZ or others) (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)
	Specific type of administrator - can alter the status of a vineyard harvester account (from temporary registration into fully pledged) and review and alter the GPS (and related vineyard data - inc. trellising, variety, surface etc.).
➤	<abstract> Registered users (GOV) (Government administration::«ArchiMate_BusinessRole»)
	These users are to be registered only by the administrator of the system and they are recruited from the force of governmental clerks. Their duty is to : <ul style="list-style-type: none"> • perform registrations or declarations on-behalf of the registered subjects (from physical paper forms) • check the declarations integrity and veracity • check the summary numbers • perform system-wide synchronization • perform data corrections and maintenance if necessary
➤	<abstract> Registrants (subjects) (Registered users (subjects)::«ArchiMate_BusinessRole»)
	(abstract data-entity for completeness and integrity of the model)
➤	Anonymous public (<abstract> Entity population::«ArchiMate_BusinessRole»)
	Any person accessing the operation-synchronization server public webpages.
➤	Area-administrators (municipality, region) (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)
	Local (municipal, APIF etc.) administrators responsible mainly for processing of physical forms of registrations/declarations.
➤	Enolog. ev.: operation 1, 2 ... n (::«ArchiMate_BusinessRole»)
	The user may perform the operations as defined in he "Operations" lists (see FR024 Productset listed (in context of a reportset) - selection and display - Activate (perform) operation)
➤	Enolog. ev.: reportset admin (::«ArchiMate_BusinessRole»)
	An user registered as this role may add customs reportsets for the subject.
➤	Enolog. evidence (cellar book) users (Registered users (subjects)::«ArchiMate_BusinessRole»)
	A subject registered as an user of the enologic evidence (cellar-book). This user (based on this role only) does not have any legal obligations concerning declarations/reports etc. This service shall be provided as-it-is to provide an alternative mean to have a cellar book.
➤	Entity (system-wide) administrators (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)
	Entity (system-wide) administrators, responsible especially for data maintenance, checking eventually corrections and updates. They may perform and observe the risk-reports. These administrators may also define templates for reports and operations and data entities in cellar book.
➤	Inspection (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)

These users can:

- view any data in the system
- submit any kind of binary-file based document (inspection report, administrative decision etc.)
- run and review automated statistics reports

➤ **Registered users (subjects)** (<abstract> Business subjects (public, parties), Bosna i Hercegovina public::«ArchiMate_BusinessRole»)

Any user publicly registered user in the register. That does not necessarily implicate any other specific role. While the only possibility to gain access to any further functions of the systems (other then documents and registrations) is to register as a vineyard harvester/wine producer/merchant or cellar book user, the user may remain in the present state if he/she wishes to do so.

Note.: While it is not foreseen as part of the first implementation phase, it may happen later, that these user roles might get more granular, allowing a "master" (subject-wide administrator) to limit the competence of the sub-users within a registered subject (for example only saving a declaration draft, but not submitting it etc.). The system shall be prepared for these scenarios without any implementation needed as far as the presently known functionalities are concerned.

➤ **Registrants (subject admin)** (::«ArchiMate_BusinessRole»)

User who may perform any operation or data altering on the subject (within the boundaries and authorizations granted to parties e.g. non-governmental users).

➤ **Registrants (subject declarant submissions)** (::«ArchiMate_BusinessRole»)

User who may perform the submitting of a prepared declaration draft (or may edit or prepare a new one).

➤ **Registrants (subject declarant)** (::«ArchiMate_BusinessRole»)

User who may perform only the preparation of declaration drafts on the subject. It may not edit the subjects roles/attributes/registrations or other users, neither submit the declaration drafts he has prepared.

➤ **Registrants (subjects) - merchant** (<abstract> Registrants (subjects)::«ArchiMate_BusinessRole»)

A subject registered as a wine merchant.

➤ **Registrants (subjects) - vineyard harvester** (<abstract> Registrants (subjects)::«ArchiMate_BusinessRole»)

A subject registered as a vineyard harvester.

[FBiH only] The access to functions is same and he role does not distinguish whether the registrant is registered fully or awaiting vineyard GPS plot validation by FAZ control.

➤ **Registrants (subjects) - wine producer** (<abstract> Registrants (subjects)::«ArchiMate_BusinessRole»)

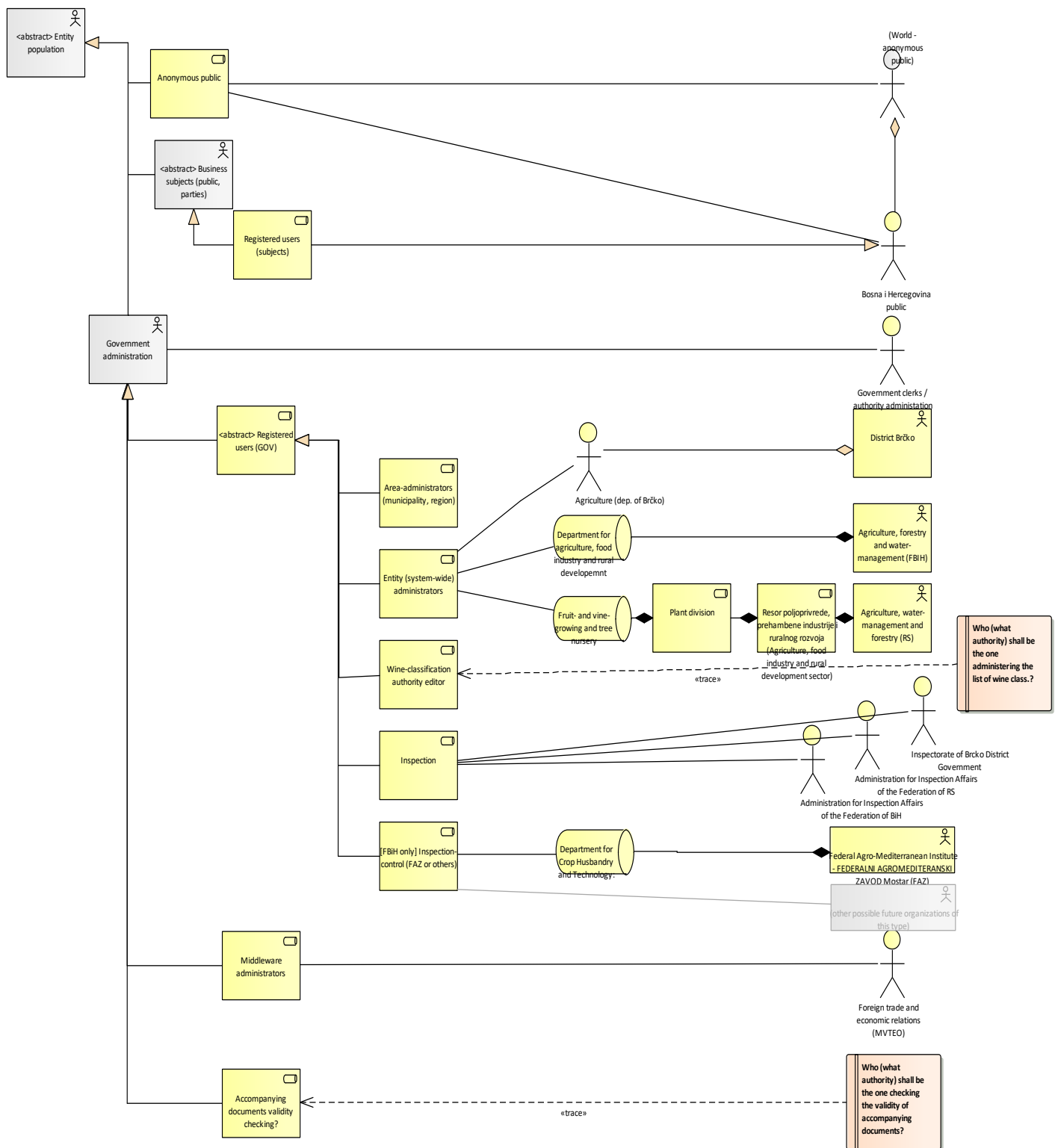
A subject registered as a wine producer.

➤ **Wine-classification authority editor** (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)

These users can:

- perform all activities with the wine classification lists.

4.2 Roles × Orgchart mapping



The roles mentioned above in the diagram are based on the functional analysis of the system to be developed. This diagram depicts their association with the organizational structure of the governmental bodies in BIH. Those associations (roles without relations) that are missing yet are TBA.

(note: not all roles/actors element stereotypes/classes are corrected, so it may appear that an entire organizational department as actor should have some single-user access ... that is not so, only the detailed roles/actors allocation has not been exactly determined yet)

➤	<abstract> Business subjects (public, parties) (<abstract> Entity population::«ArchiMate_BusinessActor»)
	(abstract data-entity for completeness and integrity of the model)
➤	<abstract> Entity population (::«ArchiMate_BusinessActor»)
	(abstract data-entity for completeness and integrity of the model)
➤	Government administration (<abstract> Entity population::«ArchiMate_BusinessActor»)
	(abstract data-entity for completeness and integrity of the model)
➤	[FBIH only] Inspection-control (FAZ or others) (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)
	Specific type of administrator - can alter the status of a vineyard harvester account (from temporary registration into fully pledged) and review and alter the GPS (and related vineyard data - inc. trellising, variety, surface etc.).
➤	<abstract> Registered users (GOV) (Government administration::«ArchiMate_BusinessRole»)
	These users are to be registered only by the administrator of the system and they are recruited from the force of governmental clerks. Their duty is to : <ul style="list-style-type: none"> • perform registrations or declarations on-behalf of the registered subjects (from physical paper forms) • check the declarations integrity and veracity • check the summary numbers • perform system-wide synchronization • perform data corrections and maintenance if necessary
➤	Accompanying documents validity checking? (Government administration::«ArchiMate_BusinessRole»)
	Any governmental executive having the ability to check the validity of a transportation document?
➤	Anonymous public (<abstract> Entity population::«ArchiMate_BusinessRole»)
	Any person accessing the operation-synchronization server public webpages.
➤	Area-administrators (municipality, region) (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)
	Local (municipal, APIF etc.) administrators responsible mainly for processing of physical forms of registrations/declarations.
➤	Entity (system-wide) administrators (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)
	Entity (system-wide) administrators, responsible especially for data maintenance, checking eventually corrections and updates. They may perform and observe the risk-reports. These administrators may also define templates for reports and operations and data entities in cellar book.
➤	Inspection (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)
	These users can: <ul style="list-style-type: none"> • view any data in the system • submit any kind of binary-file based document (inspection report, administrative decision etc.) • run and review automated statistics reports
➤	Middleware administrators (Government administration::«ArchiMate_BusinessRole»)
	Entity (system-wide) administrators, responsible especially for data maintenance, checking eventually corrections and updates. They may perform and observe the risk-reports. These administrators may also define templates for reports and operations and data entities in cellar book.
➤	Registered users (subjects) (<abstract> Business subjects (public, parties), Bosna i Hercegovina public::«ArchiMate_BusinessRole»)
	Any user publicly registered user in the register. That does not necessarily implicate any other specific role. While the only possibility to gain access to any further functions of the systems (other then documents and registrations) is to register as a vineyard harvester/wine producer/merchant or cellar book user, the user may remain in the present state if he/she wishes to do so.

Note.: While it is not foreseen as part of the first implementation phase, it may happen later, that these user roles might get more granular, allowing a "master" (subject-wide administrator) to limit the competence of the sub-

users within a registered subject (for example only saving a declaration draft, but not submitting it etc.). The system shall be prepared for these scenarios without any implementation needed as far as the presently known functionalities are concerned.

➤ **Wine-classification authority editor** (<abstract> Registered users (GOV)::«ArchiMate_BusinessRole»)

These users can:

- perform all activities with the wine classification lists.

➤ **Government clerks / authority administration** (::«ArchiMate_BusinessActor»)

The people (employees) of the governmental authority in general, responsible for the operation and content of the system.

➤ **Inspectorate of Brcko District Government** (::«ArchiMate_BusinessActor»)

An independent governmental body (agency). Its structure mimics the district administration structure and areas (industry, transport, industry, food....).

➤ **Department for Crop Husbandry and Technology:** (::«ArchiMate_BusinessRole»)

Odjeljenje biljne proizvodnje i tehnologije

➤ **Administration for Inspection Affairs of the Federation of BiH** (::«ArchiMate_BusinessActor»)

An independent governmental body (agency). Its structure mimics the ministerial structure and areas (industry, transport, industry, food....) but is segmented into local branches as well. Not every branch may have all areas covered.

➤ **Administration for Inspection Affairs of the Federation of RS** (::«ArchiMate_BusinessActor»)

An independent governmental body (agency). Its structure mimics the ministerial structure and areas (industry, transport, industry, food....) but is segmented into local branches as well. Not every branch may have all areas covered.

5. System to-be (tender terms and conditions) - Processes: Procedural description of the SW application

Note: This package (chapter) is an extension of the general analysis chapter "Processes" of the "System as-is"

It describes following processes families:

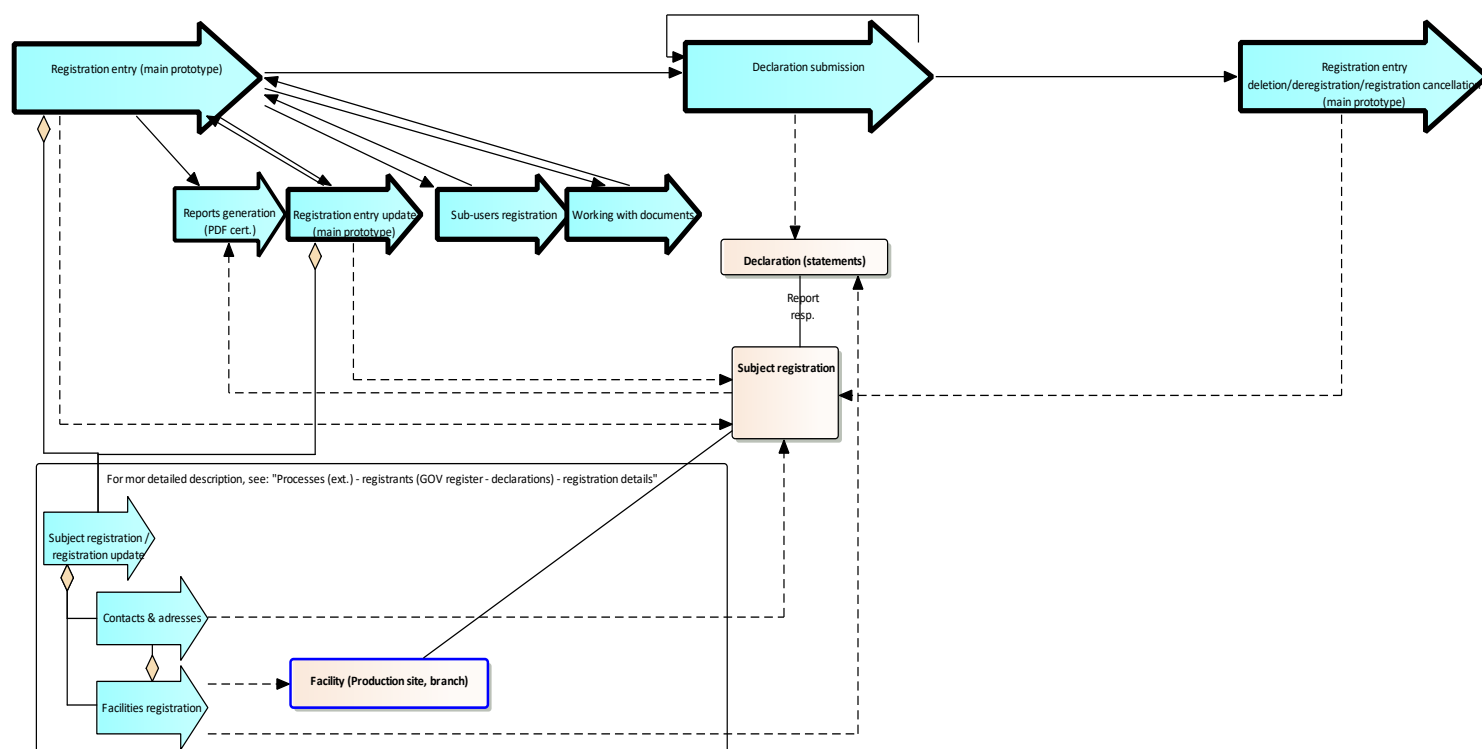
- The main processes of the registrants performed in the Governmental registers - main templates = these parts of documentation describe the parent prototype processes of registration, declaration etc., e.g. the similarities shared across all the processes of different subjects. this is also the main part of procedural description of the software application
- The main processes of the registrants performed in the Governmental registers (vineyard harvesters, wine producers, merchants) = these parts of documentation care with the various differences in the seemingly identical processes of registration, declaration etc.
- The processes for registrants performed in the area of self-care of the supporting enology evidence (cellar book) (this does not described the typical instances of the processes, but the ones the evidence is built on)
- The processes of the supporting e-commerce platform. Note: These are only fort illustration sake in order to provide a framework to depict the important cross-sections where the e-commerce platform shall provide certain APIs and services to the enology evidence and the system as whole.
- The processes performed by the authorities in the system

5.1 Processes: Procedural description of the SW application - Processes - registrants - GOV register (main prototype/parent process)

This is the main description of the core processes of the registrants performed in the Governmental registers. These here are the "parent" processes all the particular role-based processes are built on. That means, the processes described in here are the similarities shared across all the processes of different subject roles. This is also the main part of procedural description of the software application.

- First, the document provides a brief overview of the main template of processes and their flow
- Then the document details flows for 1. registration and 2. declaration details

5.1.1 Processes - registrants - main template



The basic procedural overview of processes as being run in the scope of the administration of Vine and Wine Register.

One may observe the key procedural flow here:

1. The subject is registered.
2. The subject submits declarations during its lifetime
3. The subject entry deletion / registration cancellation

Vital structural part forming the "1. Subject is registered" process is the registration of contacts and especially facilities, which is the same as declaring the subjects' affiliation to a role.

The registration process itself then may trigger further processes that are being performed during the lifetime of a subjects' registration existent in the system - namely:

- report generation of the registration certificate (usually a one-time matter, but may be repeated at will)
- update of any of the data (incl. facilities and roles)
- registering of another individual user as having access to the subject's registration
- working with documents (upload/download when communicating with an authority, download of document-form of declarations, download of reports, download of general documents published by the authority etc.).

➤ **Contacts & addresses** (::«ArchiMate_ApplicationProcess»)

Registering people in relation to the subject and their contacts (addresses, phones, e-mails)
->>>> also in relation to the corresponding user & their roles within the current subject

➤ **Declaration submission** (::«ArchiMate_ApplicationProcess»)

The user (most typically a registrant, or a government administrator, who is doing so on behalf of another subject) can create a new predefined type of document. Apart from any kind of binary form documents (files attachments), the user can select from predefined special structured forms, whose data are to be stored in a relational database, such as for example:

- harvest declaration
- production declaration

- stock declaration
- trade declaration
- alcoholization/sugar addition notification
- accompanying documents for transport

Each and every document (in the form as described in the data entity diagram and as can be observed from the attachments representing the current prototypes of the forms) can be created in multiple instances (each and every of them being linked to a specified vintage - business year, where there may exist multiple drafts for each vintage). These documents can be saved at will.

After the user is content with the data, the user can submit the document, which is an irreversible process making the declaration legally bound. There may be subsequent declarations, but only those, that:

- either invalidate the previously submitted type of document within the same vintage year

OR

- invalidate only part of the previous document (either by updating it or "deleting" it which means in fact only terminating its validity)

[Neum/RS] Could be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH ,all inputs)

➤ **Facilities registration** (::«ArchiMate_ApplicationProcess»)

Registering a list of addresses where various branches, manufacturing facilities etc. are located.

This process is tightly coupled to the "role selection" during basic user registration (in fact it should be a single step, where a role selection triggers an immediate registration of facilities).

It is important to mention, that the registration itself, after being finished, is a kind of "declaration" as well - every role has its own "registration declaration" (see corresponding paper form templates), where the registrant is "declaring" his association with the role being declared (vineyard harvester, wine producer etc.).

➤ **Registration entry (main prototype)** (::«ArchiMate_ApplicationProcess»)

The registration in electronic form shall be submitted in 2 respective 3 steps:

- in case of FBIH vineyard harvester registration 3 steps (including GPS plot/plan verification)
- 2 steps (merged in single one preferably) for any other entity

In case of a physical form registration, the request for entry in the Register (..) may be submitted to the local branch office or body responsible for keeping the Register, according to the seat of the entity subject to entry in the Register, as specified in the regulations of the Entity and Brčko District BiH.

The request shall be submitted on the application form for entry in the register prescribed by the Competent Institutions of the Entities and the Brčko District of BiH.

[Neum/RS] This can be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH ,all inputs) Forms must be available in digital form in such a way that they can be printed out in PDF format or completed online.

[Mostar] The registration and login shall be performed from one single point - the "Middleware server" operated by MVTEO:

- When registering (a subject) for the first time, the user shall declare the municipality the enterprise (wine/vine company, farm etc.) belongs to. Based on this information the system shall redirect the user registration to one of the entity instances (see: Deployment : Deployment - entity local instances with operational server over Internet) where the registration is finished.
- When logging in, the user shall be redirected to an entity based on a quick resolve of registered users in the internal database of the operational server (the same list of users as in each entity instance, but only having the ID, login and instance ID).

The same as above applies for the administrative (government) users, whereas their registration shall be performed "from bottom-up", e.g. within their entity-instance based on the SSO methods of the instance (however the users account will have an proxy in the system users data as well, so they shall sync to the central part as well).

➤ **Registration entry deletion/deregistration/registration cancellation (main prototype)**

(::«ArchiMate_ApplicationProcess»)

The Administration or the body responsible for keeping the Register shall initiate the procedure for deletion from the Register:

- (a) at the request of the registered entity on the basis of its decision on the cessation of activities or other circumstances that lead to the cessation of activities due to which it was obliged to register in the Register;
- (b) ex officio, in the following cases:

- (i) deletion of a natural or legal person from the Register due to the provisions of special regulations on organizational forms for performing activities, except in cases when deletion is performed upon application of the registered entity on changes in organization and / or change of activity and
- (ii) by repeated repetition of irregularities identified by the administration or the body keeping the Register or the competent inspector with regard to the prescribed keeping and reporting of data to the Register.

➤ **Registration entry update (main prototype)** (::«ArchiMate_ApplicationProcess»)

The user may update its subject registration data. While it is a declaration again (both for registration and for roles) and while a registration certificate (report) has to be regenerated, in the further flow/governmental authority processing this has zero influence on the existence of the subject (apart from registration cancellation, but that is a different process, see the corresponding element in this diagram).

➤ **Reports generation (PDF cert.)** (::«ArchiMate_ApplicationProcess»)

The registration process then culminates in the generation of declarations and reports:

- the system automatically generates the registration declaration (for vineyard harvester, wine producer etc.)
- the system may generate automatically or on request of the registrant the

(both documents shall be added into the documents repository)

➤ **Subject registration / registration update** (::«ArchiMate_ApplicationProcess»)

A vital part of the subject registration is the registration of subject roles (facilities) and an optional registration of contacts.

1. Creation of the main subject data (+ headquarters address)
2. OPTIONAL: Adding Contacts (and their addresses and other contacts - emails, phones) -> this (also in case of update) has no influence on the registration approval, apart from "primary" contact (subject responsible person)
3. OPTIONAL: adding facilities (+ their addresses). -> this has no influence on the registration approval, only in case of vineyard harvesters:
 - vineyard facilities have to be registered at least as list (ID/name, nearest address/geoposition single GPS coordinate, surface); the geospatial data are optional (technologically), BUT unless given AND approved for all listed vineyards, the registration & certificate has a shorter validity. If not checked&approved by an authority until given number of days (TODO: maybe the same as the "shorter" validity of registration cert?), the approval is automatically given & certificate is regenerated with unlimited validity

When a registration is being created, the logged-in user (if not a clerk) shall automatically become the "full access" ("*Registrants (subject admin)*") role for the registration he has just created (so no need to manually assign himself in that role to the registration, since that would not be possible).

➤ **Sub-users registration** (::«ArchiMate_ApplicationProcess»)

The user may update its subject registration by creating other contacts and users related to the same subject entity (physical persons - users - who can work in the system on behalf of the entity - submit declarations, change registration etc.).

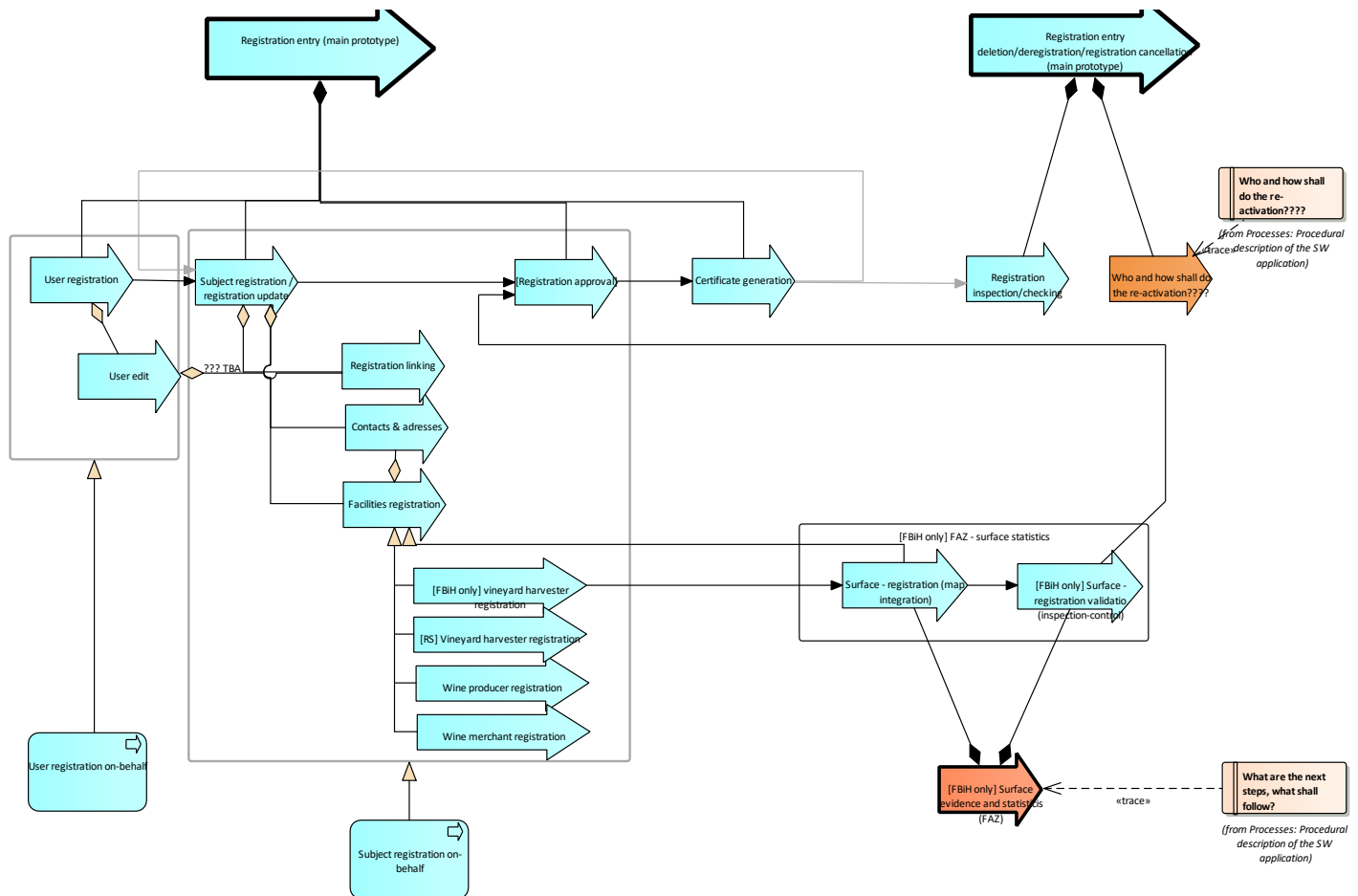
Note.: While it is not foreseen as part of the first implementation phase, it may happen later, that these user roles might get more granular, allowing a "master" (subject-wide administrator) to limit the competence of the sub-users within a registered subject (for example only saving a declaration draft, but not submitting it etc.). The system shall be prepared for these scenarios without any implementation needed as far as the presently known functionalities are concerned.

➤ **Working with documents** (::«ArchiMate_ApplicationProcess»)

The user shall have access to the subject's documents. There shall be following types of documents:

- "Declarations" folder (organized into "Harvest", "Production", "Trade", "Stock")
- "Declaration drafts" folder (organized into "Harvest", "Production", "Trade", "Stock" subfolders)
- Certificates folder (organized into "Latest" and "Archive")
- "Public {entity name}" folder (readonly for subjects, editable by authority, should contain forms templates and other publicly available documents)
- Authority documents folder with a subfolder for each subject should be there, if containing some data, so that the origin/destination of the documents is easily distinguishable, that folder content is only viewable by the subject and either local authority or the entity/ federation authority)

5.1.2 Processes (ext.) - registrants (GOV register - declarations) - registration details



This here is a more detailed description of the first-time registration process. As one may observe, the registration is a complex process consisting of multiple steps and various parts. The main parts are:

- Basic user registration (when an individual registers in the system as a generic type of user)
- A subject registration, when the user registers itself as a subject from the sector of winemaking (vinegrowing, trading)
- In case of FBIH vinegrowers a verification of geospatial data of the vineyard
- Approval of the registration
- Generating of the registration certificate
- And the illustration of further processes of inspection and their influence on the registration status.

➤ **[FBIH only] Surface - registration validation (inspection-control)** (::«ArchiMate_ApplicationProcess»)

Performed by the responsible clerk of the FAZ

➤ **[FBIH only] Surface evidence and statistics (FAZ)** (::«ArchiMate_ApplicationProcess»)

The main process of geospatial data inspection-control performed by the FAZ.

➤ **[FBIH only] vineyard harvester registration** (::«ArchiMate_ApplicationProcess»)

This is the registration process of the registration/declaration of an subject as a vineyard harvester (role/facility). In this case this process is the same in RS and FBIH, yet its continuation in FBIH is slightly different as a FAZ inspection-control of registered vineyard geospatial data shall follow.

➤ **[Registration approval]** (::«ArchiMate_ApplicationProcess»)

A submitted registration has to be reviewed and approved by responsible clerk.
(in case of a vineyard harvester: the approval has limited validity until surface approved, or it is approved automatically)

Note: Detailed approval (automated/by a clerk) procedures or if they shall apply at all TBA.

➤ **[RS] Vineyard harvester registration** (::«ArchiMate_ApplicationProcess»)

This is the registration process of the registration/declaration of an subject as an vineyard harvester (role/facility).
In this case this process is the same in RS and FBIH, yet in RS it continues straightforward.

➤ **Certificate generation** (::«ArchiMate_ApplicationProcess»)

Automated process following the "registration approval" change (either when reviewed after registration/change or if reviewed after vineyard harvester facility geospatial data registration/change), will:

1. generate the respective document (registration certificate)
2. add this document to the document repository of the respective subject registration and
3. e-mail all users having the roles for that subject registration that allow for registration data change.
(in case of vineyard harvester: the certificate has limited validity until surface geospatial data are approved or defined timeout occurs)

➤ **Contacts & addresses** (::«ArchiMate_ApplicationProcess»)

Registering people in relation to the subject and their contacts (addresses, phones, e-mails)
->>>> also in relation to the corresponding user & their roles within the current subject

➤ **Facilities registration** (::«ArchiMate_ApplicationProcess»)

Registering a list of addresses where various branches, manufacturing facilities etc. are located.

This process is tightly coupled to the "role selection" during basic user registration (in fact it should be a single step, where a role selection triggers an immediate registration of facilities).

It is important to mention, that the registration itself, after being finished, is a kind of "declaration" as well - every role has its own "registration declaration" (see corresponding paper form templates), where the registrant is "declaring" his association with the role being declared (vineyard harvester, wine producer etc.).

➤ **Registration entry (main prototype)** (::«ArchiMate_ApplicationProcess»)

The registration in electronic form shall be submitted in 2 respective 3 steps:

- in case of FBIH vineyard harvester registration 3 steps (including GPS plot/plan verification)
- 2 steps (merged in single one preferably) for any other entity

In case of a physical form registration, the request for entry in the Register (..) may be submitted to the local branch office or body responsible for keeping the Register, according to the seat of the entity subject to entry in the Register, as specified in the regulations of the Entity and Brčko District BiH.

The request shall be submitted on the application form for entry in the register prescribed by the Competent Institutions of the Entities and the Brčko District of BiH.

[Neum/RS] This can be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH, all inputs)
Forms must be available in digital form in such a way that they can be printed out in PDF format or completed online.

[Mostar] The registration and login shall be performed from one single point - the "Middleware server" operated by MVTEO:

- When registering (a subject) for the first time, the user shall declare the municipality the enterprise (wine/vine company, farm etc.) belongs to. Based on this information the system shall redirect the user registration to one of the entity instances (see: [Deployment : Deployment - entity local instances with operational server over Internet](#)) where the registration is finished.
- When logging in, the user shall be redirected to an entity based on a quick resolve of registered users in the internal database of the operational server (the same list of users as in each entity instance, but only having the ID, login and instance ID).

The same as above applies for the administrative (government) users, whereas their registration shall be performed "from bottom-up", e.g. within their entity-instance based on the SSO methods of the instance (however the users account will have an proxy in the system users data as well, so they shall sync to the central part as well).

➤ **Registration entry deletion/deregistration/registration cancellation (main prototype)**

(::«ArchiMate_ApplicationProcess»)

The Administration or the body responsible for keeping the Register shall initiate the procedure for deletion from the Register:

- (a) at the request of the registered entity on the basis of its decision on the cessation of activities or other circumstances that lead to the cessation of activities due to which it was obliged to register in the Register;
- (b) ex officio, in the following cases:
 - (i) deletion of a natural or legal person from the Register due to the provisions of special regulations on organizational forms for performing activities, except in cases when deletion is performed upon application of the registered entity on changes in organization and / or change of activity and
 - (ii) by repeated repetition of irregularities identified by the administration or the body keeping the Register or the competent inspector with regard to the prescribed keeping and reporting of data to the Register.

➤ **Registration inspection/checking** (::«ArchiMate_ApplicationProcess»)

As per request from NEUM: NONE. There are only:

- states of subject registrations (based on operation type)
- and maybe some submitted documents under the category "other" where the inspection has some influence on the registration status, but the inspection itself does not edit the data directly
- and the inspection has to have access into the register (readonly) and especially for the reports (and templates)

Following functions of the system may be used by the inspection:

1. Adding any inspection document (administrative decision for subject deletion/deactivation etc., inspection report etc.) to the repository

2. Invalidating of the certificate (cannot be downloaded anymore or regenerated with ceased validity)

This may result into an registration inspection/checking by the authority, which may result into a subject registration suspension or canceling.

➤ **Registration linking** (::«ArchiMate_ApplicationProcess»)

When registering, the subject data shall be linked to the currently "authoritative" registers:

- [RS] APIF (+ recording the user login into specific OU of ministerial MS AD)
- [FBiH] RPG (+ eventually Phytosanitary register)

Detailed process TBA, current working draft is: by entering the correct identifier from the other register. After that data attributes should be imported during registration as well periodically updated by automated processes later.

➤ **Subject registration / registration update** (::«ArchiMate_ApplicationProcess»)

A vital part of the subject registration is the registration of subject roles (facilities) and an optional registration of contacts.

1. Creation of the main subject data (+ headquarters address)
2. OPTIONAL: Adding Contacts (and their addresses and other contacts - emails, phones) -> this (also in case of update) has no influence on the registration approval, apart from "primary" contact (subject responsible person)
3. OPTIONAL: adding facilities (+ their addresses). -> this has no influence on the registration approval, only in case of vineyard harvesters:

- vineyard facilities have to be registered at least as list (ID/name, nearest address/geoposition single GPS coordinate, surface); the geospatial data are optional (technologically), BUT unless given AND approved for all listed vineyards, the registration & certificate has a shorter validity. If not checked & approved by an authority until given number of days (TODO: maybe the same as the "shorter" validity of registration cert?), the approval is automatically given & certificate is regenerated with unlimited validity

When a registration is being created, the logged-in user (if not a clerk) shall automatically become the "full access" ("Registrants (subject admin)") role for the registration he has just created (so no need to manually assign himself in that role to the registration, since that would not be possible).

➤ **Subject registration on-behalf** (::«ArchiMate_ApplicationProcess»)

All the self-service processes have to be available for government officials (clerks) who may perform the tasks on-behalf of the registrants based on his paper-form-submission.

➤ **Surface - registration (map integration)** (::«ArchiMate_ApplicationProcess»)

[Neum/RS/Radica] RS - important, since they do not have the surfaces currently

➤ **User edit** (::«ArchiMate_ApplicationProcess»)

An registered user may administer the basic registration details:

- e-mail change (verification)
- roles change in relation to subjects (when the respective user has the role to manage the subject registration, he may entitle other users (also newly created - generated password will be emailed) to have certain authorizations in regard to the registered subject
- ->>> also in relation to the corresponding contacts

➤ **User registration** (::«ArchiMate_ApplicationProcess»)

The process of the most basic registration - here an individual (person) registers as a an user in the system itself.

1. register username & email
2. E-mail verification
3. Account creation and activation
4. login

➤ **User registration on-behalf** (::«ArchiMate_ApplicationProcess»)

All the self-service processes have to be available for government officials (clerks) who may perform the tasks on-behalf of the registrant based on his paper-form-submission (in this case, if the registrant wants to, the clerk may create an account for him, however with enforced password change during contact verification).

Nevertheless, user and his roles edit shall be available.

➤ **Who and how shall do the re-activation????** (::«ArchiMate_ApplicationProcess»)

One of the open questions about who shall perform the re-activation of a suspended/canceled subject registration. TBA

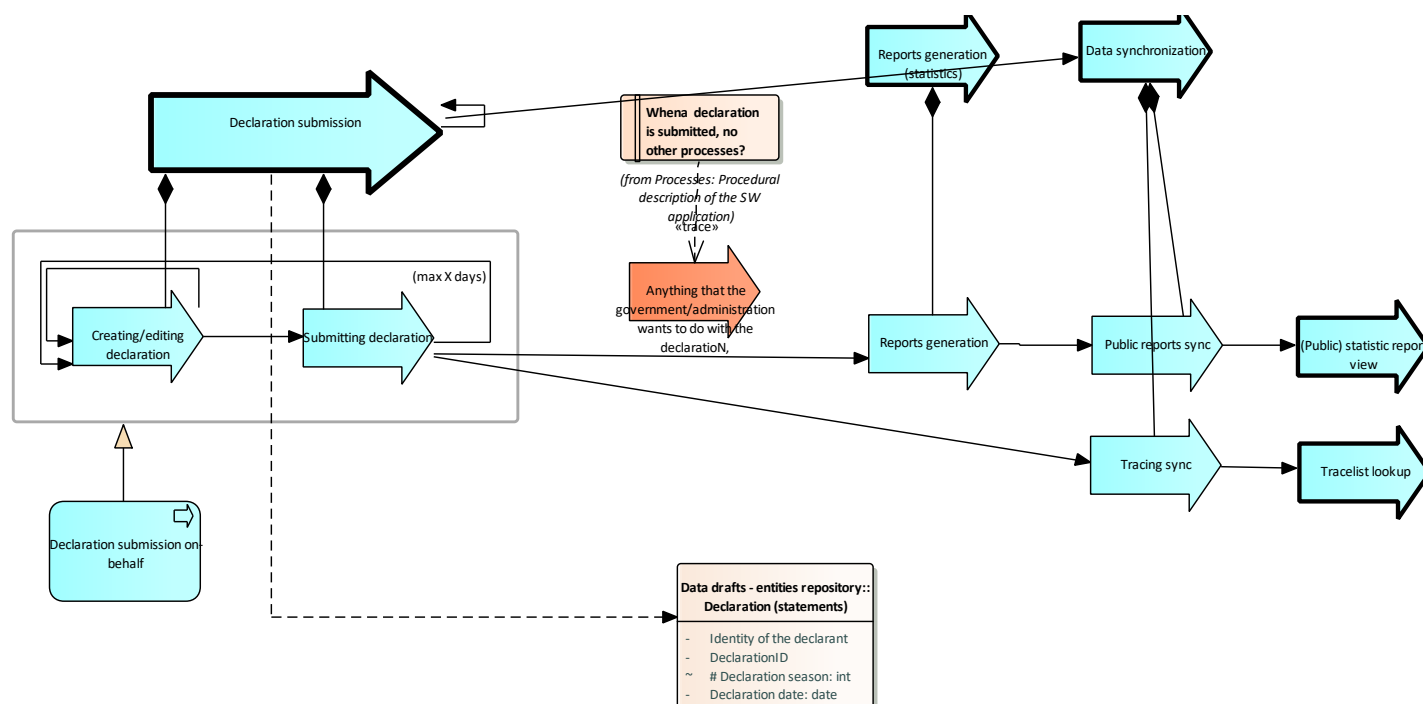
➤ **Wine merchant registration** (::«ArchiMate_ApplicationProcess»)

This is the process of a wine merchant (role/facility) registration.

➤ **Wine producer registration** (::«ArchiMate_ApplicationProcess»)

This is the process of a wine producer (role/facility) registration.

5.1.3 Processes (ext.) - registrants (GOV register - declarations) - declaration details



This is the entire procedural flow concerning the declarations

➤ (Public) statistic report view (::«ArchiMate_ApplicationProcess»)

The system shall allow to generate dynamic data queries with tabular (selected columns, aggregation funcs COUNT/SUM/AVG... 1-2 level grouping in columns and/or rows) or graphical (pie, column/bar, line graphs) representation.

These are about to be used as:

1. KPI overview / statistics for the public, namely:

- (list of declarations - see ad 2.)
- list of registrations by state (input: list of states) submitted in given dates (main feature: unapproved registrations older than X), input(dates from, to, region/region, responsible user/group)
- registered totals: subjects count (by type)
- registered totals: vineyards count, surface sum (by region, by vineyard facility attributes of age category, method of use, irrigation, substrate, backrest, tree height (categories from-to), number of wires, trellising type, number of vines, planting distance in lines, planting distance of plants, breeding form, avg altitude (categories from-to), slope of the field, exposition)
- registered totals: vineyards count, surface sum (by variety (all, red, white), by purpose)
- declared totals: harvested last year tons sum (by variety)
- declared totals: production last year hl sum (by variety, by PGI, PDO, without PGI/PDO)
- declared totals: current (last year) stock hl sum (by variety, by PGI, PDO, without PGI/PDO)
- (may be ~+6 more)

➤ Anything that the government/administration wants to do with the declarationN,

(::«ArchiMate_ApplicationProcess»)

TBA, at the moment seems null

➤ Creating/editing declaration (::«ArchiMate_ApplicationProcess»)

(when an already submitted declaration is being saved, it is "unsubmitted" and has to be re-submitted again - user warning!)

➤ Data synchronization (::«ArchiMate_ApplicationProcess»)

1. Data upload on request of the middleware part from the entity to the middleware system (selected registrants data (only current actual name, address(&point geoposition, e.g. no spatial), location, id, contact(s), registration date, operation type, facilities list (IDs, types, addresses&point geoposition)) + associated declaration rows of harvest (address, variety (incl. PGI/PDO), color, subject ID that the wine was sold to) and production (input batch subject ID who sold/produced the grapes, variety (incl PGI/PDO), color, batch etiquette ID, sales unit type (bottle, barrel...))
2. Data download (selected registrants data (only current actual name, address(&point geoposition, e.g. no spatial), location, id, contact(s), registration date, operation type, facilities list (IDs, types, addresses&point geoposition))
3. Pre-computed reports generation - this shall be operated by the Operational statistics and synchronization middleware part of the system, that shall contain the definition of the report query and input filters and pass this query to each of the system entity instances. The instance produces the report, all results are recorded in the central part and the central part re-runs the aggregation and grouping on the results to produce one final nation-wide report.

➤ **Declaration submission** (::«ArchiMate_ApplicationProcess»)

The user (most typically a registrant, or a government administrator, who is doing so on behalf of another subject) can create a new predefined type of document. Apart from any kind of binary form documents (files attachments), the user can select from predefined special structured forms, whose data are to be stored in a relational database, such as for example:

- harvest declaration
- production declaration
- stock declaration
- trade declaration
- alcoholization/sugar addition notification
- accompanying documents for transport

Each and every document (in the form as described in the data entity diagram and as can be observed from the attachments representing the current prototypes of the forms) can be created in multiple instances (each and every of them being linked to a specified vintage - business year, where there may exist multiple drafts for each vintage). These documents can be saved at will.

After the user is content with the data, the user can submit the document, which is an irreversible process making the declaration legally bound. There may be subsequent declarations, but only those, that:

- either invalidate the previously submitted type of document within the same vintage year

OR

- invalidate only part of the previous document (either by updating it or "deleting" it which means in fact only terminating its validity)

[Neum/RS] Could be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH ,all inputs)

➤ **Declaration submission on-behalf** (::«ArchiMate_ApplicationProcess»)

All the self-service processes have to be available for government officials (clerks) who may perform the tasks on-behalf of the registrant based on his paper-form-submission.

➤ **Public reports sync** (::«ArchiMate_ApplicationProcess»)

When declarations are submitted, the updates statistical reports data shall be synced to the statistical repository of the middleware part of the system.

➤ **Reports generation** (::«ArchiMate_ApplicationProcess»)

Generating of a report:

- either on-request of the registrant (the declaration, statistics available to the registrants)
- or on-request of an authority (KPIs, statistics)
- or automatically to be (shared aggregated public statistics to be transferred to the Operational statistics and synchronization middleware)

➤ **Reports generation (statistics)** (::«ArchiMate_ApplicationProcess»)

The system shall allow to generate dynamic data queries (~20-25) with tabular (selected columns, aggregation functions COUNT/SUM/AVG... 1-2 level grouping in columns and/or rows) or graphical (pie, column/bar, line graphs) representation.

These are about to be used as:

1. Statistics for the administrators

- (list of declarations - see ad 2.)
- list of registrations by state (input: list of states) submitted in given dates (main feature: unapproved registrations older than X), input(dates from, to, region/region, responsible user/group)
- registered totals: subjects count (by type)
- registered totals: vineyards surface sum (by region)
- registered totals: vineyards surface sum (by variety (all, red, white))
- declared totals: harvested last year tons sum (by variety)
- declared totals: production last year hl sum (by variety, by PGI, PDO, without PGI/PDO)
- declared totals: current (last year) stock hl sum (by variety, by PGI, PDO, without PGI/PDO)
- (may be ~+6 more)

2. KPI/QA control

- list of declarations (input: type) submitted in dates (input for year, from, to, can pre-fill "from" based on deadline; subject id (selectable by search of name etc.), facility id (selectable by search of address, subject etc.))
- list of non-existent declarations of existing subjects by (input: subject operations type) and by (input: declaration type, non-existent in given dates input(dates from, to, deadline year, region/region, responsible user/group, subject id searchable by name, address etc.)) (main feature: unapproved registrations older than X),
- (may be ~1-3 more)

3. risk-analysis

- harvest declarations: vineyards having yield >Xt/ha for each declaration entry (input: X (tons per ha), subject, facility (only vineyards), region, date from-to or declaration season)
- production declaration: must efficiency (hl of must/t of grapes processed in %) of all declaration entries (input: lower threshold, subject, facility (only wineries), region, date from-to or declaration season)
- losses? waste? marc? sums there of by wine producer/facility?
- (may be ~5-6 more)

Note: The input filters should provide "templates" of the inputted values (editable by user for himself or by administrator for himself or system-wide) with possible variables (date and time now, date and time offset by an equitation, logged in user data inc. groups).

➤ **Submitting declaration** (::«ArchiMate_ApplicationProcess»)

This is the final declaration saving when it becomes also:

- legally bounding
- no more ditable

➤ **Tracelist lookup** (::«ArchiMate_ApplicationProcess»)

The given Wine ID shall be able to provide information about:

- Facility where it has been bottled, manufactured (subject registration name, date, address, contact + facility address)
- List of vine sources (batchers IDs, originating vineyards / external purchases)

➤ **Tracing sync** (::«ArchiMate_ApplicationProcess»)

When declarations are submitted, their records (win batches identified by the ID of a wine) should be added to the tracing repository of the middleware part of the system.

5.2 Processes: Procedural description of the SW application - Processes - registrants - GOV register (different scenarios)

This part of documentation describes the main processes divergences from the main prototype/parent processes of the registrant (subject) registration lifetime in the system.

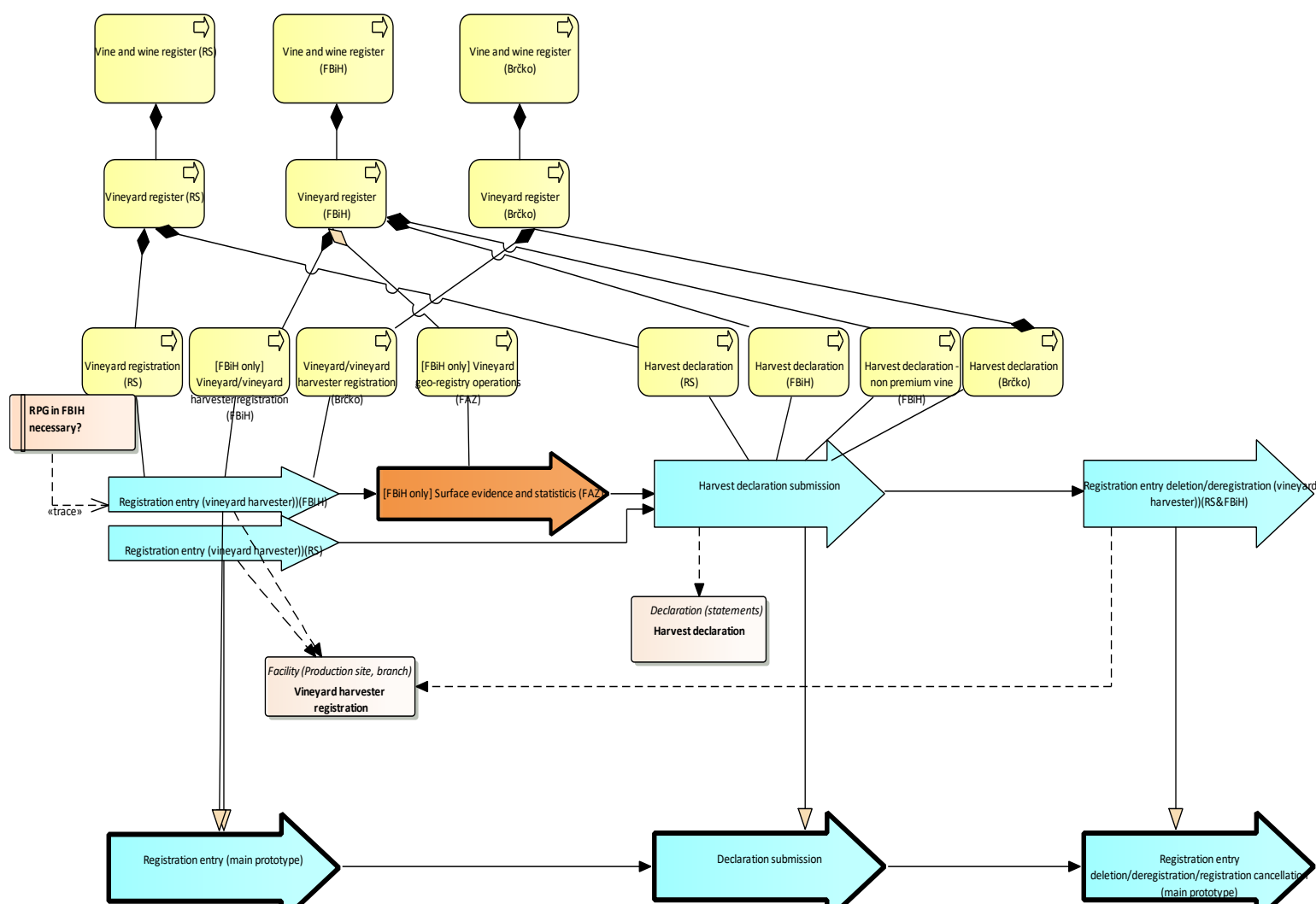
It is focused on the three key groups registered in the system:

- farmers (vineyard harvester)
- wineries (wine producers)
- and merchants (wine merchants)

Each diagram consists of 3 parts observable in horizontal split-lines:

- first third (yellow rectangular processes) - the business processes from the "system as-is" analysis that are to be supported by the relevant VWR software application processes
- second third (cyan thin-bordered arrow elements) - the application processes in question inc. description and their association to the business processes
- lowest third (cyan thick-bordered arrows) the "core" (main parent/template) processes that represent the main templates that the (thin-bordered) processes shall be descendants of

5.2.1 Processes - registrants - vinegrowers



The basic procedural overview of processes as being run in the scope of the administration of Vine and Wine Register with emphasis in the procedural flow applicable to vine growers.

➤ **[FBIH only] Surface evidence and statistics (FAZ)** (::«ArchiMate_ApplicationProcess»)

The main process of geospatial data inspection-control performed by the FAZ.

➤ **Declaration submission** (::«ArchiMate_ApplicationProcess»)

The user (most typically a registrant, or a government administrator, who is doing so on behalf of another subject) can create a new predefined type of document. Apart from any kind of binary form documents (files attachments), the user can select from predefined special structured forms, whose data are to be stored in a relational database, such as for example:

- harvest declaration
- production declaration
- stock declaration
- trade declaration
- alcoholization/sugar addition notification
- accompanying documents for transport

Each and every document (in the form as described in the data entity diagram and as can be observed from the attachments representing the current prototypes of the forms) can be created in multiple instances (each and every of them being linked to a specified vintage - business year, where there may exist multiple drafts for each vintage). These documents can be saved at will.

After the user is content with the data, the user can submit the document, which is an irreversible process making the declaration legally bound. There may be subsequent declarations, but only those, that:

- either invalidate the previously submitted type of document within the same vintage year

OR

- invalidate only part of the previous document (either by updating it or "deleting" it which means in fact only terminating its validity)

[Neum/RS] Could be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH ,all inputs)

➤ **Harvest declaration submission** (::«ArchiMate_ApplicationProcess»)

The subject is submitting a harvest declaration, composed mostly from a list of vine raw product type categorised items and the amount of vine grapes harvested from a specific vineyard (identified by a reference to the previously made vineyard registration land estate item).

➤ **Registration entry (main prototype)** (::«ArchiMate_ApplicationProcess»)

The registration in electronic form shall be submitted in 2 respective 3 steps:

- in case of FBIH vineyard harvester registration 3 steps (including GPS plot/plan verification)
- 2 steps (merged in single one preferably) for any other entity

In case of a physical form registration, the request for entry in the Register (..) may be submitted to the local branch office or body responsible for keeping the Register, according to the seat of the entity subject to entry in the Register, as specified in the regulations of the Entity and Brčko District BiH.

The request shall be submitted on the application form for entry in the register prescribed by the Competent Institutions of the Entities and the Brčko District of BiH.

[Neum/RS] This can be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH ,all inputs) Forms must be available in digital form in such a way that they can be printed out in PDF format or completed online.

[Mostar] The registration and login shall be performed from one single point - the "Middleware server" operated by MVTEO:

- When registering (a subject) for the first time, the user shall declare the municipality the enterprise (wine/vine company, farm etc.) belongs to. Based on this information the system shall redirect the user registration to one of the entity instances (see: Deployment : Deployment - entity local instances with operational server over Internet) where the registration is finished.
- When logging in, the user shall be redirected to an entity based on a quick resolve of registered users in the internal database of the operational server (the same list of users as in each entity instance, but only having the ID, login and instance ID).

The same as above applies for the administrative (government) users, whereas their registration shall be performed "from bottom-up", e.g. within their entity-instance based on the SSO methods of the instance (however the users account will have an proxy in the system users data as well, so they shall sync to the central part as well).

➤ **Registration entry (vineyard harvester))(FBIH)** (::«ArchiMate_ApplicationProcess»)

Step I: Registration in the RPG username and password from the RPG are the input for registration in VWR. This registration shall already provide and guide the user to choose from one of the roles possible in the system (vineyard harvester, wine producer, merchant, cellar book user), however the user may stay registered without any role (having access to his documents only).

Step II: The client enters in the so-called. "Viticultural cadaster" with the person in charge of keeping the viticultural cadaster - each parcel receives an identification number (assigned automatically by GIS software). The user, when registered in the system, shall register as the role of vineyard harvester. After that registration is submitted, the user can immediately generate a registration certificate about fulfilling its legislative duty. However in case of a vineyard harvester, this certificate and the registration status is only provisional (short-time limited). This timeframe is being used for either (in case the user provided detailed GPS-plotted plans of the vineyards(*)) inspection-control from the FAZ to check the validity and correctness of the provided GPS plans/plots, or (in other cases) for measuring and inspecting the vineyards.

*) The client opens the online entry by entering the username and password. An application opens with data relevant to the vineyard register that are digitally entered-filled. The link between the register and the cadastre is the identification number of the parcel as the smallest unit of account.

Step III: After the vineyards GPS coordinates have been validated, the status of the users is switched into a fully pledged certificate.

By opening the register form from the RPG, the general data should be withdrawn: customer name, ID number, VAT number, address,....

➤ **Registration entry (vineyard harvester))(RS)** (::«ArchiMate_ApplicationProcess»)

Step I: Registration in the RPG username and password from the RPG are the input for registration in VG-R. This registration shall already provide and guide the user to choose from one of the roles possible in the system (vineyard harvester, wine producer, merchant, cellar book user), however the user may stay registered without any role (having access to his documents only).

Step II: The client enters in the so-called. "Viticultural cadaster" with the person in charge of keeping the viticultural cadaster - each parcel receives an identification number (assigned automatically by GIS software). The user, when registered in the system, shall register as the role of vineyard harvester. After that registration is submitted, the user can immediately generate a registration (fully pfledged) certificate about fulfilling its legislative duty.

By opening the register form from the RPG, the general data should be withdrawn: customer name, ID number, VAT number, address,....

➤ **Registration entry deletion/deregistration (vineyard harvester))(RS&FBIH)** (::«ArchiMate_ApplicationProcess»)

The vineyard harvester (vineyard) registration may be altered:

- by deleting the entire registration of the vineyard (either on request of the vineyard harvester as result of his own decision of business termination or on request based on a governmental authority decision for example based on inspection results or other breach of the regulations)
- by deleting/changing/adding a plot of land used for vine growing

[FBIH only] Note.: Once the vineyard harvester is registered and the initial inspection-control of the GPS area of its vineyards has been finished, thus "switching" the subject into the mode of "permanent" registration status (not only the provisional one for a limited time until the initial inspection-control is done by FAZ), then apart from termination its operation as vineyard harvester (which changes the status of the registrant as non-existent/terminated), **no** other change shall change the registration status back into the provisional state. So once the registrant has been approved into the permanent registration state, no document (registration) change can trigger the change of this status. That does not apply if the "status" attribute is being changed directly by any governmental official based on any administrative decision.

➤ **Registration entry deletion/deregistration/registration cancellation (main prototype)**

(::«ArchiMate_ApplicationProcess»)

The Administration or the body responsible for keeping the Register shall initiate the procedure for deletion from the Register:

(a) at the request of the registered entity on the basis of its decision on the cessation of activities or other circumstances that lead to the cessation of activities due to which it was obliged to register in the Register;

(b) ex officio, in the following cases:

- (i) deletion of a natural or legal person from the Register due to the provisions of special regulations on organizational forms for performing activities, except in cases when deletion is performed upon application of the registered entity on changes in organization and / or change of activity and
- (ii) by repeated repetition of irregularities identified by the administration or the body keeping the Register or the competent inspector with regard to the prescribed keeping and reporting of data to the Register.

Harvest declaration

Declaration (statements)Class

Document representing the declaration of the harvest amount in the specific vine year (vintage).

Note: There are no harvest-declaration-specific, batch-related attributes for the declaration, but that may be re-specified during the initial analysis and such attributes may immerge.

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

➤ **RPG in FBIH necessary?**

[03_22 Mostar] TODO: Wine seller - not in RPG! When dual registration without RPG (e.g. RPG only as data source, but there might be subjects that are only sellers => no RPG registratiOn)

➤ **Vine and wine register (Brčko)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in Brčko.

➤ **Vine and wine register (FBIH)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in FBIH.

➤ **Vineyard registration (RS)** (::«ArchiMate_BusinessProcess»)

The legal obligation of RS foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing and commercialization process, meeting certain criteria (vineyard surface etc.), have to be registered in a governmental register.

This register is currently run only governmentally-based (FAZ) and not entirely update by the parties (registrants, vineyard harvesters) involved.

➤ **[FBIH only] Vineyard/vineyard harvester registration (FBIH)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBIH foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing and commercialization process, meeting certain criteria (vineyard surface etc.), have to be registered in a governmental register.

This register is currently run only governmentally-based (FAZ in Mostar) and not entirely update by the parties (registrants, vineyard harvesters) involved.

➤ **Harvest declaration (Brčko)** (::«ArchiMate_BusinessProcess»)

The legal obligation of Brčko foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing and commercialization process, meeting certain criteria (vineyard surface etc.), have to report annually the volume of their harvests.

This processes is not yet being executed in the governmental administration.

➤ **Harvest declaration (RS)** (::«ArchiMate_BusinessProcess»)

The legal obligation of RS foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing and commercialization process, meeting certain criteria (vineyard surface etc.), have to report annually the volume of their harvests.

This processes is not yet being executed in the governmental administration.

➤ **Vine and wine register (RS)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in RS.

➤ **Vineyard/vineyard harvester registration (Brčko)** (::«ArchiMate_BusinessProcess»)

The legal obligation of Brčko foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing, harvesting and commercialization process, meeting certain criteria (vineyard surface etc.), have to be registered in a governmental register.

This register is currently run only governmentally-based (FAZ in Mostar) and not entirely update by the parties (registrants, vineyard harvester) involved.

➤ **[FBiH only] Vineyard geo-registry operations (FAZ)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing and commercialization process, meeting certain criteria (vineyard surface even for non-premium vines etc.), have to report any changes in the data of their registration.

This processes is not yet being executed in the governmental administration.

➤ **Harvest declaration -non premium vine (FBiH)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing and commercialization process, meeting certain criteria (vineyard surface even for non-premium vines etc.), have to report annually the volume of their harvests.

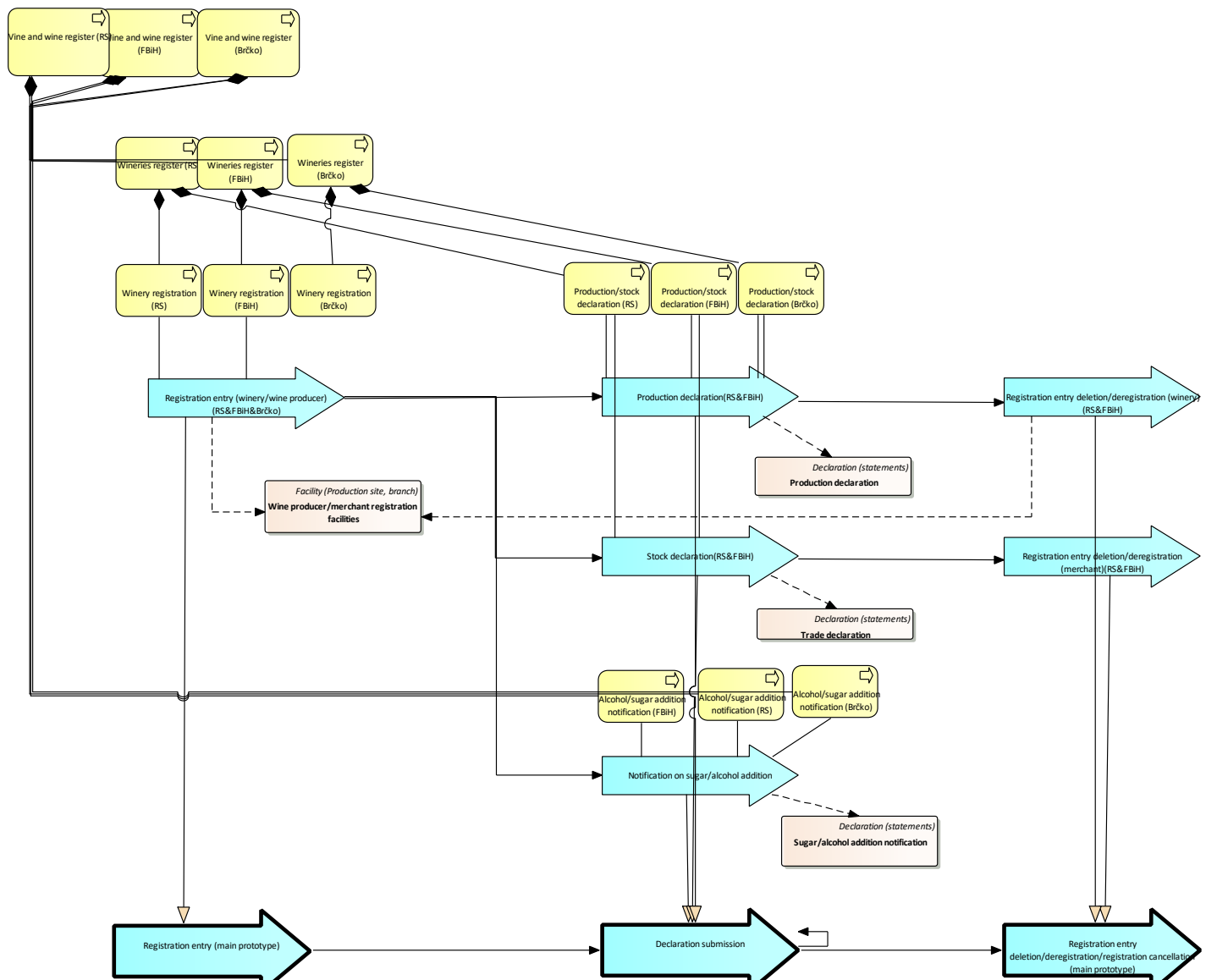
This processes is not yet being executed in the governmental administration.

➤ **Harvest declaration (FBiH)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing and commercialization process, meeting certain criteria (vineyard surface etc.), have to report annually the volume of their harvests.

This processes is not yet being executed in the governmental administration.

5.2.2 Processes - registrants - winemakers



The basic procedural overview of processes as being run in the scope of the administration of Vine and Wine Register with emphasis in the procedural flow applicable to winemakers.

➤ Declaration submission (::«ArchiMate_ApplicationProcess»)

The user (most typically a registrant, or a government administrator, who is doing so on behalf of another subject) can create a new predefined type of document. Apart from any kind of binary documents (files attachments), the user can select from predefined special structured forms, whose data are to be stored in a relational database, such as for example:

- harvest declaration
- production declaration
- stock declaration
- trade declaration
- alcoholization/sugar addition notification
- accompanying documents for transport

Each and every document (in the form as described in the data entity diagram and as can be observed from the attachments representing the current prototypes of the forms) can be created in multiple instances (each and every of them being linked to a specified vintage - business year, where there may exist multiple drafts for each vintage). These documents can be saved at will.

After the user is content with the data, the user can submit the document, which is an irreversible process making the declaration legally bound. There may be subsequent declarations, but only those, that:

- either invalidate the previously submitted type of document within the same vintage year

OR

- invalidate only part of the previous document (either by updating it or "deleting" it which means in fact only terminating its validity)

[Neum/RS] Could be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH ,all inputs)

➤ **Notification on sugar/alcohol addition** (::«ArchiMate_ApplicationProcess»)

This has to be announced in the form of a simple fill-in form only and submitted as any other declaration.

➤ **Production declaration(RS&FBIH)** (::«ArchiMate_ApplicationProcess»)

RS [Neum/RS/Radica]: Note: In BIH it is forbidden to produce wine from imported grapes! This poses a specific constraint on the source of grapes/must in the production declaration.

Every source batch for a wine batch should be able to be identified by an ID of a corresponding harvest declaration or ID of a vineyard parcel.

Every resulting batch of wine can be then be of any destination, not important if inside BIH, cross-entity sale, EU or other countries.

➤ **Registration entry (main prototype)** (::«ArchiMate_ApplicationProcess»)

The registration in electronic form shall be submitted in 2 respective 3 steps:

- in case of FBIH vineyard harvester registration 3 steps (including GPS plot/plan verification)
- 2 steps (merged in single one preferably) for any other entity

In case of a physical form registration, the request for entry in the Register (..) may be submitted to the local branch office or body responsible for keeping the Register, according to the seat of the entity subject to entry in the Register, as specified in the regulations of the Entity and Brčko District BiH.

The request shall be submitted on the application form for entry in the register prescribed by the Competent Institutions of the Entities and the Brčko District of BiH.

[Neum/RS] This can be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH ,all inputs) Forms must be available in digital form in such a way that they can be printed out in PDF format or completed online.

[Mostar] The registration and login shall be performed from one single point - the "Middleware server" operated by MVTEO:

- When registering (a subject) for the first time, the user shall declare the municipality the enterprise (wine/vine company, farm etc.) belongs to. Based on this information the system shall redirect the user registration to one of the entity instances (see: [Deployment : Deployment - entity local instances with operational server over Internet](#)) where the registration is finished.
- When logging in, the user shall be redirected to an entity based on a quick resolve of registered users in the internal database of the operational server (the same list of users as in each entity instance, but only having the ID, login and instance ID).

The same as above applies for the administrative (government) users, whereas their registration shall be performed "from bottom-up", e.g. within their entity-instance based on the SSO methods of the instance (however the users account will have an proxy in the system users data as well, so they shall sync to the central part as well).

➤ **Registration entry (winery/wine producer)(RS&FBIH&Brčko)** (::«ArchiMate_ApplicationProcess»)

The subject may register as a wine producer.

Note.: If all the wine being sold is sold from the sources of own production only, then no trade declaration duty applies. A wine producer has to report on production and stock only (eventually on harvest, if he is a vineyard harvester as well, yet that is a different role/facility registration), but reporting on trade applies only on cases when any ready-made wine end-product is being purchased and re-sold as it is (without changing its state).

➤ **Registration entry deletion/deregistration (winery)(RS&FBIH)** (::«ArchiMate_ApplicationProcess»)

(nothing special here)

➤ **Registration entry deletion/deregistration/registration cancellation (main prototype)**

(::«ArchiMate_ApplicationProcess»)

The Administration or the body responsible for keeping the Register shall initiate the procedure for deletion from the Register:

- (a) at the request of the registered entity on the basis of its decision on the cessation of activities or other circumstances that lead to the cessation of activities due to which it was obliged to register in the Register;
- (b) ex officio, in the following cases:
- (i) deletion of a natural or legal person from the Register due to the provisions of special regulations on organizational forms for performing activities, except in cases when deletion is performed upon application of the registered entity on changes in organization and / or change of activity and
- (ii) by repeated repetition of irregularities identified by the administration or the body keeping the Register or the competent inspector with regard to the prescribed keeping and reporting of data to the Register.

➤ **Stock declaration(RS&FBiH)** (::«ArchiMate_ApplicationProcess»)

As part of the stock declaration, the declarant (subject, registrant) may identify the stored wine stock either by its internal LOT number, or as well by linking it to a declared manufactured lot from production declarations.

➤ **Alcohol/sugar addition notification (Brčko)** (::«ArchiMate_BusinessProcess»)

The legal obligation of Brčko foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) registered as wine producers, who perform any addition of sugar or ethyl alcohol into their current production lot, notify the authorities of these actions within a given time frame.

The authorities do not have any obligation to respond neither have the wine producers wait for any approval, this notification duty servers for future reference only (inspections, wine laboratory analysis etc.).

➤ **Alcohol/sugar addition notification (FBiH)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) registered as wine producers, who perform any addition of sugar or ethyl alcohol into their current production lot, notify the authorities of these actions within a given time frame.

The authorities do not have any obligation to respond neither have the wine producers wait for any approval, this notification duty servers for future reference only (inspections, wine laboratory analysis etc.).

➤ **Alcohol/sugar addition notification (RS)** (::«ArchiMate_BusinessProcess»)

The legal obligation of RS foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) registered as wine producers, who perform any addition of sugar or ethyl alcohol into their current production lot, notify the authorities of these actions within a given time frame.

The authorities do not have any obligation to respond neither have the wine producers wait for any approval, this notification duty servers for future reference only (inspections, wine laboratory analysis etc.).

➤ **Wineries register (FBiH)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) involved in the wine making and commercialization process, meeting certain criteria (production volume etc.), have to be registered in a governmental register.

In FBiH this register is currently being run in the form of municipality-based paper filing.

➤ **Wineries register (RS)** (::«ArchiMate_BusinessProcess»)

The legal obligation of RS foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) involved in the wine making and commercialization process, meeting certain criteria (production volume etc.), have to be registered in a governmental register.

In RS, this register is currently being run in the form of an entity-wide single Excel sheet containing a total of 36 records.

➤ **Production/stock declaration (FBiH)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms, wine producers, bottlers, merchants etc.) registered as wine producers have the obligation to report on their annual production volume.

➤ **Production/stock declaration (Brčko)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms, wine producers, bottlers, merchants etc.) registered as wine producers have the obligation to report on their annual production volume.

➤ **Vine and wine register (Brčko)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in Brčko.

➤ **Vine and wine register (FBiH)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in FBIH.

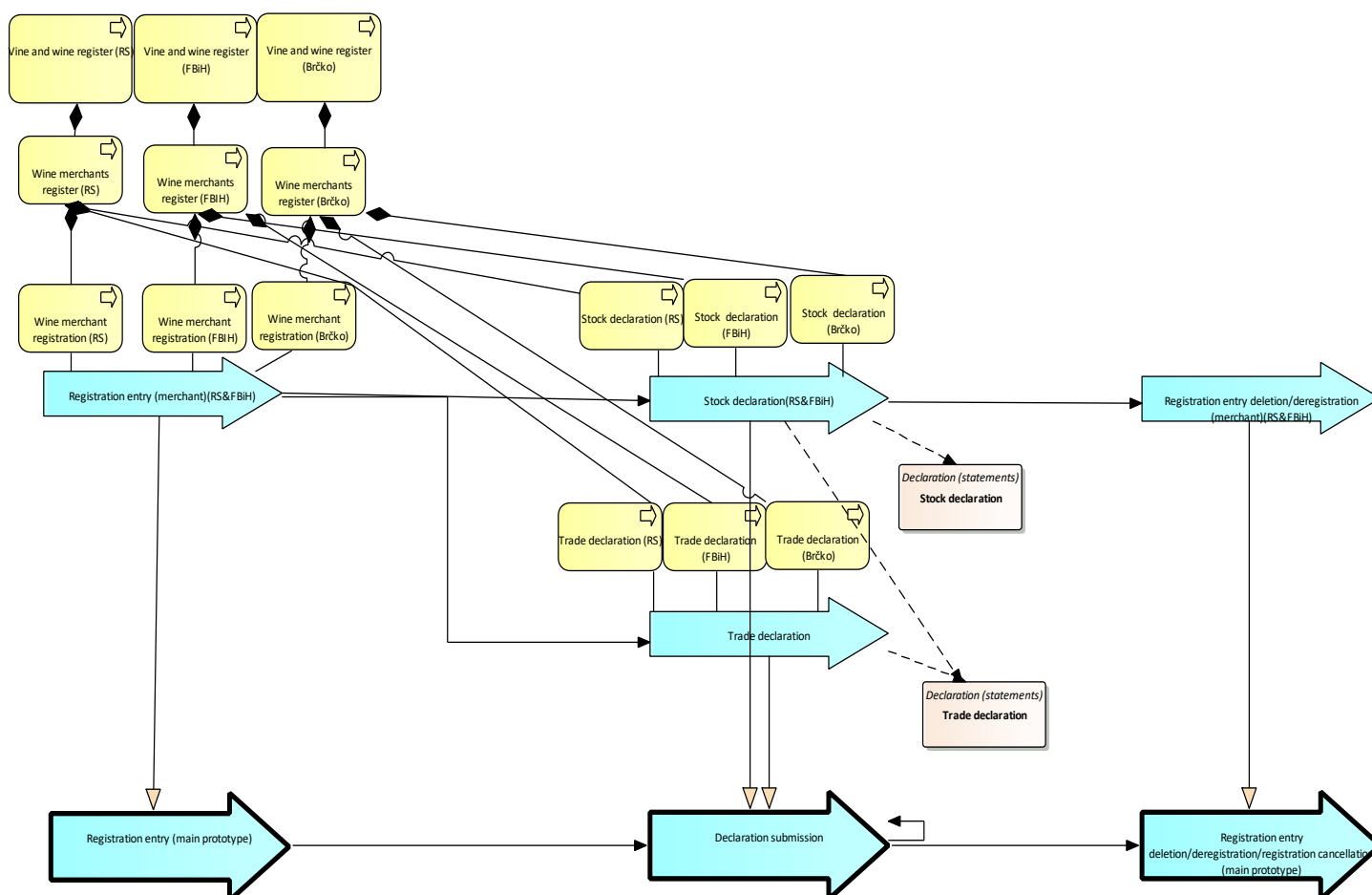
➤ **Production/stock declaration (RS)** (::«ArchiMate_BusinessProcess»)

The legal obligation of RS foresees those enterprises (companies, legal persons - farms, wine producers, bottlers, merchants etc.) registered as wine producers have the obligation to report on their annual production volume.

➤ **Vine and wine register (RS)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in RS.

5.2.3 Processes - registrants - winetraders



The basic procedural overview of processes as being run in the scope of the administration of Vine and Wine Register with emphasis in the procedural flow applicable to wine traders.

➤ Declaration submission (::«ArchiMate_ApplicationProcess»)

The user (most typically a registrant, or a government administrator, who is doing so on behalf of another subject) can create a new predefined type of document. Apart from any kind of binary form documents (files attachments), the user can select from predefined special structured forms, whose data are to be stored in a relational database, such as for example:

- harvest declaration
- production declaration
- stock declaration
- trade declaration
- alcoholization/sugar addition notification
- accompanying documents for transport

Each and every document (in the form as described in the data entity diagram and as can be observed from the attachments representing the current prototypes of the forms) can be created in multiple instances (each and every of them being linked to a specified vintage - business year, where there may exist multiple drafts for each vintage). These documents can be saved at will.

After the user is content with the data, the user can submit the document, which is an irreversible process making the declaration legally bound. There may be subsequent declarations, but only those, that:

- either invalidate the previously submitted type of document within the same vintage year
OR

- invalidate only part of the previous document (either by updating it or "deleting" it which means in fact only terminating its validity)

[Neum/RS] Could be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH ,all inputs)

➤ **Registration entry (main prototype)** (::«ArchiMate_ApplicationProcess»)

The registration in electronic form shall be submitted in 2 respective 3 steps:

- in case of FBIH vineyard harvester registration 3 steps (including GPS plot/plan verification)
- 2 steps (merged in single one preferably) for any other entity

In case of a physical form registration, the request for entry in the Register (..) may be submitted to the local branch office or body responsible for keeping the Register, according to the seat of the entity subject to entry in the Register, as specified in the regulations of the Entity and Brčko District BiH.

The request shall be submitted on the application form for entry in the register prescribed by the Competent Institutions of the Entities and the Brčko District of BiH.

[Neum/RS] This can be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBIH ,all inputs)
Forms must be available in digital form in such a way that they can be printed out in PDF format or completed online.

[Mostar] The registration and login shall be performed from one single point - the "Middleware server" operated by MVTEO:

- When registering (a subject) for the first time, the user shall declare the municipality the enterprise (wine/vine company, farm etc.) belongs to. Based on this information the system shall redirect the user registration to one of the entity instances (see: Deployment : Deployment - entity local instances with operational server over Internet) where the registration is finished.
- When logging in, the user shall be redirected to an entity based on a quick resolve of registered users in the internal database of the operational server (the same list of users as in each entity instance, but only having the ID, login and instance ID).

The same as above applies for the administrative (government) users, whereas their registration shall be performed "from bottom-up", e.g. within their entity-instance based on the SSO methods of the instance (however the users account will have an proxy in the system users data as well, so they shall sync to the central part as well).

➤ **Registration entry (merchant)(RS&FBIH)** (::«ArchiMate_ApplicationProcess»)

The subject may register as a wine merchant.

Note.: If all the wine being sold is sold from the sources of own production only, then no trade declaration duty applies.

➤ **Registration entry deletion/deregistration/registration cancellation (main prototype)**

(::«ArchiMate_ApplicationProcess»)

The Administration or the body responsible for keeping the Register shall initiate the procedure for deletion from the Register:

(a) at the request of the registered entity on the basis of its decision on the cessation of activities or other circumstances that lead to the cessation of activities due to which it was obliged to register in the Register;

(b) ex officio, in the following cases:

- (i) deletion of a natural or legal person from the Register due to the provisions of special regulations on organizational forms for performing activities, except in cases when deletion is performed upon application of the registered entity on changes in organization and / or change of activity and
- (ii) by repeated repetition of irregularities identified by the administration or the body keeping the Register or the competent inspector with regard to the prescribed keeping and reporting of data to the Register.

➤ **Stock declaration(RS&FBIH)** (::«ArchiMate_ApplicationProcess»)

As part of the stock declaration, the declarant (subject, registrant) may identify the stored wine stock either by its internal LOT number, or as well by linking it to a declared manufactured lot from production declarations.

➤ **Trade declaration** (::«ArchiMate_ApplicationProcess»)

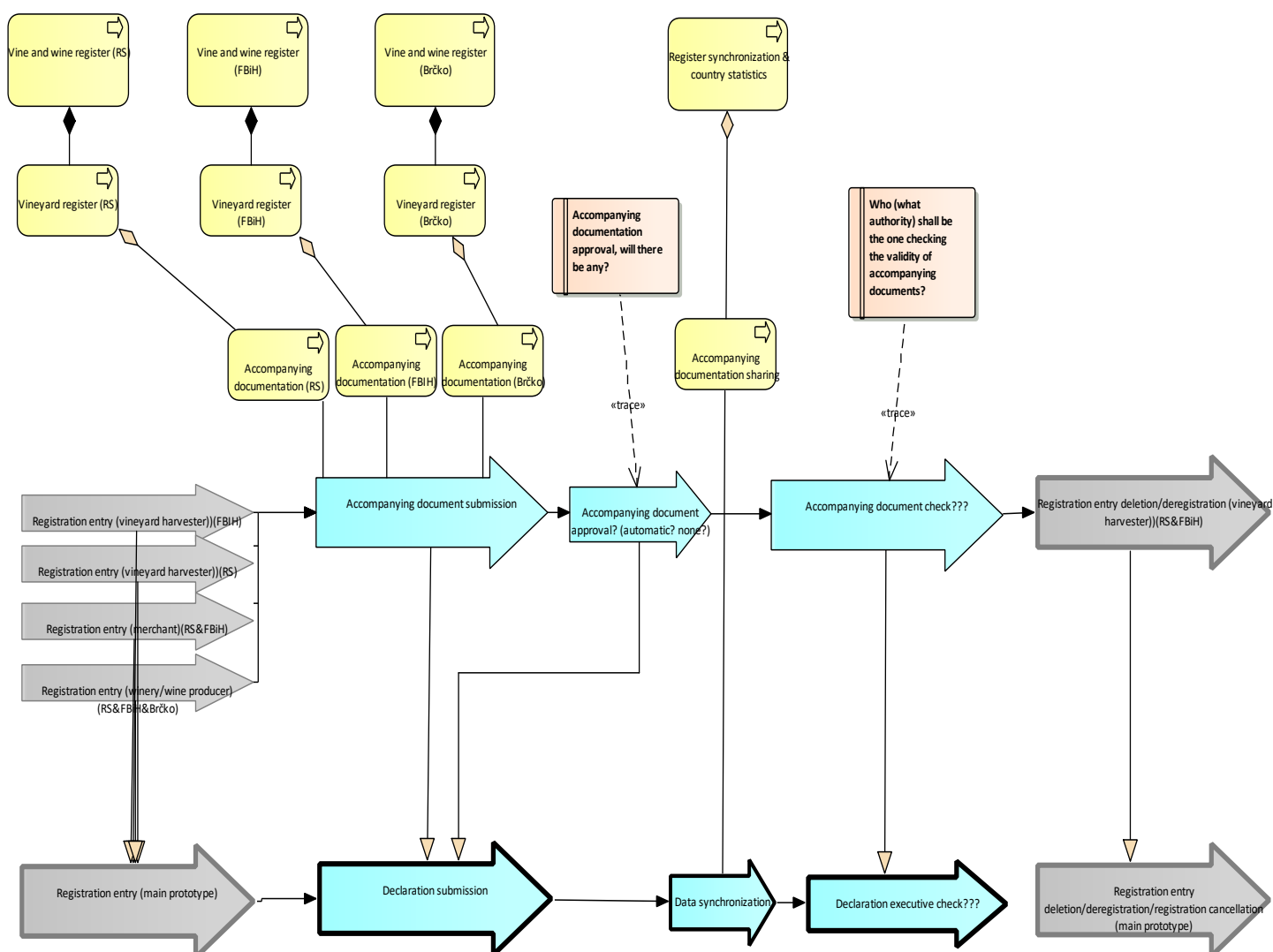
+ selection process of declaration links!

➤ **Stock declaration (Brčko)** (::«ArchiMate_BusinessProcess»)

The legal obligation of Brčko foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) registered as wine merchants have the obligation to report on their current stock amount.

➤ Stock declaration (FBiH) (::«ArchiMate_BusinessProcess»)
The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) registered as wine merchants have the obligation to report on their current stock amount.
➤ Stock declaration (RS) (::«ArchiMate_BusinessProcess»)
The legal obligation of RS foresees those enterprises (companies, legal persons - farms, wine manufacturers, bottlers, merchants etc.) registered as wine merchants have the obligation to report on their current stock amount.
➤ Vine and wine register (Brčko) (::«ArchiMate_BusinessProcess»)
The processes and procedures operated by the entire register in Brčko.
➤ Vine and wine register (FBiH) (::«ArchiMate_BusinessProcess»)
The processes and procedures operated by the entire register in FBiH.
➤ Vine and wine register (RS) (::«ArchiMate_BusinessProcess»)
The processes and procedures operated by the entire register in RS.
➤ Trade declaration (Brčko) (::«ArchiMate_BusinessProcess»)
Currently non-existent.
➤ Trade declaration (FBiH) (::«ArchiMate_BusinessProcess»)
Currently non-existent.
➤ Trade declaration (RS) (::«ArchiMate_BusinessProcess»)
Currently non-existent.

5.2.4 Processes - registrants - anyone doing transport



The basic procedural overview of processes as being run in the scope of the administration of Vine and Wine Register with emphasis in the procedural flow applicable to vine growers.

➤ **Accompanying document approval? (automatic? none?)** (::«ArchiMate_ApplicationProcess»)

??? Is it needed ??? Who will be approving and when???

➤ **Accompanying document check???** (::«ArchiMate_ApplicationProcess»)

The subject is submitting information needed in the accompanying documentation.
A paper form with the corresponding ID is generated.

➤ **Accompanying document submission** (::«ArchiMate_ApplicationProcess»)

The subject is submitting information needed in the accompanying documentation.
A report for paper form print-out with the corresponding ID is generated.

➤ **Data synchronization** (::«ArchiMate_ApplicationProcess»)

1. Data upload on request of the middleware part from the entity to the middleware system (selected registrants data (only current actual name, address&point geoposition, e.g. no spatial), location, id, contact(s), registration date, operation type, facilities list (IDs, types, addresses&point geoposition)) + associated declaration rows of harvest (address, variety (incl. PGI/PDO), color, subject ID that the wine was sold to) and production (input batch subject ID who sold/produced the grapes, variety (incl. PGI/PDO), color, batch etiquette ID, sales unit type (bottle, barrel...))

2. Data download (selected registrants data (only current actual name, address(&point geoposition, e.g. no spatial), location, id, contact(s), registration date, operation type, facilities list (IDs, types, addresses&point geoposition))
3. Pre-computed reports generation - this shall be operated by the Operational statistics and synchronization middleware part of the system, that shall contain the definition of the report query and input filters and pass this query to each of the system entity instances. The instance produces the report, all results are recorded in the central part and the central part re-runs the aggregation and grouping on the results to produce one final nation-wide report.

➤ **Declaration executive check???** (::«ArchiMate_ApplicationProcess»)

Is there any executive part of the authority, that would require the access to check the documents?

- accompanying documents for transport

➤ **Declaration submission** (::«ArchiMate_ApplicationProcess»)

The user (most typically a registrant, or a government administrator, who is doing so on behalf of another subject) can create a new predefined type of document. Apart from any kind of binary form documents (files attachments), the user can select from predefined special structured forms, whose data are to be stored in a relational database, such as for example:

- harvest declaration
- production declaration
- stock declaration
- trade declaration
- alcoholization/sugar addition notification
- accompanying documents for transport

Each and every document (in the form as described in the data entity diagram and as can be observed from the attachments representing the current prototypes of the forms) can be created in multiple instances (each and every of them being linked to a specified vintage - business year, where there may exist multiple drafts for each vintage). These documents can be saved at will.

After the user is content with the data, the user can submit the document, which is an irreversible process making the declaration legally bound. There may be subsequent declarations, but only those, that:

- either invalidate the previously submitted type of document within the same vintage year

OR

- invalidate only part of the previous document (either by updating it or "deleting" it which means in fact only terminating its validity)

[Neum/RS] Could be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBiH, all inputs)

➤ **Registration entry (main prototype)** (::«ArchiMate_ApplicationProcess»)

The registration in electronic form shall be submitted in 2 respective 3 steps:

- in case of FBiH vineyard harvester registration 3 steps (including GPS plot/plan verification)
- 2 steps (merged in single one preferably) for any other entity

In case of a physical form registration, the request for entry in the Register (..) may be submitted to the local branch office or body responsible for keeping the Register, according to the seat of the entity subject to entry in the Register, as specified in the regulations of the Entity and Brčko District BiH.

The request shall be submitted on the application form for entry in the register prescribed by the Competent Institutions of the Entities and the Brčko District of BiH.

[Neum/RS] This can be done (on behalf) by: APIF clerks (RS, registration only), Municipalities (FBiH, all inputs)

Forms must be available in digital form in such a way that they can be printed out in PDF format or completed online.

[Mostar] The registration and login shall be performed from one single point - the "Middleware server" operated by MVTEO:

- When registering (a subject) for the first time, the user shall declare the municipality the enterprise (wine/vine company, farm etc.) belongs to. Based on this information the system shall redirect the user registration to one of the entity instances (see: [Deployment : Deployment - entity local instances with operational server over Internet](#)) where the registration is finished.

- When logging in, the user shall be redirected to an entity based on a quick resolve of registered users in the internal database of the operational server (the same list of users as in each entity instance, but only having the ID, login and instance ID).

The same as above applies for the administrative (government) users, whereas their registration shall be performed "from bottom-up", e.g. within their entity-instance based on the SSO methods of the instance (however the users account will have an proxy in the system users data as well, so they shall sync to the central part as well).

➤ **Registration entry (merchant)(RS&FBIH)** (::«ArchiMate_ApplicationProcess»)

The subject may register as a wine merchant.

Note.: If all the wine being sold is sold from the sources of own production only, then no trade declaration duty applies.

➤ **Registration entry (vineyard harvester))(FBIH)** (::«ArchiMate_ApplicationProcess»)

Step I: Registration in the RPG username and password from the RPG are the input for registration in VWR. This registration shall already provide and guide the user to choose from one of the roles possible in the system (vineyard harvester, wine producer, merchant, cellar book user), however the user may stay registered without any role (having access to his documents only).

Step II: The client enters in the so-called. "Viticulural cadaster" with the person in charge of keeping the viticulural cadaster - each parcel receives an identification number (assigned automatically by GIS software). The user, when registered in the system, shall register as the role of vineyard harvester. After that registration is submitted, the user can immediately generate a registration certificate about fulfilling its legislative duty. However in case of a vineyard harvester, this certificate and the registration status is only provisional (short-time limited). This timeframe is being used for either (in case the user provided detailed GPS-plotted plans of the vineyards(*)) inspection-control from the FAZ to check the validity and correctness of the provided GPS plans/plots, or (in other cases) for measuring and inspecting the vineyards.

*) The client opens the online entry by entering the username and password. An application opens with data relevant to the vineyard register that are digitally entered-filled. The link between the register and the cadastre is the identification number of the parcel as the smallest unit of account.

Step III: After the vineyards GPS coordinates have been validated, the status of the users is switched into a fully pledged certificate.

By opening the register form from the RPG, the general data should be withdrawn: customer name, ID number, VAT number, address,....

➤ **Registration entry (vineyard harvester))(RS)** (::«ArchiMate_ApplicationProcess»)

Step I: Registration in the RPG username and password from the RPG are the input for registration in VG-R. This registration shall already provide and guide the user to choose from one of the roles possible in the system (vineyard harvester, wine producer, merchant, cellar book user), however the user may stay registered without any role (having access to his documents only).

Step II: The client enters in the so-called. "Viticulural cadaster" with the person in charge of keeping the viticulural cadaster - each parcel receives an identification number (assigned automatically by GIS software). The user, when registered in the system, shall register as the role of vineyard harvester. After that registration is submitted, the user can immediately generate a registration (fully pfledged) certificate about fulfilling its legislative duty.

By opening the register form from the RPG, the general data should be withdrawn: customer name, ID number, VAT number, address,....

➤ **Registration entry (winery/wine producer)(RS&FBIH&Brčko)** (::«ArchiMate_ApplicationProcess»)

The subject may register as a wine producer.

Note.: If all the wine being sold is sold from the sources of own production only, then no trade declaration duty applies. A wine producer has to report on production and stock only (eventually on harvest, if he is a vineyard harvester as well, yet that is a different role/facility registration), but reporting on trade applies only on cases when any ready-made wine end-product is being purchased and re-sold as it is (without changing its state).

➤ **Registration entry deletion/deregistration (vineyard harvester))(RS&FBIH)** (::«ArchiMate_ApplicationProcess»)

The vineyard harvester (vineyard) registration may be altered:

- by deleting the entire registration of the vineyard (either on request of the vineyard harvester as result of his own decision of business termination or on request based on a governmental authority decision for example based on inspection results or other breach of the regulations)

- by deleting/changing/adding a plot of land used for vine growing

[FBIH only] Note.: Once the vineyard harvester is registered and the initial inspection-control of the GPS area of its vineyards has been finished, thus "switching" the subject into the mode of "permanent" registration status (not only the provisional one for a limited time until the initial inspection-control is done by FAZ), then apart from termination its operation as vineyard harvester (which changes the status of the registrant as non-existent/terminated), **no** other change shall change the registration status back into the provisional state. So once the registrant has been approved into the permanent registration state, no document (registration) change can trigger the change of this status. That does not apply if the "status" attribute is being changed directly by any governmental official based on any administrative decision.

➤ **Registration entry deletion/deregistration/registration cancellation (main prototype)**

(::«ArchiMate_ApplicationProcess»)

The Administration or the body responsible for keeping the Register shall initiate the procedure for deletion from the Register:

- (a) at the request of the registered entity on the basis of its decision on the cessation of activities or other circumstances that lead to the cessation of activities due to which it was obliged to register in the Register;
- (b) ex officio, in the following cases:
 - (i) deletion of a natural or legal person from the Register due to the provisions of special regulations on organizational forms for performing activities, except in cases when deletion is performed upon application of the registered entity on changes in organization and / or change of activity and
 - (ii) by repeated repetition of irregularities identified by the administration or the body keeping the Register or the competent inspector with regard to the prescribed keeping and reporting of data to the Register.

➤ **Accompanying documentation (Brčko)** (::«ArchiMate_BusinessProcess»)

The legal obligation of Brčko foresees that any transportation of ANY wine-related products/raw materials (apart from certain exceptions, like no-owner change transport up to 70km etc.) have to be reported in, captured within and equipped with "accompanying documents", each having own unique ID by the authority. This processes is not yet being executed in the governmental administration.

➤ **Accompanying documentation (FBIH)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBIH foresees that any transportation of ANY wine-related products/raw materials (apart from certain exceptions, like no-owner change transport up to 70km etc.) have to be reported in, captured within and equipped with "accompanying documents", each having own unique ID by the authority. This processes is not yet being executed in the governmental administration.

➤ **Accompanying documentation (RS)** (::«ArchiMate_BusinessProcess»)

The legal obligation of RS foresees that any transportation of ANY wine-related products/raw materials (apart from certain exceptions, like no-owner change transport up to 70km etc.) have to be reported in, captured within and equipped with "accompanying documents", each having own unique ID by the authority. This processes is not yet being executed in the governmental administration.

➤ **Accompanying documentation sharing** (::«ArchiMate_BusinessProcess»)

As the legal obligation of all entities and districts foresees that any transportation of ANY wine-related products/raw materials (apart from certain exceptions, like no-owner change transport up to 70km etc.) have to be reported in, captured within and equipped with "accompanying documents", each having own unique ID by the authority, these have to be shared between the entities. This processes is not yet being executed in the governmental administration.

➤ **Vine and wine register (Brčko)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in Brčko.

➤ **Vine and wine register (FBIH)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in FBIH.

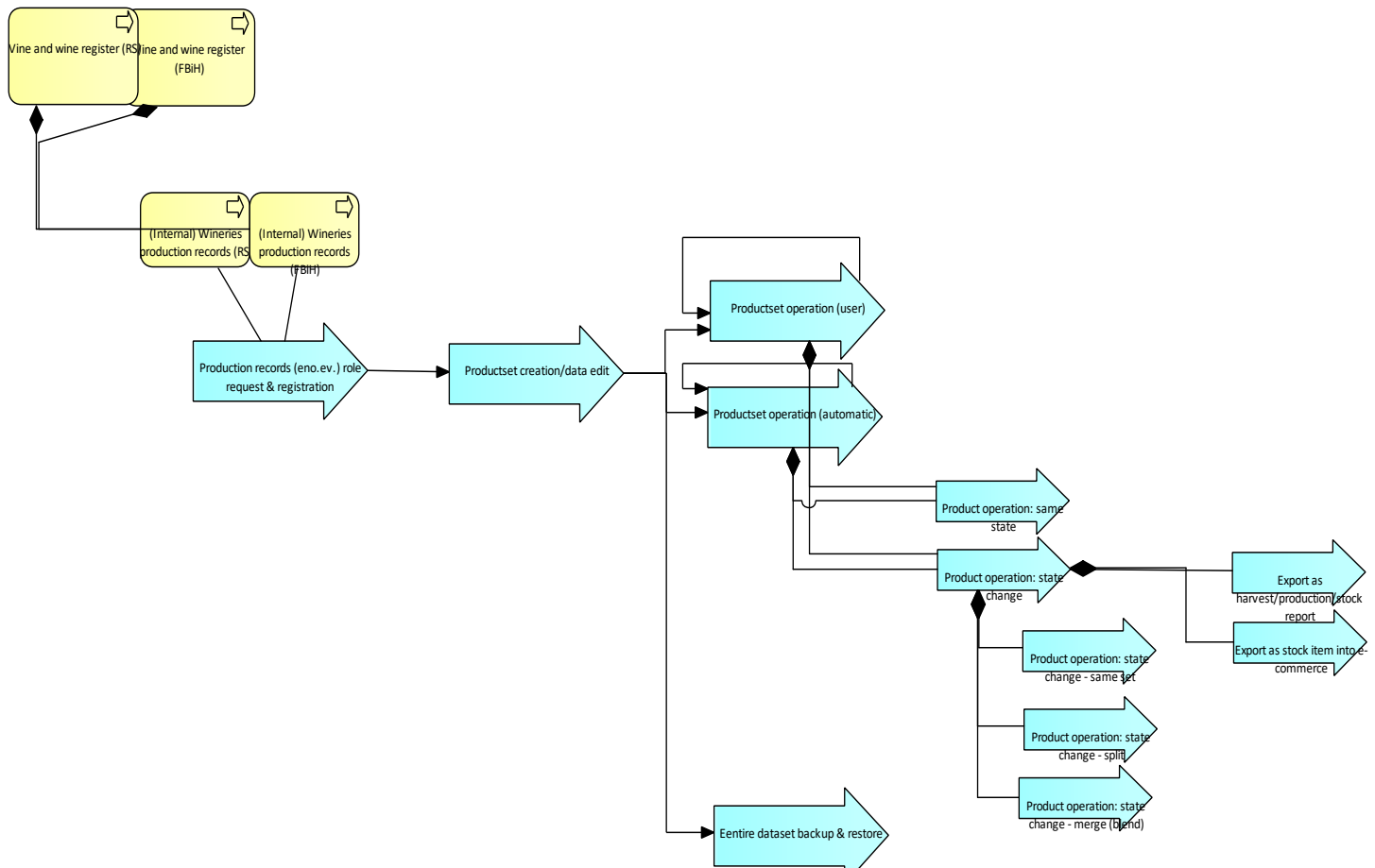
➤ Vine and wine register (RS) (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in RS.

5.3 Processes: Procedural description of the SW application - Processes - registrants - enology evidence

This part described the generic processes of an enology evidence.

5.3.1 Processes (ext.) - registrants - enology evidence



The basic procedural overview of processes as being run in the scope of an extended service module for the winemakers - the enology evidence (cellar book).

➤ Entire dataset backup & restore (::«ArchiMate_ApplicationProcess»)

As the governmental entity cannot guarantee a full and uninterrupted data protection, the user shall be responsible for the backup of (his own) data.

This backup shall be performed in two different processes with two possible outputs:

- manual (download using either the www GUI or the www API)
- automated (sending an email with a link to the data or the data as attachment)

whereas the form of the data in both the abovementioned cases shall be

- a set of excel/CSV pages/files (eventually in a ZIP archive) grouped and formatted in the same logic as defined by the productsets/sites/batches (e.g. a multi-column data views containing all the data given in the GUI in the same logic)
- an XML (alternative: named JSON or any other named self-documenting automated-readable generic-standard form) that is usable a) for the backup locally, b) for a restore in case of the main system failure.

If an automated backup is not set and a manual one has not been done for a certain interval of time, the system shall notify the main contacts (owners, primary users/subject-admins). This notification cannot be set-up or turned off unless an automated setup is established and successfully working (no e-mail delivery errors).

➤ **Export as harvest/production/stock report** (::«ArchiMate_ApplicationProcess»)

A special operation, when the productset becomes a part (a record, a line in declaration) of a declaration of stock/production declaration in the main (governmental) part of the register.

This may happen more than once (there may be multiple drafts of a stock/production declaration and there may be corrective declarations as well).

➤ **Export as stock item into e-commerce** (::«ArchiMate_ApplicationProcess»)

A special operation, when the productset becomes a sales catalog item product to be sold (it gets an end-customer price, photo, some marketing description, category etc.) and is enrolled into the external e-commerce platform, either:

- as edit of an existing item (the data in catalogue are changed, the amount of items in stock is changed)
- as addition of an existing item (the data in catalogue remains unchanged, but the stock count is incremented)
- as a newly enlisted item in catalogue.

This may happen more than once (there may be multiple "releases" of some product in larger stock at the producer).

➤ **Product operation: same state** (::«ArchiMate_ApplicationProcess»)

The user has edited the data (attributes) on the productset without changing its state (the wine material is still the same, without additions/blending/splitting etc., only some additional info has been added (e.g. laboratory measurement, note etc.) or some attributes changed (sugar content for example)

➤ **Product operation: state change** (::«ArchiMate_ApplicationProcess»)

The user has performed some operation on the product, that has change its state (position in the production chain).

➤ **Product operation: state change - merge (blend)** (::«ArchiMate_ApplicationProcess»)

The product has become:

- either something added (from a different, still existent productset or an external agents - sugar, alcohol etc.)
- or two or more products have been blended into one (some or all of the previous productsets have ceased to exist, it may be as well that some/all of the productsets ceased to exist and only one entirely new or one of them is continuing as a blend thereof)

➤ **Product operation: state change - same set** (::«ArchiMate_ApplicationProcess»)

It is still the same production set, only its position in the production chain has changed (for example must->young wine).

➤ **Product operation: state change - split** (::«ArchiMate_ApplicationProcess»)

The product has been split into two or more batches - for example aprt of a must has been used for fermentation of one wine, the other has been stored in different tanks and will be undergoing a different fermentation process.

➤ **Production records (eno.ev.) role request & registration** (::«ArchiMate_ApplicationProcess»)

The user may as well register as a (optional, non-compulsory) cellar-book user. This does not yield any legal obligations to him, but provides the possibility of keeping records using the online enology evidence (cellar book).

➤ **Productset creation/data edit** (::«ArchiMate_ApplicationProcess»)

Important note:

- It is allowed, that a previous entry is editable only until some timeout in X days or by system administrator (clerk). After it is locked, the editing has to be done: either by requesting a formal request to a clerk (outside the system) or by an administrator. The user cannot change the attributes afterwards.

➤ **Productset operation (automatic)** (::«ArchiMate_ApplicationProcess»)

The operation on a productset (changing attributes or state) = the productset has reached some state (attribute values or state of the productset as whole) that has to be reflected in the enology evidence by some autonomous operation that changes its state further.

➤ **Productset operation (user)** (::«ArchiMate_ApplicationProcess»)

The operation on a productset (changing attributes or state) = the productset has undergone some production operation in the real world (some measurement, fermentation, blending or splitting) that has to be reflected in the enology evidence.

➤ **Vine and wine register (FBiH)** (::«ArchiMate_BusinessProcess»)

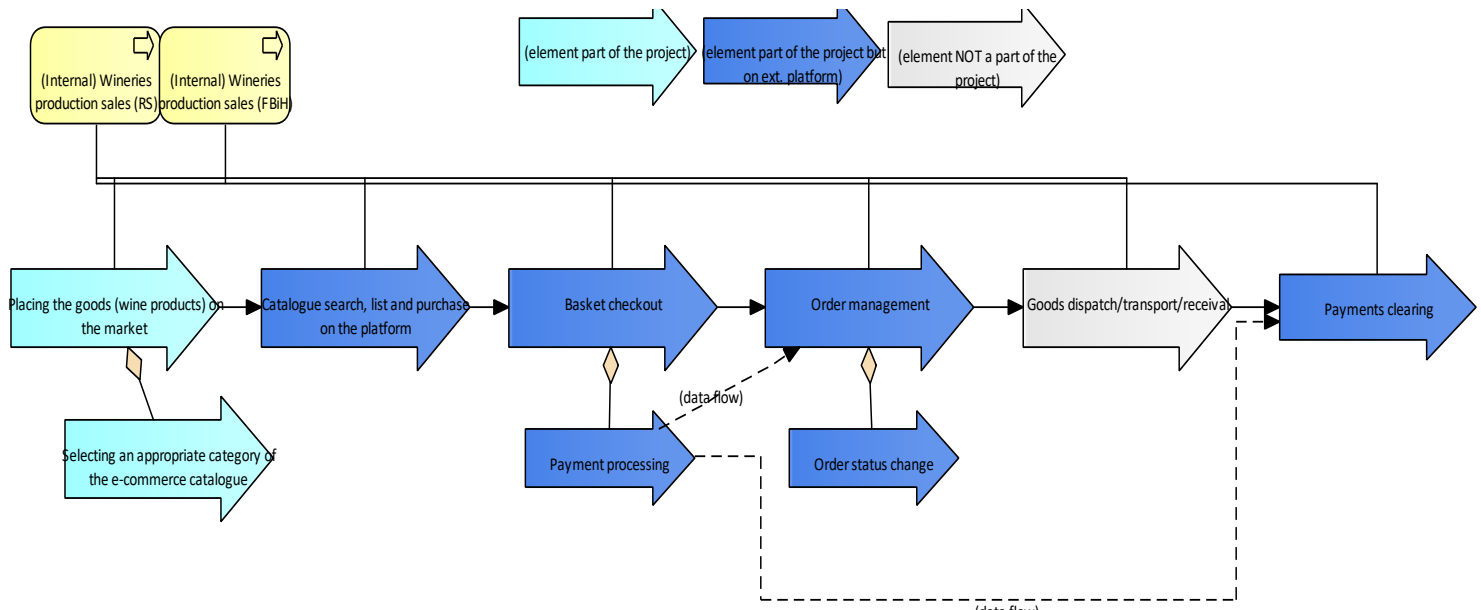
The processes and procedures operated by the entire register in FBiH.

➤ **Vine and wine register (RS)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in RS.

5.4 Processes: Procedural description of the SW application - Processes - registrants - e-commerce platform

5.4.1 Processes (ext.) - registrants - e-commerce



The basic procedural overview of processes as being run in the scope of an extended service module for the winemakers - the e-commerce platform.

➤ **Basket checkout** (::«ArchiMate_ApplicationProcess»)

During the finishing of the shopping the basket is checked out. The user gives details on his address, transportation and payments.

➤ **Catalogue search, list and purchase on the platform** (::«ArchiMate_ApplicationProcess»)

Any user (public, anonymous) can browse (search, list), the products in the platform.
The selected (purchased) goods are placed into a shopping basket.

➤ **Goods dispatch/transport/receival** (::«ArchiMate_ApplicationProcess»)

Finally the supplier (wine producer) dispatches the goods and the shopper receives it. (This happens completely unsupported by the platform apart from order status change.)

➤ **Order management** (::«ArchiMate_ApplicationProcess»)

Everybody has access to a list of his/her relevant orders (a registered customer can check the status, cancel order, review past orders etc.; a supplier (wine producer) can review orders received for dispatching/transport and payments statuses).

➤ **Order status change** (::«ArchiMate_ApplicationProcess»)

While the entire logistic process is run outside the platform, the e-commerce platform shall allow the supplier (wine producer) to mark the order as shipped, eventually with adding of a tracking number.

➤ **Payment processing** (::«ArchiMate_ApplicationProcess»)

During the finishing of the shopping the basket is checked out. The user gives details on his address, transportation and payment information (the e-commerce platform shall process the payment).

➤ **Payments clearing** (::«ArchiMate_ApplicationProcess»)

After the orders are processes, the e-commerce platform has to allow for clearing of the money received for the orders to be sent to the respective suppliers.

➤ **Placing the goods (wine products) on the market** (::«ArchiMate_ApplicationProcess»)

The user of a (optional, non-compulsory) cellar-book (=enology evidence) may place a productset (or a part of it) into a catalogue on an e-commerce platform.

The publishing shall require additional productset attributes, such as:

- trade name/title of the product
- product item price
- photo(s)
- descriptive text
- other attributes the platform may need

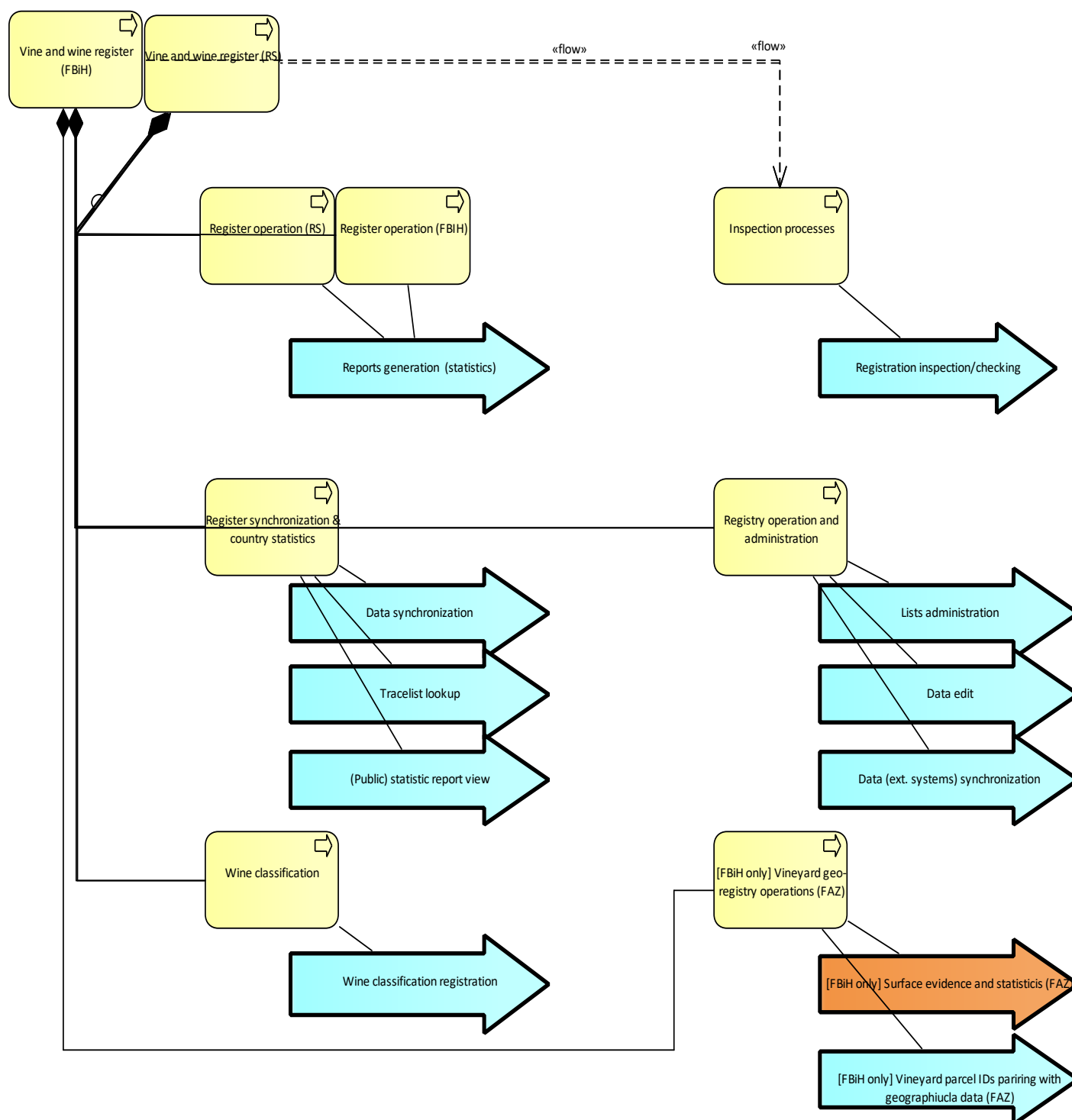
➤ **Selecting an appropriate category of the e-commerce catalogue** (::«ArchiMate_ApplicationProcess»)

During the placement of the products on the e-commerce platform a proper category shall be selected.

5.5 Processes: Procedural description of the SW application - Processes - authorities

This part describes the processes concerning the authorities (governmental and municipal bodies) that operate the register and perform specific tasks in it.

5.5.1 Processes (ext.) - authorities



The basic procedural overview of processes as being run in the scope of the Governmental register by the authorities.

➤ **(Public) statistic report view** (::«ArchiMate_ApplicationProcess»)

The system shall allow to generate dynamic data queries with tabular (selected columns, aggregation funcs COUNT/SUM/AVG... 1-2 level grouping in columns and/or rows) or graphical (pie, column/bar, line graphs) representation.

These are about to be used as:

1. KPI overview / statistics for the public, namely:

- (list of declarations - see ad 2.)
- list of registrations by state (input: list of states) submitted in given dates (main feature: unapproved registrations older than X), input(dates from, to, region/region, responsible user/group)
- registered totals: subjects count (by type)
- registered totals: vineyards count, surface sum (by region, by vineyard facility attributes of age category, method of use, irrigation, substrate, backrest, tree height (categories from-to), number of wires, trellising type, number of vines, planting distance in lines, planting distance of plants, breeding form, avg altitude (categories from-to), slope of the field, exposition)
- registered totals: vineyards count, surface sum (by variety (all, red, white), by purpose)
- declared totals: harvested last year tons sum (by variety)
- declared totals: production last year hl sum (by variety, by PGI, PDO, without PGI/PDO)
- declared totals: current (last year) stock hl sum (by variety, by PGI, PDO, without PGI/PDO)
- (may be ~+6 more)

➤ **[FBIH only] Surface evidence and statistics (FAZ)** (::«ArchiMate_ApplicationProcess»)

The main process of geospatial data inspection-control performed by the FAZ.

➤ **Data (ext. systems) synchronization** (::«ArchiMate_ApplicationProcess»)

The system shall (apart from linking during the registration process) allow for:

- [FBIH] Regular data update from RPG register
- [RS] Regular data update from APIF register

➤ **Data edit** (::«ArchiMate_ApplicationProcess»)

Direct editing of any data (without historization trace) shall be allowed to certain administrators, however, such an action has to be logged in a linear log (including the data entity table and row ID reference, in case of record/row deletion including all the data originally in the record and related records).

This shall apply especially for errors/mistakes correction on-demand etc.

➤ **Data synchronization** (::«ArchiMate_ApplicationProcess»)

1. Data upload on request of the middleware part from the entity to the middleware system (selected registrants data (only current actual name, address(&point geoposition, e.g. no spatial), location, id, contact(s), registration date, operation type, facilities list (IDs, types, addresses&point geoposition)) + associated declaration rows of harvest (address, variety (incl. PGI/PDO), color, subject ID that the wine was sold to) and production (input batch subject ID who sold/produced the grapes, variety (incl PGI/PDO), color, batch etiquette ID, sales unit type (bottle, barrel...))
2. Data download (selected registrants data (only current actual name, address(&point geoposition, e.g. no spatial), location, id, contact(s), registration date, operation type, facilities list (IDs, types, addresses&point geoposition))
3. Pre-computed reports generation - this shall be operated by the Operational statistics and synchronization middleware part of the system, that shall contain the definition of the report query and input filters and pass this query to each of the system entity instances. The instance produces the report, all results are recorded in the central part and the central part re-runs the aggregation and grouping on the results to produce one final nation-wide report.

➤ **Lists administration** (::«ArchiMate_ApplicationProcess»)

The administrator has to have the possibility to edit any enumerations/registers/lists used throughout the system, especially:

- (declarations) seasons and their deadlines
- addresses lists
- user records and their groups associations

- lists of varieties (tree!), batch destination types, inputs category, age category, color, contact type, subject status type, subject operation type, document type and all possible others that can be introduced during the analysis and detailed architectural specification
- reports templates (queries, outputs) and report filter system-wide templates (pre-defined forms/filters inputs) for both public reports (in the central part) and entity-internal register level reports
- Enological evidence (cellar book) Reportsets and their rules&operations

➤ **Registration inspection/checking** (::«ArchiMate_ApplicationProcess»)

As per request from NEUM: NONE. There are only:

- states of subject registrations (based on operation type)
- and maybe some submitted documents under the category "other" where the inspection has some influence on the registration status, but the inspection itself does not edit the data directly
- and the inspection has to have access into the register (readonly) and especially for the reports (and templates)

Following functions of the system may be used by the inspection:

1. Adding any inspection document (administrative decision for subject deletion/deactivation etc., inspection report etc.) to the repository

2. Invalidating of the certificate (cannot be downloaded anymore or regenerated with ceased validity)

This may result into an registration inspection/checking by the authority, which may result into a subject registration suspension or canceling.

➤ **Reports generation (statistics)** (::«ArchiMate_ApplicationProcess»)

The system shall allow to generate dynamic data queries (~20-25) with tabular (selected columns, aggregation functions COUNT/SUM/AVG... 1-2 level grouping in columns and/or rows) or graphical (pie, column/bar, line graphs) representation.

These are about to be used as:

1. Statistics for the administrators

- (list of declarations - see ad 2.)
- list of registrations by state (input: list of states) submitted in given dates (main feature: unapproved registrations older than X), input(dates from, to, region/region, responsible user/group)
- registered totals: subjects count (by type)
- registered totals: vineyards surface sum (by region)
- registered totals: vineyards surface sum (by variety (all, red, white))
- declared totals: harvested last year tons sum (by variety)
- declared totals: production last year hl sum (by variety, by PGI, PDO, without PGI/PDO)
- declared totals: current (last year) stock hl sum (by variety, by PGI, PDO, without PGI/PDO)
- (may be ~+6 more)

2. KPI/QA control

- list of declarations (input: type) submitted in dates (input for year, from, to, can pre-fill "from" based on deadline; subject id (selectable by search of name etc.), facility id (selectable by search of address, subject etc.))
- list of non-existent declarations of existing subjects by (input: subject operations type) and by (input: declaration type, non-existent in given dates input(dates from, to, deadline year, region/region, responsible user/group, subject id searchable by name, address etc.) (main feature: unapproved registrations older than X),
- (may be ~1-3 more)

3. risk-analysis

- harvest declarations: vineyards having yield >Xt/ha for each declaration entry (input: X (tons per ha), subject, facility (only vineyards), region, date from-to or declaration season)
- production declaration: must efficiency (hl of must/t of grapes processed in %) of all declaration entries (input: lower threshold, subject, facility (only wineries), region, date from-to or declaration season)
- losses? waste? marc? sums there of by wine producer/facility?
- (may be ~5-6 more)

Note: The input filters should provide "templates" of the inputted values (editable by user for himself or by administrator for himself or system-wide) with possible variables (date and time now, date and time offset by an equitation, logged in user data inc. groups).

➤ **Tracelist lookup** (::«ArchiMate_ApplicationProcess»)

The given Wine ID shall be able to provide information about:

- Facility where it has been bottled, manufactured (subject registration name, date, address, contact + facility address)
- List of vine grape sources (batchers IDs, originating vineyards / external purchases)

➤ **Wine classification registration** (::«ArchiMate_ApplicationProcess»)

The corresponding authority that is providing administrative decision on the wine classification based on laboratory result, shall record this into a specific GUI of the system, where it shall be made publicly available in the operational statistics and synchronization instance of the system.

➤ **Inspection processes** (::«ArchiMate_BusinessProcess»)

An independent body from each of the entity (Inspectorate) is performing processes of inspection on the declared data and business subjects behaviour.

Note: These processes are not supported by the VWR system itself (they are being run in an completely independent system), the VWR system only provides support in terms of:

- providing data read access to the data declared by the subjects within
- providing (optional) document submission (inspection results)
- providing subject registration statuses (suspended, cancelled) or deletion, yet these are being performed NOT by the inspectors themselves, they provide the footing materials for that, yet the administrative decision is made and mirrored in the system by the authority responsible for the system (and wine sector) operation itself.

➤ **Wine classification** (::«ArchiMate_BusinessProcess»)

The corresponding authority that is providing administrative decision on the wine classification based on laboratory result, shall record this into a specific GUI of the system, where it shall be made publicly available in the operational statistics and synchronization instance of the system.

➤ **Vine and wine register (FBiH)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in FBiH.

➤ **Vine and wine register (RS)** (::«ArchiMate_BusinessProcess»)

The processes and procedures operated by the entire register in RS.

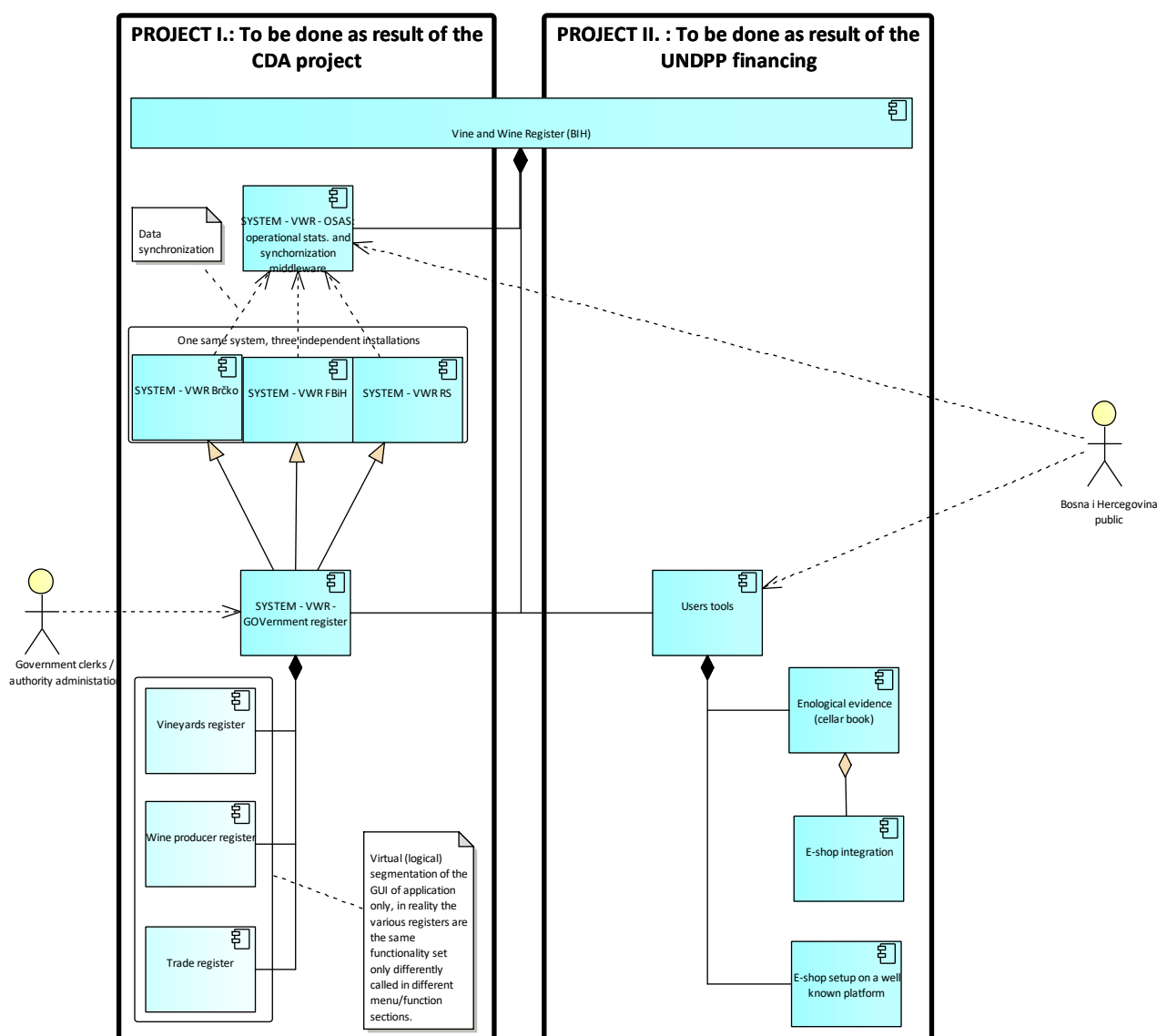
➤ **[FBiH only] Vineyard geo-registry operations (FAZ)** (::«ArchiMate_BusinessProcess»)

The legal obligation of FBiH foresees those enterprises (companies, legal persons - farms etc.) involved in the vine growing and commercialization process, meeting certain criteria (vineyard surface even for non-premium vines etc.), have to report any changes in the data of their registration.

This processes is not yet being executed in the governmental administration.

6. System to-be (tender terms and conditions) - Functional architecture

6.1 Functional architecture - project split



It is important to understand, that the following descriptions are to be understood by both projects being called out within this tender.

There are to be two projects:

Project I (P.I.): The GOVERNMENTAL register of the vine growers, winemakers and traders (including 1. their facilities, declarations and documents, 2. the middleware part to sy

➤ **Enological evidence (cellar book)** (::«ArchiMate_ApplicationComponent»)

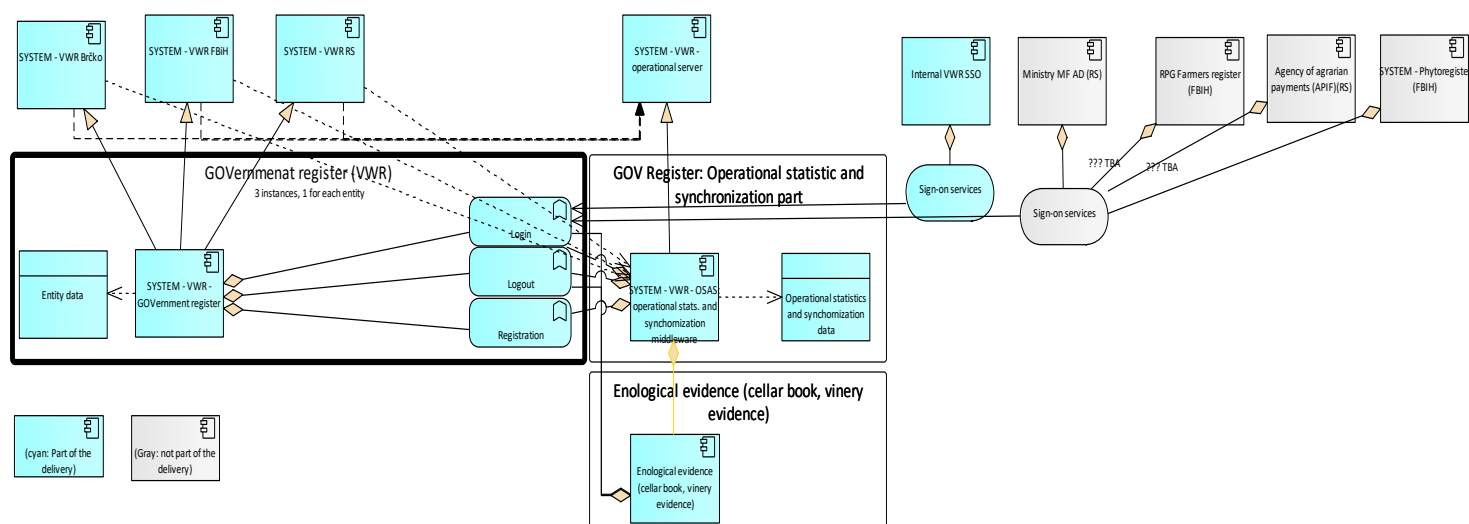
Apart from evidence/records keeping of the so called "cellar book", the system may help to generate the harvest/production/stock reports to be submitted into the "Governmental administration" part.

➤ **E-shop integration** (::«ArchiMate_ApplicationComponent»)

When the enologic evidence (cellar book) keeps the records of all batches, then these batches could be "exported" into an integrated e-shop platform (for the purpose of the project the platform "Shopify" should be used).

➤ E-shop setup on a well known platform (::«ArchiMate_ApplicationComponent»)
Shall be an e-shop implemented on a platform already ready for an e-shop. So this part represents the setup and customization of a pre-defined web-shop (e-shop).
➤ Trade register (::«ArchiMate_ApplicationComponent»)
The part for registering of the merchants (inc. trade/stock declaration).
➤ Users tools (::«ArchiMate_ApplicationComponent»)
<p>This part of the register shall be an optional offer to be used by the wine producers/merchants (if they wish to do so in this system) in order to:</p> <ul style="list-style-type: none"> • Be able to fulfill the legal requirements of monitoring and evidence keeping for their technological process (each wine batch, sugar stock, additions, alcohol stock, additions, batch processing etc.) • Be able to "move" a batch to a nation-wide e-shop that may help them promoting the wine (and related product) sales.
➤ Vine and Wine Register (BIH) (::«ArchiMate_ApplicationComponent»)
This objects represents the entire system to be delivered within this project.
➤ Vineyards register (::«ArchiMate_ApplicationComponent»)
The part for registering of the vineyard harvesters and vineyards (inc. harvest declaration).
➤ Wine producer register (::«ArchiMate_ApplicationComponent»)
The part for registering of the wine producers and their facilities (inc. production/stock declaration).
➤ Government clerks / authority administation (::«ArchiMate_BusinessActor»)
The people (employees) of the governmental authority in general, responsible for the operation and content of the system.
➤ SYSTEM - VWR - GOVernment register (::«ArchiMate_ApplicationComponent»)
<p>This item represents the part of the system that is used for supporting of the governmental administration processes as foreseen by the law - the module of the application responsible for local registries to register:</p> <ul style="list-style-type: none"> • vineyard harvesters • wine producers • wine merchants • their declarations (harvest, production, stock, trade, winification/sugar addition) • and their relevant documents <p>including the:</p> <ul style="list-style-type: none"> • reports and statistics from that
➤ SYSTEM - VWR - OSAS: operational stats. and synchornization middleware (::«ArchiMate_ApplicationComponent»)
This item represents the module of the application responsible for the operational statistics aggregation and synchronization of the registry.

6.2 Functional architecture P.I. (GOVregister - login,registration)



➤ **Entity data** (::«ArchiMate_DataObject»)

The data of the entity-deployed instance of the system.

➤ **Operational statistics and synchronization data** (::«ArchiMate_DataObject»)

Operational and synchronization data - the data source of the common part of the system valid for the entire state BIH.

➤ **Login** (::«ArchiMate_ApplicationFunction»)

When logging in (using the central page) the login will be redirected based on the user data to the relevant entity system instance.

IMPORTANT: Specific rule has to apply for the "inspection" roles - that role has to be able to reach **any** entity-deployed instance they wish to enter (with limitations imposed on the accessibility of the data attributes and operations performable).

➤ **Logout** (::«ArchiMate_ApplicationFunction»)

The user logs off.

➤ **Registration** (::«ArchiMate_ApplicationFunction»)

During the first registration, each of the users should select the location where their activity is located by selecting the entity/canton/municipality.

For detailed process of registration please see appropriate process description in other parts of this documentation (concerning mainly the multiple steps and the temporary registration status of vineyard harvesters depending on the inspection-control on the geospatial of their registered vineyard plots).

➤ **Enological evidence (cellar book, vinery evidence)** (::«ArchiMate_ApplicationComponent»)

A "helping" part (module) of the system: Not used in the governmental evidence, just as a value-added-service to the registrants.

➤ **SYSTEM - VWR - GOVernment register** (::«ArchiMate_ApplicationComponent»)

This item represents the part of the system that is used for supporting of the governmental administration processes as foreseen by the law - the module of the application responsible for local registries to register:

- vineyard harvesters
- wine producers
- wine merchants
- their declarations (harvest, production, stock, trade, winification/sugar addition)
- and their relevant documents

including the:

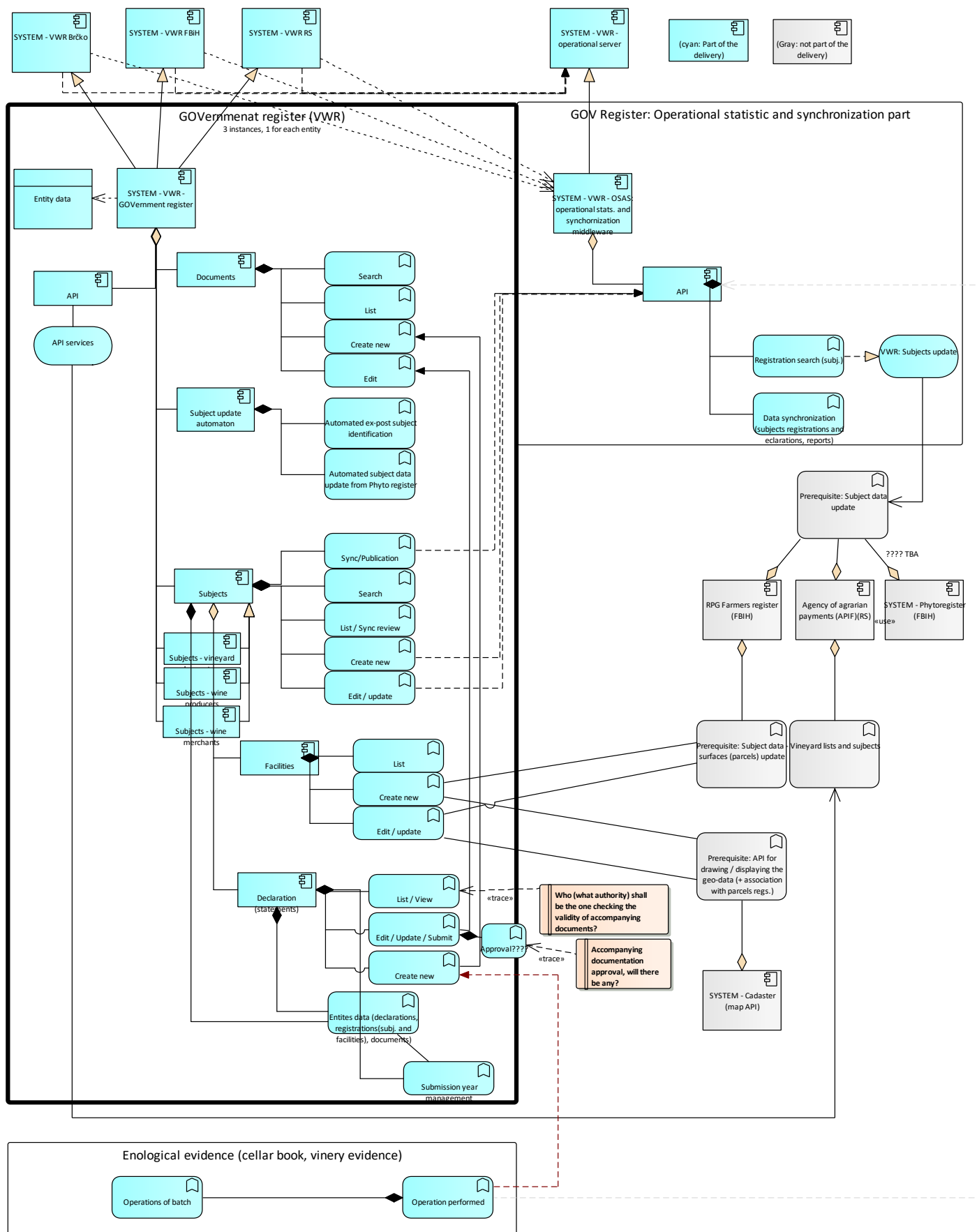
-
- reports and statistics from that

➤ **SYSTEM - VWR - OSAS: operational stats. and synchornization middleware**
(::«ArchiMate_ApplicationComponent»)

This item represents the module of the application responsible for the operational statistics aggregation and synchronization of the registry.

6.3 Functional architecture P.I. (GOVregister - subjects,

[RS only]



documents)

➤ API services (::«ArchiMate_ApplicationService»)
See FR047 API provision
➤ Entity data (::«ArchiMate_DataObject»)
The data of the entity-deployed instance of the system.
➤ Subjects - vineyard harvesters (::«ArchiMate_ApplicationComponent»)
This module represents a logical user-GUI "entry point" (main list, main menu item). While the module is always an instance of the main module of "Subjects" (with some tweaks concerning specific vineyard registration attributes usable for filtering, columns display etc.), the user has to have the impression entering a discrete module.
➤ Subjects - wine merchants (::«ArchiMate_ApplicationComponent»)
This module represents a logical user-GUI "entry point" (main list, main menu item). While the module is always an instance of the main module of "Subjects" (with some tweaks for simplifying the GUI attributes of facility registrations for filtering, columns display etc. and based on the role (type) of the subject registration), the user has to have the impression entering a discrete module.
➤ Subjects - wine producers (::«ArchiMate_ApplicationComponent»)
This module represents a logical user-GUI "entry point" (main list, main menu item). While the module is always an instance of the main module of "Subjects" (with some tweaks concerning specific wine producer facility registration attributes usable for filtering, columns display etc.), the user has to have the impression entering a discrete module.
➤ Approval???? (::«ArchiMate_ApplicationFunction»)
When accompanying documentation is submitted shall somebody review it?
➤ Automated ex-post subject identification (::«ArchiMate_ApplicationFunction»)
In case when a subject has been introduced into the system without being associated with the RPG register in the first place, this subjects have to be actively searched and associated later if necessary.
➤ Automated subject data update from Phyto register (::«ArchiMate_ApplicationFunction»)
In case the subject has been associated with the phytoregister, it has to be associated with that data as well.
➤ Create new (::«ArchiMate_ApplicationFunction»)
Creating a new document from scratch. Has to be associated to a specific subject registration or report. This functionality is to be called from report submission or from Subject registration.
➤ Create new (::«ArchiMate_ApplicationFunction»)
A new subject can be created. Note: This functionality may be also part of the registration functionality.
➤ Data synchronization (subjects registrations and eclarations, reports) (::«ArchiMate_ApplicationFunction»)
Functionalities needed for read/write of subject registration and reports, for those data, that have been approved for inter-entity (but not for anonymous) sharing.
➤ Edit (::«ArchiMate_ApplicationFunction»)
Editing of metadata including upload of a new / new version of binary representation file.
➤ Edit / update (::«ArchiMate_ApplicationFunction»)
Note: This has to be doable only for those data-entities, that have their origin in this very instance. For those entities, that have been synchronized from other instances of the system, this feature has to be blocked (apart from eventual detailed attribute/properties display/listing in a GUI or other interface).
➤ Edit / update (::«ArchiMate_ApplicationFunction»)
[FBiH only](part of this functionality is also triggering of e-mailed report for FAZ when geospatial data has been updated)

➤ **Edit / Update / Submit** (::«ArchiMate_ApplicationFunction»)

Editing of the data.

Note: When a list item (color, variety, product type, wine raw type...) having its validity terminated to a date has to be prevented to be selected, than this date has to be evaluated not to the current (present) date, but to the date of:

- vineyard registration: 31st December of year of planting
- facility registration: the date of registration
- harvest declaration: last (legal) day of the vintage harvest declarations deadline
- production/stock/trade declaration: last (legal) day of the business year production declarations deadline

When a declaration is submitted, then its "paper" (print-out form) is generated as well and stored in the documents (files) as well (and attached = linked to the declaration data).

➤ **List** (::«ArchiMate_ApplicationFunction»)

Results of search, displaying (potentially) all columns of all document data attributes (and related entities attributes used for search/filter).

➤ **List / Sync review** (::«ArchiMate_ApplicationFunction»)

One of the functionalities of the list of subjects shall be also the information about synchronization status and events of the subjects. (available only to the administrators)

➤ **List / View** (::«ArchiMate_ApplicationFunction»)

For current year / another year

TODO: The document has to be viewable as well for the ???AUTHORITY EXECUTIVES NAME???

➤ **Operation performed** (::«ArchiMate_ApplicationFunction»)

When an operation is selected, a corresponding dialogue shall be displayed requiring to fill in the manual-input attributes of the operation.

After submission the attributes of the productset entities are altered accordingly (and the state of entity changes, productsets may merge/split during this operation).

A "merge" operation may be done on multiple selected batches.

While an operation may be of generic types:

- quantity/parameter change + reason (some manufacturing operation, technology loses, accident, destroying of the product, product partial sale (incl 1 bottle), private consumption etc.)
- split
- merge
- packaging/bottling

there are to be expected three specific operation types (the later two can occur together)

- publication for sale - the productset gets added product metadata (category, photo, marketing name, description) and available quantity in pieces and this information is transferred to the register)
- [on a set of productsets] stock / manufacturing declaration (manufacturing = those productsets, which have undergone specific operation types within the last period - year etc.) generation: the system generates the production and stock declarations for the VWR and opens the appropriate declaration GUI with prefilled data for authorization/edit/save/submitting
- [on a set of productsets] stock/manufacturing cellar book yearly closure

Typical operations (business meaning) foreseen by the regulations: Where implemented, the following specific operations shall be recorded in the cellar register:

- (a) blending and coupage;
- (b) bottling;
- (c) production of all categories of sparkling wine, semi-sparkling wine and aerated semi-sparkling wine;
- (d) production of liqueur wine;
- (e) production of concentrated grape must, whether or not rectified;
- (f) production of fortifying wine for distillation;
- (g) processing into any other product categories, such as aromatized wine.

➤ **Operations of batch** (::«ArchiMate_ApplicationFunction»)

An operation (one type, one definition) may be also performed on multiple selected productsets (batches) at once. This is possible only with operations having only one input or one output (e.g. so the definition of the operation does not need to handle selection of appropriate batches) - as example: sugar addition, packaging, etc.

➤ **Prerequisite: API for drawing / displaying the geo-data (+ association with parcels regs.)**

(::«ArchiMate_ApplicationFunction»)

(if not part of "Search for identifying a person")

➤ **Prerequisite: Subject data - surfaces (parcels) update** (::«ArchiMate_ApplicationFunction»)

(if not part of "Search for identifying a person")

➤ **Prerequisite: Subject data update** (::«ArchiMate_ApplicationFunction»)

(if not part of "Search for identifying a person")

➤ **Search** (::«ArchiMate_ApplicationFunction»)

Searching in context of (and/or):

- all documents
- a specific subject
- a subjects role in the document
- a specific report
- date and time of the document

➤ **Submission year management** (::«ArchiMate_ApplicationFunction»)

The administrator has to have the possibility of "closing" a year (at a given DDMMYY HH:MM deadline). Any declarations submitted after this deadline, will be either for any upcoming year (thus submitted correctly) or for any previous year (e.g. submitted after deadline). Note: the given deadline YYYY (year) may NOT correspond to the YYYY (year) the declarations belong to. E.g. for example production declarations for 2021 deadline can be 31st Jan 2022.

Nevertheless, while the forms for submitting the declarations should have the "latest" "open" season automatically prefilled, it may be allowed to input any other season (year) the declaration applies to. However, that will (when submitting, not on save!) after warning, discard the previous data (marked as obsolete, declaration document marked as "deleted"(deactivated)) and introduce this new declaration, which, however, shall be regarded as submitted after deadline.

➤ **Sync/Publication** (::«ArchiMate_ApplicationFunction»)

The subject data (including documents representing registration of vineyards, facilities etc.) has to be transferred into the main operational statistics and synchronization register.

This applies only to those data attributes marked as "shared" or "public" (or "shared for inspection", if necessary) and this has to be those data attributes, that are usable in:

- the other entity deployment for selection of the batches/

Note: When lists/enums are synchronised together with the subjects records, the synchronization process shall take into account 1. local differences in the lists, 2. incorporate as read-only those items originating from a different installation instance (different entity).

➤ **Vineyard lists and subjects** (::«ArchiMate_ApplicationFunction»)

(if not part of "Search for identifying a person")

➤ **API** (::«ArchiMate_ApplicationComponent»)

The API functionalities of the SYSTEM - VWR - state registers shall cover all here listed application functions under the conditions described in [FR047 API provision](#).

➤ **API** (::«ArchiMate_ApplicationComponent»)

To avoid doubt: The technological approach and methods used to fulfil the functions linked to the "API" are at sole discretion of the contractor as shall be decided during analysis and system design. (see [AR013](#))

Any automated synchronization is possible, starting from a 'simple' database replication up to complex application logic accessible through various protocol such as REST/SOAP with higher markup for data serializations such as but not limited to XML/JSON etc. The contractor is however advised, that not important what solution shall be chosen, the contractor is bearing the entire cost for the solution deployment completely within the originally fixed and contractually obligatory price.

To avoid doubt: The "API" as depicted here is intended only for access by the other parts of the system itself, yet there shall be another API provided by each of the instance for subject data and declaration manipulation, covering all here listed application functions under the conditions described in [FR047 API provision](#).

➤ **Documents** (::«ArchiMate_ApplicationComponent»)

A module enabling a view on all the declarations/documents (named and displayed mainly by the type of document (+subject role), name of subject and year/date of submission).

➤ **Facilities** (::«ArchiMate_ApplicationComponent»)

Facilities:

- vineyard harvesters: the vineyards (parcels, addresses, locations)
- wine producers: the plants (cellars...) addresses and locations
- wine merchants: the shops/offices addresses and locations

➤ **Subject update automaton** (::«ArchiMate_ApplicationComponent»)

Module responsible for automated data update of those subjects, whose data attributes have been linked to external systems.

➤ **Subjects** (::«ArchiMate_ApplicationComponent»)

(There may be also subjects that are neither vineyard harvesters or vine producers - e.g. external entities used in the reports etc.)

➤ **SYSTEM - VWR - GOVernment register** (::«ArchiMate_ApplicationComponent»)

This item represents the part of the system that is used for supporting of the governmental administration processes as foreseen by the law - the module of the application responsible for local registries to register:

- vineyard harvesters
- wine producers
- wine merchants
- their declarations (harvest, production, stock, trade, winification/sugar addition)
- and their relevant documents

including the:

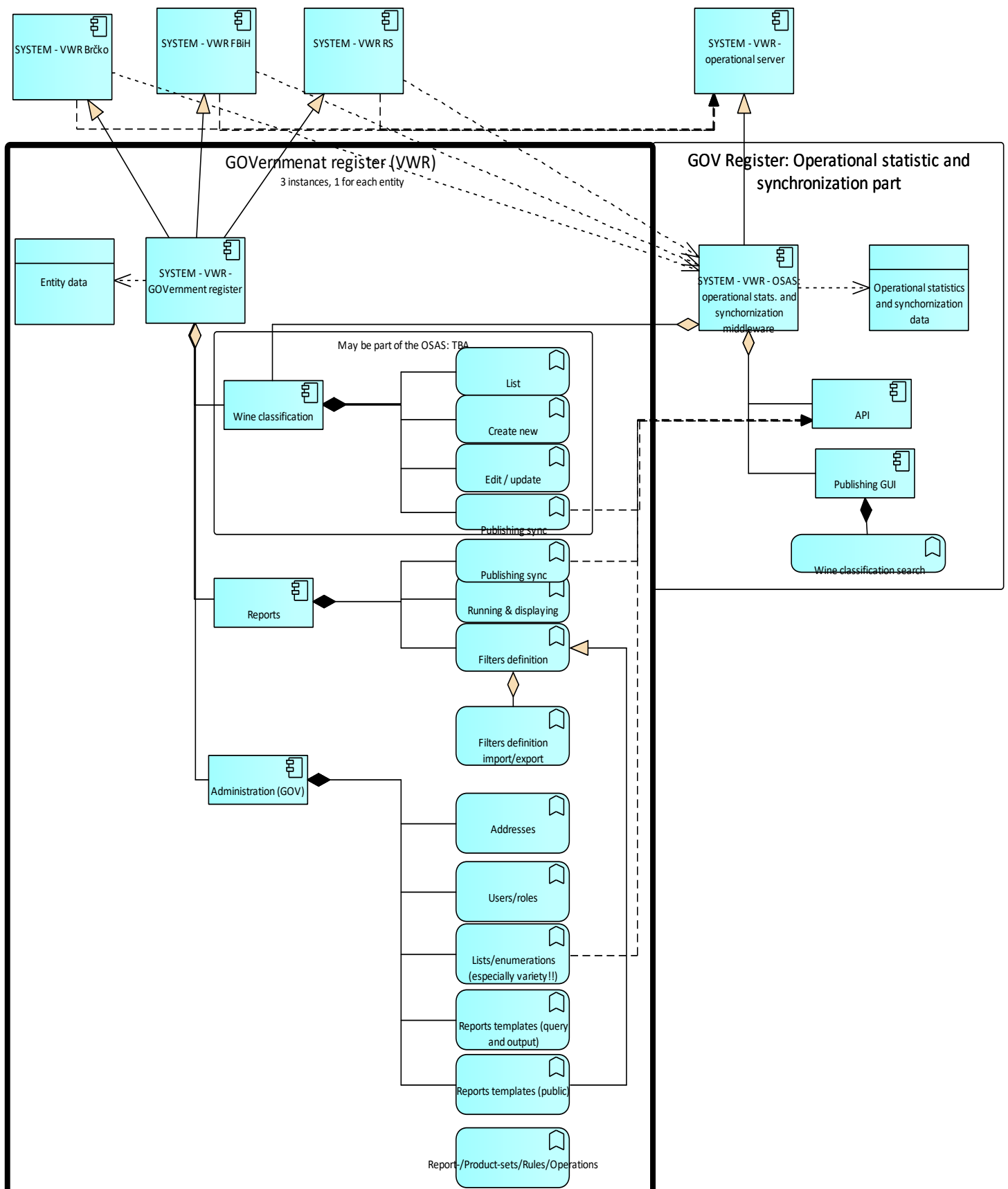
- reports and statistics from that

➤ **SYSTEM - VWR - OSAS: operational stats. and synchronization middleware**

(::«ArchiMate_ApplicationComponent»)

This item represents the module of the application responsible for the operational statistics aggregation and synchronization of the registry.

6.4 Functional architecture P.I. (GOVregister - Wine classification,reports,administration)



➤ Entity data (::«ArchiMate_DataObject»)
The data of the entity-deployed instance of the system.
➤ Operational statistics and synchronornization data (::«ArchiMate_DataObject»)
Operational and synchronization data - the data source of the common part of the system valid for the entire state BIH.
➤ Addresses (::«ArchiMate_ApplicationFunction»)
Editing (admin management) of the addresses, inc. joining/splitting (and reassociating to different related data records).
➤ Filters definition (::«ArchiMate_ApplicationFunction»)
Personal ones for every user (administrator, inspection, inspection-control, local (municipal) administrator).
➤ Filters definition import/export (::«ArchiMate_ApplicationFunction»)
Especially necessary for inspections and QA.
➤ Lists/enumerations (especially variety!!) (::«ArchiMate_ApplicationFunction»)
<p>Synchronization from the middleware is the primary source of the data, yet every entity may ADD or RENAME the items as required in order to locally override the settings of an item (including its validity being terminated to a date (it is still available in the list but no more selectable), immediate validity termination (such an item is not provided in the lists at all immediately)).</p> <p>Note: When lists/enums are synchronised together with the subjects records, the synchronization process shall take into account 1. local differences in the lists, 2. incorporate as read-only those items originating from a different installation instance (different entity).</p>
➤ Publishing sync (::«ArchiMate_ApplicationFunction»)
Synchronization of the pre-calculated reports to the "Operational statistics and synchronization part".
➤ Publishing sync (::«ArchiMate_ApplicationFunction»)
The wine classification list has to be published in the "Operational statistics and synchronization" part.
➤ Report-/Product-sets/Rules/Operations (::«ArchiMate_ApplicationFunction»)
<p>[Enology system module only] shall provide:</p> <ul style="list-style-type: none"> • system-wide admin • every user his own private - relevant in the context of the subject only <p>administration of the</p> <ul style="list-style-type: none"> • productsets, • the attributes of the "productsets", • "recordsets", • "operations" • and "rules" for automated "operations" launched on the productsets. <p>Note 1: A system-wide operation shall be assignable to the locally (subject-private) defined productset but only provided the local productset has the necessary data attributes.</p> <p>Note 2: A system-wide productset shall be editable by a locally (subject-private) defined and to the productset assigned operation.</p>
➤ Reports templates (public) (::«ArchiMate_ApplicationFunction»)
Pre-defined run parameters and schedules for those reports, that are to be run regularly and whose outputs are synchronized to the public operational statistics instance of the system.
➤ Reports templates (query and output) (::«ArchiMate_ApplicationFunction»)
The system shall provide the possibility to define a report (query into the data source and list of columns). (inc. human-readable full-data export = GDPR report)
➤ Running & displaying (::«ArchiMate_ApplicationFunction»)
Only specific group can see system-wide reports.

A registered subject may see only his data and his declarations.

➤ **Users/roles** (::«ArchiMate_ApplicationFunction»)

Editing (admin management), deleting, password reset, creating, role changing.

➤ **Wine classification search** (::«ArchiMate_ApplicationFunction»)

Possibility to search / display registration of classified wine lots (batches), resulting only into data given for anonymous publishing.

➤ **Administration (GOV)** (::«ArchiMate_ApplicationComponent»)

The GOVernmental register system shall provide a GUI for administration of data/lists/enums used in the system.

➤ **API** (::«ArchiMate_ApplicationComponent»)

To avoid doubt: The technological approach and methods used to fulfil the functions linked to the "API" are at sole discretion of the contractor as shall be decided during analysis and system design. (see [AR013](#))

Any automated synchronization is possible, starting from a 'simple' database replication up to complex application logic accessible through various protocol such as REST/SOAP with higher markup for data serializations such as but not limited to XML/JSON etc. The contractor is however advised, that not important what solution shall be chosen, the contractor is bearing the entire cost for the solution deployment completely within the originally fixed and contractually obligatory price.

To avoid doubt: The "API" as depicted here is intended only for access by the other parts of the system itself, yet there shall be another API provided by each of the instance for subject data and declaration manipulation, covering all here listed application functions under the conditions described in [FR047 API provision](#).

➤ **SYSTEM - VWR - GOVernment register** (::«ArchiMate_ApplicationComponent»)

This item represents the part of the system that is used for supporting of the governmental administration processes as foreseen by the law - the module of the application responsible for local registries to register:

- vineyard harvesters
- wine producers
- wine merchants
- their declarations (harvest, production, stock, trade, winification/sugar addition)
- and their relevant documents

including the:

- reports and statistics from that

➤ **Wine classification** (::«ArchiMate_ApplicationComponent»)

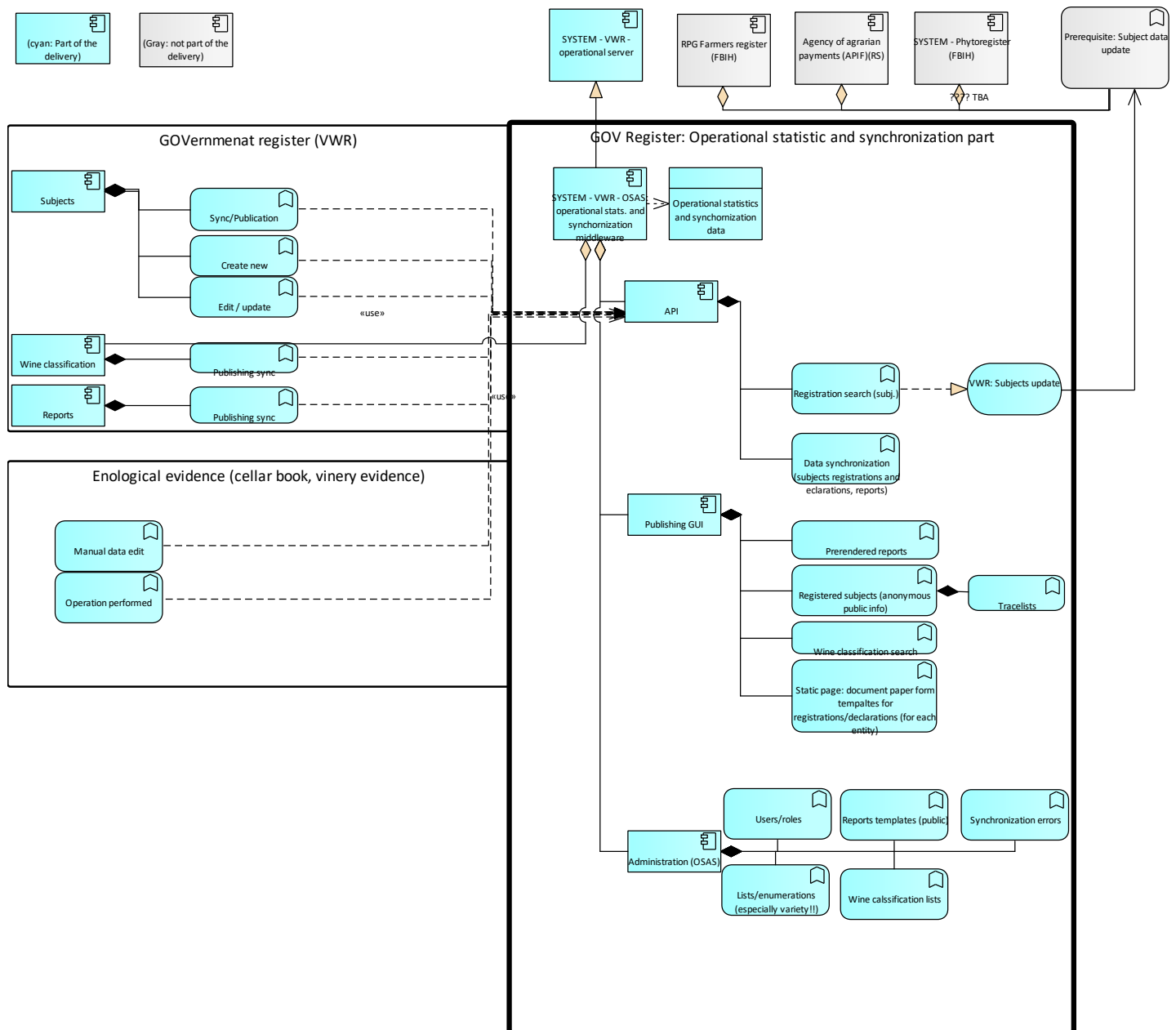
A module for the authority only. To edit and publish wine classification lists.

➤ **SYSTEM - VWR - OSAS: operational stats. and synchornization middleware**

(::«ArchiMate_ApplicationComponent»)

This item represents the module of the application responsible for the operational statistics aggregation and synchronization of the registry.

6.5 Functional architecture P.I. (GOVregister - operational statistic and synchronization part)



➤ Operational statistics and synchronization data (::«ArchiMate_DataObject»)

Operational and synchronization data - the data source of the common part of the system valid for the entire state BIH.

➤ Create new (::«ArchiMate_ApplicationFunction»)

A new subject can be created.

Note: This functionality may be also part of the registration functionality.

➤ Data synchronization (subjects registrations and eclarations, reports) (::«ArchiMate_ApplicationFunction»)

Functionalities needed for read/write of subject registration and reports, for those data, that have been approved for inter-entity (but not for anonymous) sharing.

➤ **Edit / update** (::«ArchiMate_ApplicationFunction»)

Note: This has to be doable only for those data-entities, that have their origin in this very instance. For those entities, that have been synchronized from other instances of the system, this feature has to be blocked (apart from eventual detailed attribute/properties display/listing in a GUI or other interface).

➤ **Lists/enumerations (especially variety!!)** (::«ArchiMate_ApplicationFunction»)

Editing (admin management). Item can be only added or its validity terminated to a date (it is still available in the list but no more selectable), immediate validity termination (such an item is not provided in the lists at all immediately).

Note: When lists/enums are synchronised together with the subjects records, the synchronization process shall take into account 1. local differences in the lists, 2. incorporate as read-only those items originating from a different installation instance (different entity).

➤ **Manual data edit** (::«ArchiMate_ApplicationFunction»)

The productset data must be editable by manual input (but this has to be recorded as well).

➤ **Operation performed** (::«ArchiMate_ApplicationFunction»)

When an operation is selected, a corresponding dialogue shall be displayed requiring to fill in the manual-input attributes of the operation.

After submission the attributes of the productset entities are altered accordingly (and the state of entity changes, productsets may merge/split during this operation).

A "merge" operation may be done on multiple selected batches.

While an operation may be of generic types:

- quantity/parameter change + reason (some manufacturing operation, technology loses, accident, destroying of the product, product partial sale (incl 1 bottle), private consumption etc.)
- split
- merge
- packaging/bottling

there are to be expected three specific operation types (the later two can occur together)

- publication for sale - the productset gets added product metadata (category, photo, marketing name, description) and available quantity in pieces and this information is transferred to the register)
- [on a set of productsets] stock / manufacturing declaration (manufacturing = those productsets, which have undergone specific operation types within the last period - year etc.) generation: the system generates the production and stock declarations for the VWR and opens the appropriate declaration GUI with prefilled data for authorization/edit/save/submitting
- [on a set of productsets] stock/manufacturing cellar book yearly closure

Typical operations (business meaning) foreseen by the regulations: Where implemented, the following specific operations shall be recorded in the cellar register:

- (a) blending and coupage;
- (b) bottling;
- (c) production of all categories of sparkling wine, semi-sparkling wine and aerated semi-sparkling wine;
- (d) production of liqueur wine;
- (e) production of concentrated grape must, whether or not rectified;
- (f) production of fortifying wine for distillation;
- (g) processing into any other product categories, such as aromatized wine.

➤ **Prerendered reports** (::«ArchiMate_ApplicationFunction»)

Global statistical reports (graphs):

- count of registered vineyards / vineyard harvesters
- count of registered wine producers
- amount of production hl/t [in selected year] [per: vine variety/wine type - note that this may be any level of the varieties tree!]

➤ **Prerequisite: Subject data update** (::«ArchiMate_ApplicationFunction»)

(if not part of "Search for identifying a person")

➤ **Publishing sync** (::«ArchiMate_ApplicationFunction»)

	The wine classification list has to be published in the "Operational statistics and synchronization" part.
➤ Publishing sync (::«ArchiMate_ApplicationFunction»)	Synchronization of the pre-calculated reports to the "Operational statistics and synchronization part".
➤ Registered subjects (anonymous public info) (::«ArchiMate_ApplicationFunction»)	Possibility to search / display registration of subjects, only data given for anonymous publishing (usually name, address, registration ID, date of registration, registration validity).
➤ Reports templates (public) (::«ArchiMate_ApplicationFunction»)	Pre-defined run parameters and schedules for those reports, that are to be run regularly and whose outputs are synchronized to the public operational statistics instance of the system.
➤ Static page: document paper form templates for registrations/declarations (for each entity) (::«ArchiMate_ApplicationFunction»)	Only publishing place for the registration forms. Could have also links to the two national registers URLs (for registration and registered users). (Shall be a conglomerate of the "Public" documents/files folder in each entity).
➤ Sync/Publication (::«ArchiMate_ApplicationFunction»)	<p>The subject data (including documents representing registration of vineyards, facilities etc.) has to be transferred into the main operational statistics and synchronization register.</p> <p>This applies only to those data attributes marked as "shared" or "public" (or "shared for inspection", if necessary) and this has to be those data attributes, that are usable in:</p> <ul style="list-style-type: none"> • the other entity deployment for selection of the batches/ <p>Note: When lists/enums are synchronised together with the subjects records, the synchronization process shall take into account 1. local differences in the lists, 2. incorporate as read-only those items originating from a different installation instance (different entity).</p>
➤ Synchronization errors (::«ArchiMate_ApplicationFunction»)	<p>Lists of events (and eventually providing solution, if possible) that happened during synchronization of:</p> <ul style="list-style-type: none"> • subjects and their related data-entities across the instances (installations) of the entity-local registers • subjects and their attributes linked in the external systems • precomputed reports • enums/lists • [if applicable] Wine classification records
➤ Tracelists (::«ArchiMate_ApplicationFunction»)	Search of a wine identifier - list of tracing reports (harvest, production, [storage])
➤ Users/roles (::«ArchiMate_ApplicationFunction»)	<p>Editing (admin management), deleting, password reset, creating (the local users - usually administrators - of middleware only).</p> <p>Editing (admin management), role changing/assigning (all the users - those authenticated against the middleware as well those authenticated from within the other systems).</p>
➤ Wine classification lists (::«ArchiMate_ApplicationFunction»)	If the Wine classification edit interface is present only in the entities installation, the system shall provide the possibility of overriding these data in the OSAS middleware (and then propagate the change downwards to the local installations).
➤ Wine classification search (::«ArchiMate_ApplicationFunction»)	Possibility to search / display registration of classified wine lots (batches), resulting only into data given for anonymous publishing.
➤ Administration (OSAS) (::«ArchiMate_ApplicationComponent»)	The middleware system shall provide an interface for administration of data/lists/enums used in the system.

➤ **API** (::«ArchiMate_ApplicationComponent»)

To avoid doubt: The technological approach and methods used to fulfil the functions linked to the "API" are at sole discretion of the contractor as shall be decided during analysis and system design. (see [AR013](#))

Any automated synchronization is possible, starting from a 'simple' database replication up to complex application logic accessible through various protocol such as REST/SOAP with higher markup for data serializations such as but not limited to XML/JSON etc. The contractor is however advised, that not important what solution shall be chosen, the contractor is bearing the entire cost for the solution deployment completely within the originally fixed and contractually obligatory price.

To avoid doubt: The "API" as depicted here is intended only for access by the other parts of the system itself, yet there shall be another API provided by each of the instance for subject data and declaration manipulation, covering all here listed application functions under the conditions described in [FR047 API provision](#).

➤ **Subjects** (::«ArchiMate_ApplicationComponent»)

(There may be also subjects that are neither vineyard harvesters or vine producers - e.g. external entities used in the reports etc.)

➤ **Wine classification** (::«ArchiMate_ApplicationComponent»)

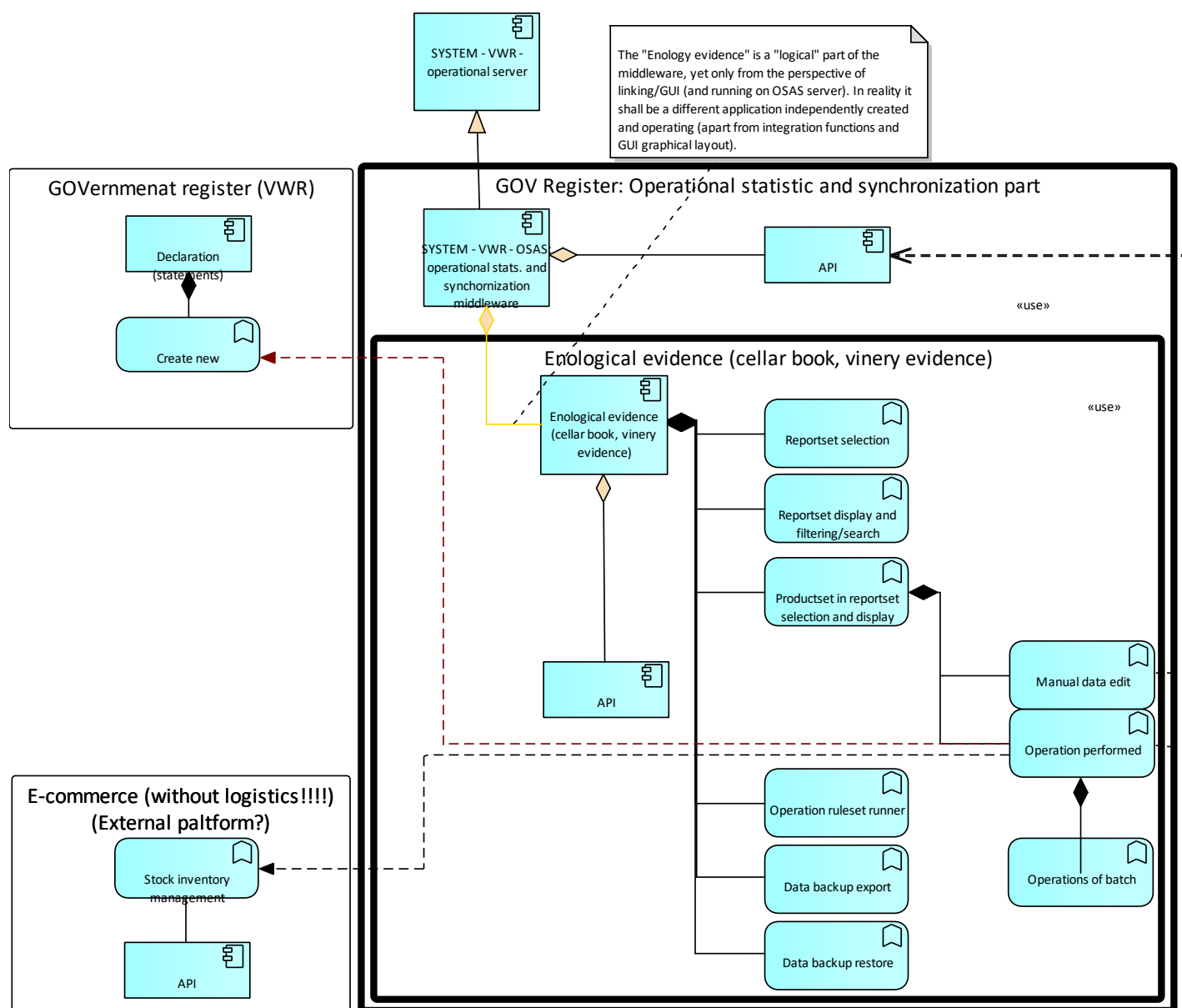
A module for the authority only. To edit and publish wine classification lists.

➤ **SYSTEM - VWR - OSAS: operational stats. and synchornization middleware**

(::«ArchiMate_ApplicationComponent»)

This item represents the module of the application responsible for the operational statistics aggregation and synchronization of the registry.

6.6 Functional architecture P.II. (Enology evidence)



➤ Data backup export (::«ArchiMate_ApplicationFunction»)

As the governmental entity cannot guarantee a full and uninterrupted data protection, the user shall be responsible for the backup of the data (all data records belonging (related) to the subject the user is administering).

This backup shall be performed in two different processes with two possible outputs:

- manual (download using either the www GUI or the www API)
- automated (sending an email with a link to the data or the data as attachment)

whereas the form of the data in both the abovementioned cases shall be

- a set of excel/CSV pages/files (eventually in an ZIP archive) grouped and formatted in the same logic as defined by the productsets/sites/batches (e.g. a multi-column data views containing all the data given in the GUI in the same logic)
- an XML (alternative: named JSON or any other named self-documenting automated-readable generic-standard form) that is usable a) for the backup locally, b) for a restore in case of the main system failure.

If an automated backup is not set and a manual one has not been done for a certain interval of time, the system shall notify the main contacts (owners, primary users/subject-admins). This notification cannot be set-up or turned off unless an automated setup is established and successfully working (no e-mail delivery errors).

➤ **Data backup restore** (::«ArchiMate_ApplicationFunction»)

The system should allow to restore all the data belonging (related) to a specific subject (the user in question is working with / administrating) from a structured (XML, JSON etc.) backup file uploaded - a file created by the system itself earlier as part of the "backup export" functionality.

➤ **Manual data edit** (::«ArchiMate_ApplicationFunction»)

The productset data must be editable by manual input (but this has to be recorded as well).

➤ **Operation performed** (::«ArchiMate_ApplicationFunction»)

When an operation is selected, a corresponding dialogue shall be displayed requiring to fill in the manual-input attributes of the operation.

After submission the attributes of the productset entities are altered accordingly (and the state of entity changes, productsets may merge/split during this operation).

A "merge" operation may be done on multiple selected batches.

While an operation may be of generic types:

- quantity/parameter change + reason (some manufacturing operation, technology loses, accident, destroying of the product, product partial sale (incl 1 bottle), private consumption etc.)
- split
- merge
- packaging/bottling

there are to be expected three specific operation types (the later two can occur together)

- publication for sale - the productset gets added product metadata (category, photo, marketing name, description) and available quantity in pieces and this information is transferred to the register)
- [on a set of productsets] stock / manufacturing declaration (manufacturing = those productsets, which have undergone specific operation types within the last period - year etc.) generation: the system generates the production and stock declarations for the VWR and opens the appropriate declaration GUI with prefilled data for authorization/edit/save/submitting
- [on a set of productsets] stock/manufacturing cellar book yearly closure

Typical operations (business meaning) foreseen by the regulations: Where implemented, the following specific operations shall be recorded in the cellar register:

- (a) blending and coupage;
- (b) bottling;
- (c) production of all categories of sparkling wine, semi-sparkling wine and aerated semi-sparkling wine;
- (d) production of liqueur wine;
- (e) production of concentrated grape must, whether or not rectified;
- (f) production of fortifying wine for distillation;
- (g) processing into any other product categories, such as aromatized wine.

➤ **Operation ruleset runner** (::«ArchiMate_ApplicationFunction»)

Automated regular running of "Rules" operations to see, if some entities got some status/attributes state that permits some automated operation not done already.

➤ **Operations of batch** (::«ArchiMate_ApplicationFunction»)

An operation (one type, one definition) may be also performed on multiple selected productsets (batches) at once. This is possible only with operations having only one input or one output (e.g. so the definition of the operation does not need to handle selection of appropriate batches) - as example: sugar addition, packaging, etc.

➤ **Productset in reportset selection and display** (::«ArchiMate_ApplicationFunction»)

When a productset is selected, its current data attributes are displayed (as first only metadata, the others may be in collapsible request-on-demand controls).

Also available operations (or Rules) are listed as command buttons.

➤ **Reportset display and filtering/search** (::«ArchiMate_ApplicationFunction»)

Based on the rules in "Reportset" it displays the corresponding data (and allows some basic search/filtering).

➤ **Reportset selection** (::«ArchiMate_ApplicationFunction»)

Lists the reportsets as a kind of "menu", thus creating the impression of various distinctive lists.

These can be for example:

- (a) correction of the alcoholic strength of wine and reduction in sugar content of musts through membrane coupling;
- (b) enrichment and sweetening;
- (c) acidification and de-acidification;
- (d) treatment with charcoal for oenological use;
- (e) treatment with potassium ferrocyanide;
- (f) treatment by electrodialysis or by cation exchanger to ensure the tartaric stabilization of the wine or acidification by cation exchanger treatment;
- (g) addition of dimethyldicarbonate (DMDC) to wine;
- (h) use of oak chips in winemaking;
- (i) experimental use of new oenological practices;
- (j) the management of dissolved gas in wine using membrane contactors;
- (k) treatment using a membrane technology coupled with activated carbon;
- (l) use of polyvinylimidazole-polyvinylpyrrolidone copolymers;
- (m) use of silver chloride.

➤ **Stock inventory management** (::«ArchiMate_ApplicationFunction»)

(central admin, VWR user(winery) + automated API callable from the enological evidence) Managing of the inventory items and their current stock availability.

➤ **API** (::«ArchiMate_ApplicationComponent»)

The API functionalities of the Enological evidence (cellar book, vinery evidence) shall cover all here listed application functions under the conditions described in [FR047 API provision](#).

➤ **API** (::«ArchiMate_ApplicationComponent»)

The API functionalities of the E-commerce (e-shop) shall cover only explicitly mentioned application functions, the conditions described in [FR047 API provision](#) apply here only to an extent the contractor can be fairly held responsible for.

➤ **API** (::«ArchiMate_ApplicationComponent»)

To avoid doubt: The technological approach and methods used to fulfil the functions linked to the "API" are at sole discretion of the contractor as shall be decided during analysis and system design. (see [AR013](#))

Any automated synchronization is possible, starting from a 'simple' database replication up to complex application logic accessible through various protocol such as REST/SOAP with higher markup for data serializations such as but not limited to XML/JSON etc. The contractor is however advised, that not important what solution shall be chosen, the contractor is bearing the entire cost for the solution deployment completely within the originally fixed and contractually obligatory price.

To avoid doubt: The "API" as depicted here is intended only for access by the other parts of the system itself, yet there shall be another API provided by each of the instance for subject data and declaration manipulation, covering all here listed application functions under the conditions described in [FR047 API provision](#).

➤ **Enological evidence (cellar book, vinery evidence)** (::«ArchiMate_ApplicationComponent»)

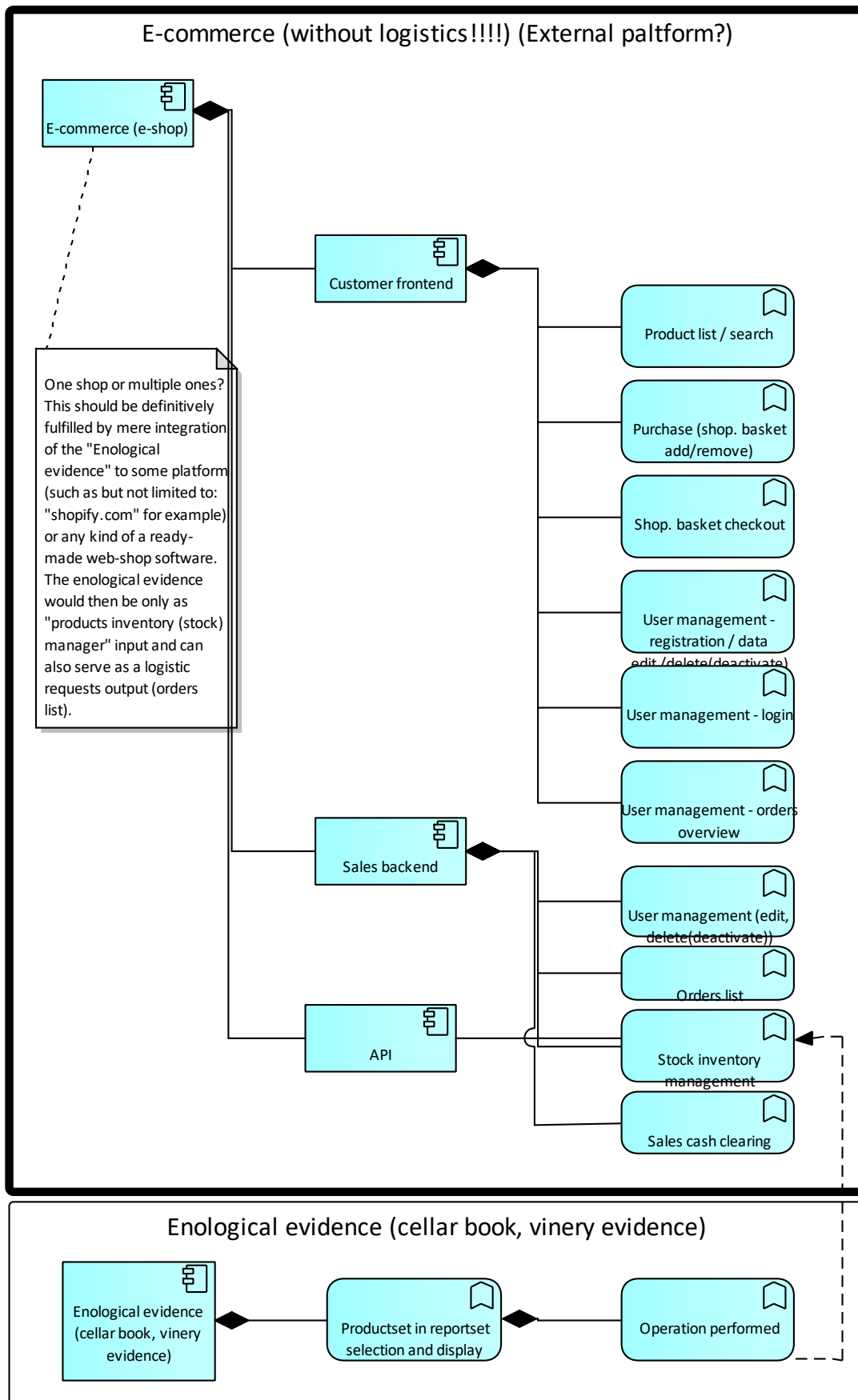
A "helping" part (module) of the system: Not used in the governmental evidence, just as a value-added-service to the registrants.

➤ **SYSTEM - VWR - OSAS: operational stats. and synchronizaton middleware**

(::«ArchiMate_ApplicationComponent»)

This item represents the module of the application responsible for the operational statistics aggregation and synchronization of the registry.

6.7 Functional architecture P.II. (E-commerce)



➤ **Operation performed** (::«ArchiMate_ApplicationFunction»)

When an operation is selected, a corresponding dialogue shall be displayed requiring to fill in the manual-input attributes of the operation.

After submission the attributes of the productset entities are altered accordingly (and the state of entity changes, productsets may merge/split during this operation).

A "merge" operation may be done on multiple selected batches.

While an operation may be of generic types:

- quantity/parameter change + reason (some manufacturing operation, technology loses, accident, destroying of the product, product partial sale (incl 1 bottle), private consumption etc.)
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- merge
- packaging/bottling

there are to be expected three specific operation types (the later two can occur together)

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Typical operations (business meaning) foreseen by the regulations: Where implemented, the following specific operations shall be recorded in the cellar register:

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- (d) production of liqueur wine;
- (e) production of concentrated grape must, whether or not rectified;
- (f) production of fortifying wine for distillation;
- (g) processing into any other product categories, such as aromatized wine.

➤ **Orders list** (::«ArchiMate_ApplicationFunction»)

(central admin, VWR user(winery)) Listing all orders, their status (pending / closed), editing, canceling. Including logistics list (orders pending to be sent out, tracking number provision etc.).

➤ **Product list / search** (::«ArchiMate_ApplicationFunction»)

The e-shop shall provide the customer with a possibility to search and list the product catalogue.

➤ **Productset in reportset selection and display** (::«ArchiMate_ApplicationFunction»)

When a productset is selected, its current data attributes are displayed (as first only metadata, the others may be in collapsible request-on-demand controls).

Also available operations (or Rules) are listed as command buttons.

➤ **Purchase (shop. basket add/remove)** (::«ArchiMate_ApplicationFunction»)

The e-shop shall provide the customer with a possibility to select product(s) (and item count) he/she wishes to purchase (shopping basket).

➤ **Sales cash clearing** (::«ArchiMate_ApplicationFunction»)

(central admin only) Regular monthly cash/sales income clearing.

➤ **Shop. basket checkout** (::«ArchiMate_ApplicationFunction»)

The e-shop shall provide the customer with a possibility to checkout the basket (finalize the purchase) incl payment and transportation options selection.

➤ **Stock inventory management** (::«ArchiMate_ApplicationFunction»)

(central admin, VWR user(winery) + automated API callable from the enological evidence) Managing of the inventory items and their current stock availability.

➤ **User management - login** (::«ArchiMate_ApplicationFunction»)

The e-shop shall provide the customer with a possibility to work anonymously in the web-shop or under his/her personal self-registered account (login/password protected).

➤ **User management - orders overview** (::«ArchiMate_ApplicationFunction»)

The e-shop shall provide the customer with a possibility to manage his/her user account data (including closed/pending orders, basket status, invoices, eventually wish lists).

➤ **User management - registration / data edit /delete(deactivate)** (::«ArchiMate_ApplicationFunction»)

The e-shop shall provide the customer with a possibility to manage his/her user account data (including user account self-registration).

➤ **User management (edit, delete(deactivate))** (::«ArchiMate_ApplicationFunction»)

(central admin only) Central management of the users (customers as well VWR users (wineries)).

➤ **API** (::«ArchiMate_ApplicationComponent»)

The API functionalities of the E-commerce (e-shop) shall cover only explicitly mentioned application functions, the conditions described in FR047 API provision apply here only to an extent the contractor can be fairly held responsible for.

➤ **Customer frontend** (::«ArchiMate_ApplicationComponent»)

The system shall provide the user

➤ **Enological evidence (cellar book, vinery evidence)** (::«ArchiMate_ApplicationComponent»)

A "helping" part (module) of the system: Not used in the governmental evidence, just as a value-added-service to the registrants.

➤ **Sales backend** (::«ArchiMate_ApplicationComponent»)

The web-shop shall have certain functions accessible to the operators (enological books users) as well administrators of the solution.

7. System to-be (tender terms and conditions) - Data drafts (logical classes)

Note on sharing of the data: Each of the entities attributes in the images below is marked as follows:

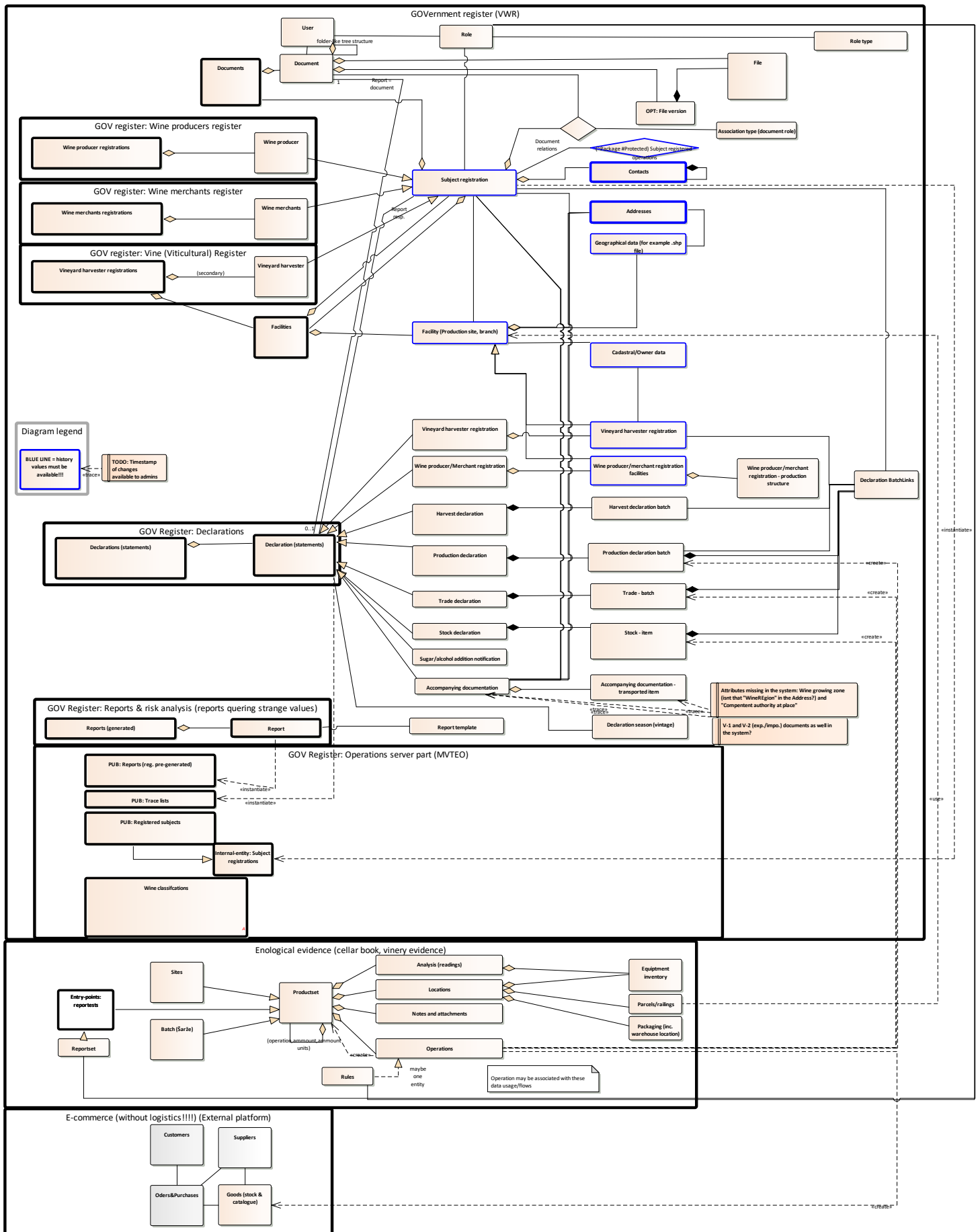
Note on attrib protection level	
+	Public = data will be synchronised using operational server and be publicly available
#	Protected = data will be synchronised using operational server but available only to the entites
#	(insp) Protected = data synced using operational server available only to inspection bodies
~	Package = here it means, that the data synced to the op. server will be aggregated first (see reports)

a "-" minus means "private" data attribute, not synced from the entity.

Note:

The drafts of data-entities of declarations (and related attributes) are dependent on the structure and elements of the attached declaration forms. As these forms together with the processes are still not definitively settled, the data structure may change slightly. In case of differences, the current template(s) of the declarations/reports shall prevail.

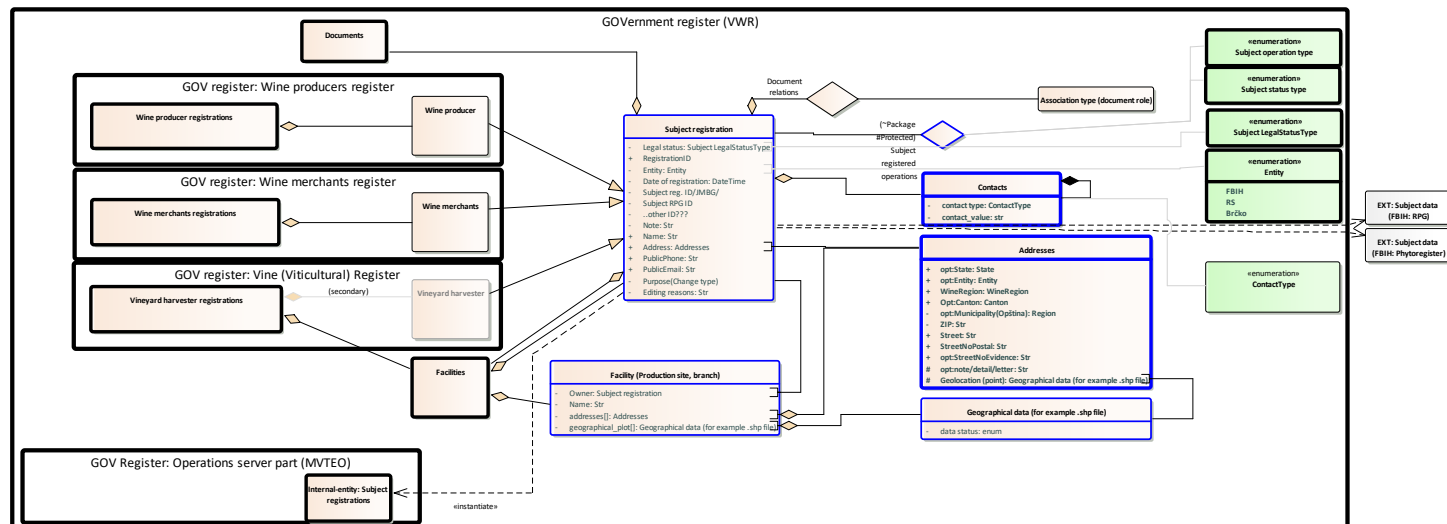
7.1 Data drafts (logical classes) (all-entity overview)



Note:

The drafts of data-entities of declarations (and related attributes) are dependent on the structure and elements of the attached declaration forms. As these forms together with the processes are still not definitively settled, the data structure may change slightly. In case of differences, the current template(s) of the declarations/reports shall prevail.

7.2 Data drafts (logical classes) (Subjects registration)



Association type (document role)

Class

What type of association has (in what relation is) the document to the respective subject.

Facilities

Class

Represents the entire collection - an "entry point" into the data entities (e.g. list of a subject's facilities).

Rel. from: () Subject registration.

to: () Facilities.

This slightly irrationally directed relation has one important meaning: While of course from the perspective of a data storage (database) a subject is an aggregate of (0)..1..n locations (each location belongs to a subject while a subject may have multiple of them), the system foresees, that a "Facilities list" is as well one of the logical "user entry points" into the data of the system (eg. one of the main lists in the UI or other interfaces). So a list of facilities may be displayed, searched, filtered, aggregated/grouped/drilled etc. (especially for inspections, controls and similar reasons), while displaying the subjects behind each of the "Facility" records shown in the list.

Facility (Production site, branch)

Class

The representation of any unit or other organizational part of an subject, whose




- either: address differs from the main (headquarters) address given in the "Subject registration" entity
- or: registration of merchant/producer requires at least one facility, even when being in the same location as the main address (this may theoretically apply to a vineyard harvester (physical person) as well, when his only vineyard large enough to be registered is for example around his house etc.)

Rel. from: () Facility (Production site, branch).Owner

to: () Subject registration.

Owner subject (reference of subject from the facility).

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
Owner			Subject registration		Refers to a subject record - there shall be subjects in the register, that are not accessible directly through a list (apart from specific search parameter and/or

					administrators) yet their data are used/visible in the ownership information for a facility (vineyard, winery or sales building etc.).
 Name			Str		
 addresses[]			Addresses		Attribute is public for facilities of producers/merchants
 geographical_plot[]			Geographical data (for example .shp file)		


Geographical data (for example .shp file)

Class

Geographical data (LAT,LON) as well reference to land parcels and/or geospatial data in a cadastre.

Note: This data may be stored in an application only structure (XML etc.) since it shall be used only in interaction with integrated land parcel systems API. The format of geospatial data (shapefile shp(x) and its binary clones, OGC Geopackage, FlatGeobuf, GeoJSON, OGC GML, etc.) is to be agreed during the initial analysis.

note: The system may be integrated with more than one GIS for land parcels. See detailed requirements for "Integration"

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 data status			enum		<ul style="list-style-type: none"> "for validation" (will be a filter attribute for facilities or subjects (vineyard harvesters) search!) "validated" (will be a filter attribute for facilities or subjects (vineyard harvesters) search!) "informational"

Vineyard harvester

Subject registrationClass

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered subjects).

(no detailed attributes requested in tender terms and conditions)

Wine merchants

Subject registrationClass

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered subjects).

(no detailed attributes requested in tender terms and conditions)

Wine producer

Subject registrationClass

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered subjects).

(no detailed attributes requested in tender terms and conditions)

ContactType

Enumeration

Distinguishing the various levels of the tree

- contact type: person, responsible person (company owner etc.) - the "value" is then the "name" of the person
- contact data type (child of "contact type"): phone, address, e-mail, fax

(The "tree level" shall be a secondary contact attribute.)

Addresses

Class

The addresses register (data entity listing unique identification attributes of geo-locations).

The "no sync" requirements is valid only then and then, if only a single entity shall use this feature.

Note:

the attributes: State, Entity, Municipality, Canton, Region and Place/City shall be introduced based on the dropdown list filtered by currently selected values(s) of the other attributes for addresses within the state "Bosnia and Herzegovina".

the attributes: "State" has to be introduced based on a world-wide dropdown list. If data for "Municipality", "Region" and "City" are present, they shall be offered in a dropdown as well. If used from a 3rd party source, the lists should be stored locally in the SW and administered by the Administrator.

Their values might be added by ID-reference if the reliability of the source list allows, else they shall be referenced by value-reference.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
♦ opt:State			State		In what state the address is in.
♦ opt:Entity			Entity		Specially for BIH addresses only: In what entity (RS or FBiH or Brčko) the address is in.
♦ WineRegion			WineRegion		What wine region is the address in (applies mostly rather only for addresses of vineyards).
♦ Opt:Canton			Canton		FBiH Only: In what canton is the address in.
♦ opt:Municipality(Opština)			Region		In what region is the address. Important note: This shall be a mandatory attribute and important one for access-permissions filtering of the subjects and their data (facilities, declarations etc.) for the Municipality-based administrators' role.
♦ ZIP			Str		International postal ZIP code.
♦ Street			Str		Name of the street where the address is located. Please note: There are locations (especially in case of vineyards registrations) that have NO street names neither anything similar.
♦ StreetNoPostal			Str		Number of the house (postal).
♦ opt:StreetNoEvidence			Str		
♦ opt:note/detail/letter			Str		Attached letter (Kosevać 32a) or any kind of note (Kyseliak 3215/12 "hill behind the house").
♦ Geolocation (point)			Geographical data (for example .shp file)		

Contacts

Class

The contact attributes (e-mail, phones) of a subject. As a "contact" another subject may be used (for example in case of physical persons "representatives" of legal persons (companies)).

The "no sync" requirements are valid only then and then, if only a single entity shall use this feature.

Should be a tree: 1st level various types of persons (physical, owners...) 2nd level the name of the person, 3rd level the contact data of the persons.

Might be associated with a user(role). NOTE: This should be only a helping association if an "user" & "user role" is being created from a contact or when a contact is created with contact data based on verified e-mail or verified phone of an user (and system offers adding to that user a role). This association should not be used as "role" relation to the "subject", but merely as a helper when a "contact" or "user role" is being deleted(changed)/deactivated, the system shall offer to deactivate/delete the corresponding (associated) "user role"/"contact(s)"

✎ Rel. from: () Contacts. to: () Contacts.

Hierarchy between the values - lets assign different types of values to different types of contacts.

✎ Rel. from: () Contacts. to: () Contacts.

Hierarchy between the values - lets assign different types of values to different types of contacts.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ contact type			ContactType		What type of data (in the tree) this node represents (1-Owner, 1-Representative; 3-Phone, 3-E-mail, 3-Address, 3-Fax etc.)
◆ contact_value			str		<ul style="list-style-type: none"> For 1st level person types "owner", "contact", "representative" etc. will contain the name of the person For 2nd level person types: The name of the person (usually a physical person - the system does not foresee, yet does not rule out as well, the possibility of legal persons representing other legal persons having then other legal/physical representatives .. that why it is required to be a tree or a tree-like structure). For 3rd level person types "telephone", "e-mail", "address" etc. will contain the appropriate values of phone/e-mail/address belonging to the name of the person name from the 1st level

Documents

Class

Represents the entire collection - an "entry point" into the data entities.
(no detailed attributes requested in tender terms and conditions)

EXT: Subject data (FBIH: Phytoregister)

Class

Represents the link to the external subject data. The detailed solution is left upon the detailed technical specification of the contractor, but it shall be most probably done as a list of various reference IDs to the respective register (information shared across entities). A list of attributes locked for updates may be a part of this data as well.

EXT: Subject data (FBIH: RPG)

Class

Represents the link to the external subject data. The detailed solution is left upon the detailed technical specification of the contractor, but it shall be most probably done as a list of various reference IDs to the respective register (information shared across entities). A list of attributes locked for updates may be a part of this data as well.

Subject registration

Class

Registered subject for wine handling (growth/production-making/import/sale)

(Note: this list may also contain the list of companies/subjects in general, also foreign ones when used in import (trade, production) declaration)

◆ **Rel. from:** () Subject registration. **to:** () Facilities.

This slightly irrationally directed relation has one important meaning: While of course from the perspective of a data storage (database) a subject is an aggregate of (0)..1..n locations (each location belongs to a subject while a subject may have multiple of them), the system foresees, that a "Facilities list" is as well one of the logical "user entry points" into the data of the system (eg. one of the main lists in the UI or other interfaces). So a list of facilities may be displayed, searched, filtered, aggregated/grouped/drilled etc. (especially for inspections, controls and similar reasons), while displaying the subjects behind each of the "Facility" records shown in the list.

◆ **Rel. from:** () Association. **to:** () Subject registration.

1:1 One document may have multiple subjects it belongs to, however in usual scenario it will be associated to only one subject (the responsible subject who has submitted that document (harvest, production, stock) or that is being object of the document (inspection result)).

1:M A very specific situation occurs, when a purchase/production (sales) report of some wine of some vinegrower/wine producer contains reference to another entity. In such a case this relation has to be determinable:

- either from the attribute of the "Report" (has to be always, since it is associated)
- or also from the association of the document to multiple subjects

(the determination of (a) or (b) on technological level is due to the decision of the developer)

✎ **Rel. from:** () Facility (Production site, branch).Owner **to:** () Subject registration.

Owner subject (reference of subject from the facility).

✎ **Rel. from:** () Declaration (statements). **to:** () Subject registration.

The responsible subject of a report is allways only one subject.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ Legal status			Subject LegalStatus Type		What is the (legal) status of the subject within the register.
◆ RegistrationID					Not changeable and unique across the lifetime for a subject. Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign" origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
◆ Entity			Entity		What BIH entity (FBiH, RS, Brčko) the subject is registered in (can be hidden in the structure of ID as well).
◆ Date of registration			DateTime		Date of first registration of the subject. Subsequent changes have to be deduced from the registration declarations.
◆ Subject reg. ID/JMBG/					External ID reference to the governmental register (State wide - ministry of interior).
◆ Subject RPG ID					External ID reference to the governmental register (RPG - FBiH).
◆ ..other ID???					May contain other IDs as well.
◆ Note			Str		Unlimited text field for internal notes of the administration.
◆ Name			Str		Human readable official name of the subject (company name, physical person forename and surname).
◆ Address			Addresses		
◆ PublicPhone			Str		Main official phone contact (publicly visible in public reports).
◆ PublicEmail			Str		Main official SMTP e-mail address contact (publicly visible in public reports).
◆ Purpose(Change type)					What was the last change done on the subject (part of the historically available data - see legend for " <i>thick blue lines</i> ").
◆ Editing reasons			Str		

Vineyard harvester registrations

Class

Represents the entire collection - an "entry point" into the data entities (e.g. primarily a list of vineyards facilities, secondarily a list of registered vineyard harvester subjects).

(no detailed attributes requested in tender terms and conditions)

Wine merchants registrations

Class

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered wine merchant subjects).
(no detailed attributes requested in tender terms and conditions)

Wine producer registrations

Class

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered wine producer subjects).
(no detailed attributes requested in tender terms and conditions)

Entity

Enumeration

TBA

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ FBIH					
◆ RS					
◆ Brčko					

Subject LegalStatusType

Enumeration

TBA

Subject operation type

Enumeration

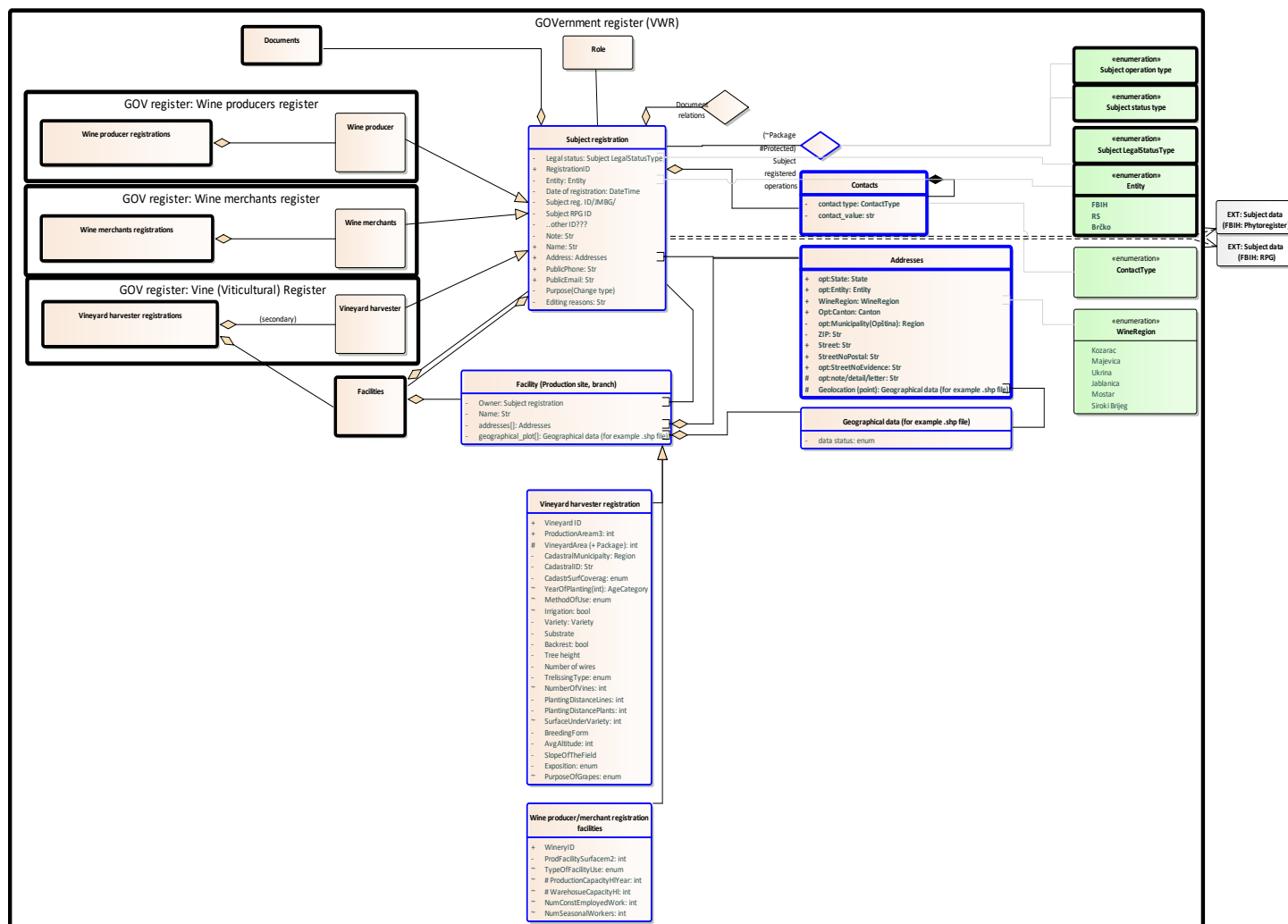
- vineyard harvester
- wine producer
- merchant
- owner
- other

Subject status type

Enumeration

- registered - new reg approval pending (-> reg. - reg. update pending; -> reg - approved (vin chng pend); -> reg - update req.; -> reg - approved; -> discarded; -> reg. - on-hold (adm. decission); -> reg. - on-hold (self req))
- registered - reg update approval pending (-> reg. - reg. update pending; -> reg - approved (vin chng pend); -> reg - update req.; -> reg - approved; -> discarded; -> reg. - on-hold (adm. ceission); -> reg. - on-hold (self req))
- registered - approved (vineyards change pending) (-> reg. - reg. update pending; -> reg - approved (vin chng pend); -> reg - update req.; -> reg - approved; -> discarded; -> reg. - on-hold (adm. decission); -> reg. - on-hold (self req))
- registered - update requested (-> reg. - reg. update pending;)
- registered - approved (-> reg - approved (vin chng pend); -> reg - update req.; -> discarded; -> reg. - on-hold (adm. decission); -> reg. - on-hold (self req))
- registered - on-hold (self req) (-> reg - approved; -> reg - update req.; -> discarded; -> reg. - on-hold (adm. decission); -> reg. - on-hold (self req))
- registered - on-hold (adm. decission) (-> reg - approved; -> reg - update req.; -> discarded;)
- discarded (-> reg. - reg. update pending;)

7.3 Data drafts (logical classes) (Subjects registration - Roles/Facilities)



Facilities

Class

Represents the entire collection - an "entry point" into the data entities (e.g. list of a subject's facilities).

Rel. from: () Subject registration.

to: () Facilities.

This slightly irrationally directed relation has one important meaning: While of course from the perspective of a data storage (database) a subject is an aggregate of (0).. n locations (each location belongs to a subject while a subject may have multiple of them), the system foresees, that a "Facilities list" is as well one of the logical "user entry points" into the data of the system (eg. one of the main lists in the UI or other interfaces). So a list of facilities may be displayed, searched, filtered, aggregated/grouped/drilled etc. (especially for inspections, controls and similar reasons), while displaying the subjects behind each of the "Facility" records shown in the list.

Facility (Production site, branch)

Class

The representation of any unit or other organizational part of an subject, whose

- either: address differs from the main (headquarters) address given in the "Subject registration" entity
- or: registration of merchant/producer requires at least one facility, even when being in the same location as the main address (this may theoretically apply to a vineyard harvester (physical person) as well, when his only vineyard large enough to be registered is for example around his house etc.)

Rel. from: () Facility (Production site, branch).Owner

to: () Subject registration.

Owner subject (reference of subject from the facility).

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
Owner			Subject registration		Refers to a subject record - there shall be subjects in the register, that are not accessible directly through a list (apart from specific search parameter and/or administrators) yet their data are used/visible in the ownership information for a facility (vineyard, winery or sales building etc.).
Name			Str		
addresses[]			Addresses		Attribute is public for facilities of producers/merchants
geographical_plot[]			Geographical data (for example .shp file)		

Geographical data (for example .shp file)

Class

Geographical data (LAT,LON) as well reference to land parcels and/or geospatial data in a cadastre.

Note: This data may be stored in an application only structure (XML etc.) since it shall be used only in interaction with integrated land parcel systems API. The format of geospatial data (shapefile shp(x) and its binary clones, OGC Geopackage, FlatGeobuf, GeoJSON, OGC GML, etc.) is to be agreed during the initial analysis.

note: The system may be integrated with more then one GIS for land parcels. See detailed requirements for "Integration"

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
data status			enum		<ul style="list-style-type: none"> "for validation" (will be a filter attribute for facilities or subjects (vineyard harvesters) search!) "validated" (will be a filter attribute for facilities or subjects (vineyard harvesters) search!) "informational"

Role

Class

Two types of roles:

- data related (see associations to subjects and productsets) functions (for subj ID=123 Create, Update; subj ID=234 Delete...)
- data related admin (set of subjects - geographical or creator-role based e.g. a "role" representing data ownership; subj.addr.district=123 Full) - this is for "Municipality administrators" logical role.
- system-wide (above all data, only functions-related) for example (WineBatches-own: Create,Delete)

(no detailed attributes requested in tender terms and conditions)

Rel. from: () Reportset. **to:** () Role.

Some reportsets may be bound to system-wide roles (if the subject has access to specific functionalities of the system - for example advanced functionalities based on payments etc.) and some may be bound to specific subjects only (custom book-keeping).

Rel. from: () Rules. **to:** () Role.

Some rulestes (operation from one batch into another) may be bound to system-wide roles (if the subject has access to specific functionalities of the system - for example advanced functionalities based on payments etc.) and some may be bound to specific subjects only (custom book-keeping).

Vineyard harvester

Subject registrationClass

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered subjects).

(no detailed attributes requested in tender terms and conditions)

Vineyard harvester registration

Facility (Production site, branch)Class

Date entity representing each facility of a vineyard harvester.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ Vineyard ID					Identification number of the vineyard. Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign" origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
◆ ProductionArea3			int		Area of the vineyard plot cultivated for vine grow.
◆ VineyardArea (+ Package)			int		The area of the vineyard.
◆ CadastralMunicipality			Region		Geographical region the vineyard belongs to.
◆ CadastralID			Str		ID of the cadastral estate.
◆ CadastrSurfCoverag			enum		Surface of the cadastral land that is covered by the vineyard.
◆ YearOfPlanting(int)			AgeCategory		The record shall keep the planting year, but on output the age category is shown. When on input the planting year is not known, then the category is selected and as planting year the following year is calculated: <ul style="list-style-type: none"> = now().year - 1/2 of category interval = now().year - 30 (for category 30andabove)
◆ MethodOfUse			enum		(OWNERSHIP, POSSESSION, LEASE, CONCESSION, ETC.)
◆ Irrigation			bool		If the vineyard is equipped with an irrigation system.
◆ Variety			Variety		TBA: Whether this shall be "RawMatCategory" or "Variety" or both (two attributes)
◆ Substrate					Type of soil.
◆ Backrest			bool		If the vineyard is equipped with backrests.
◆ Tree height					How high the plants are.
◆ Number of wires					Number of trellising wires.
◆ TrellisingType			enum		1. Wooden, 2. Concrete, 3. Steel, 4. Aluminum, 5. Other
◆ NumberOfVines			int		Number of plants in the trellising.
◆ PlantingDistanceLines			int		How distant are the lines from each other.
◆ PlantingDistancePlants			int		How distant are plants planted from each other.

SurfaceUnderVariety			int		Land surface of the vineyard under the variety.
BreedingForm					
AvgAltitude			int		Altitude above the sea level.
SlopeOfTheField					Slope of the land.
Exposition			enum		Insolation exposition type.
PurposeOfGrapes			enum		The intended usage of the grapes.

Wine merchants

Subject registrationClass

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered subjects).
(no detailed attributes requested in tender terms and conditions)

Wine producer

Subject registrationClass

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered subjects).

(no detailed attributes requested in tender terms and conditions)

Wine producer/merchant registration facilities

Facility (Production site, branch)Class

Facility of a wine producer.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
WineryID					Unique identification number of the facility. Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign" origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
ProdFacilitySurface m2			int		Floor surface of the facility.
TypeOfFacilityUse			enum		1: Owner; 2: Co-owner; 3: Tenant; 4: Unknown owner; 5: Other (enter)
# ProductionCapacity HIYear			int		Wine volume producible in the facility.
# WarehosueCapacity HI			int		Wine volume storable in the facility.
NumConstEmployed Work			int		How many workers are steadily employed in the facility.
NumSeasonalWorkers			int		How many workers are employable additionally when necessary.

ContactType

Enumeration

Distinguishing the various levels of the tree

- contact type: person, responsible person (company owner etc.) - the "value" is then the "name" of the person
- contact data type (child of "contact type"): phone, address, e-mail, fax

(The "tree level" shall be a secondary contact attribute.)

WineRegion

Enumeration

The region of wine growing. May be associated with multiple addresses and it may have generic descriptors (Municipality, Canton) for newly created addresses to be automatically associated there.

TODO: Is this correct listing?

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ Kozarac					
◆ Majevica					
◆ Ukrina					
◆ Jablanica					
◆ Mostar					
◆ Siroki Brijeg					

Addresses

Class

The addresses register (data entity listing unique identification attributes of geo-locations).

The "no sync" requirements is valid only then and then, if only a single entity shall use this feature.





Note:

the attributes: State, Entity, Municipality, Canton, Region and Place/City shall be introduced based on the dropdown list filtered by currently selected values(s) of the other attributes for addresses within the state "Bosnia and Herzegovina".

the attributes: "State" has to be introduced based on a world-wide dropdown list. If data for "Municipality", "Region" and "City" are present, they shall be offered in a dropdown as well. If used from a 3rd party source, the lists should be stored locally in the SW and administered by the Administrator.

Their values might be added by ID-reference if the reliability of the source list allows, else they shall be referenced by value-reference.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ opt:State			State		In what state the address is in.
◆ opt:Entity			Entity		Specially for BIH addresses only: In what entity (RS or FBiH or Brčko) the address is in.
◆ WineRegion			WineRegion		What wine region is the address in (applies mostly rather only for addresses of vineyards).
◆ Opt:Canton			Canton		FBiH Only: In what canton is the address in.
◆ opt:Municipality(Opština)			Region		In what region is the address. Important note: This shall be a mandatory attribute and important one for access-permissions filtering of the subjects and their data (facilities, declarations etc.) for the Municipality-based administrators' role.
◆ ZIP			Str		International postal ZIP code.
◆ Street			Str		Name of the street where the address is located. Please note: There are locations (especially in case of vineyards registrations) that have NO street names neither anything similar.

 StreetNoPostal			Str		Number of the house (postal).
 opt:StreetNoEvidence			Str		
 opt:note/detail/letter			Str		Attached letter (Kosevać 32 <u>a</u>) or any kind of note (Kyseliak 3215/12 " hill behind the house ").
 Geolocation (point)			Geographic data (for example .shp file)		

Contacts


Class

The contact attributes (e-mail, phones) of a subject. As a "contact" another subject may be used (for example in case of physical persons "representatives" of legal persons (companies)).

The "no sync" requirements are valid only then and then, if only a single entity shall use this feature.


Should be a tree: 1st level various types of persons (physical, owners...) 2nd level the name of the person, 3rd level the contact data of the persons.

Might be associated with a user(role). NOTE: This should be only a helping association if an "user" & "user role" is being created from a contact or when a contact is created with contact data based on verified e-mail or verified phone of an user (and system offers adding to that user a role). This association should not be used as "role" relation to the "subject", but merely as a helper when a "contact" or "user role" is being deleted(changed)/deactivated, the system shall offer to deactivate/delete the corresponding (associated) "user role"/"contact(s)"

 **Rel. from:** () Contacts.



to: () Contacts.

Hierarchy between the values - lets assign different types of values to different types of contacts.

 **Rel. from:** () Contacts.

to: () Contacts.

Hierarchy between the values - lets assign different types of values to different types of contacts.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 contact type			ContactType		What type of data (in the tree) this node represents (1-Owner, 1-Representative; 3-Phone, 3-E-mail, 3-Address, 3-Fax etc.)
 contact_value			str		<ul style="list-style-type: none"> For 1st level person types "owner", "contact", "representative" etc. will contain the name of the person For 2nd level person types: The name of the person (usually a physical person - the system does not foresee, yet does not rule out as well, the possibility of legal persons representing other legal persons having then other legal/physical representatives .. that why it is required to be a tree or a tree-like structure). For 3rd level person types "telephone", "e-mail", "address" etc. will contain the appropriate values of phone/e-mail/address belonging to the name of the person name from the 1st level

Documents

Class

Represents the entire collection - an "entry point" into the data entities.
(no detailed attributes requested in tender terms and conditions)

EXT: Subject data (FBIH: Phytoregister)

Class

Represents the link to the external subject data. The detailed solution is left upon the detailed technical specification of the contractor, but it shall be most probably done as a list of various reference IDs to the respective register (information shared across entities). A list of attributes locked for updates may be a part of this data as well.

EXT: Subject data (FBIH: RPG)

Class


Represents the link to the external subject data. The detailed solution is left upon the detailed technical specification of the contractor, but it shall be most probably done as a list of various reference IDs to the respective register (information shared across entities). A list of attributes locked for updates may be a part of this data as well.

Subject registration


Class

Registered subject for wine handling (growth/production-making/import/sale)

(Note: this list may also contain the list of companies/subjects in general, also foreign ones when used in import (trade, production) declaration)

 **Rel. from:** () Subject registration. **to:** () Facilities.

This slightly irrationally directed relation has one important meaning: While of course from the perspective of a data storage (database) a subject is an aggregate of (0)..1..n locations (each location belongs to a subject while a subject may have multiple of them), the system foresees, that a "Facilities list" is as well one of the logical "user entry points" into the data of the system (eg. one of the main lists in the UI or other interfaces). So a list of facilities may be displayed, searched, filtered, aggregated/grouped/drilled etc. (especially for inspections, controls and similar reasons), while displaying the subjects behind each of the "Facility" records shown in the list.

 **Rel. from:** () Association. **to:** () Subject registration.


1:1 One document may have multiple subjects it belongs to, however in usual scenario it will be associated to only one subject (the responsible subject who has submitted that document (harvest, production, stock) or that is being object of the document (inspection result)).

1:M A very specific situation occurs, when a purchase/production (sales) report of some wine of some vinegrower/wine producer contains reference to another entity. In such a case this relation has to be determinable:


a) either from the attribute of the "Report" (has to be always, since it is associated)

b) or also from the association of the document to multiple subjects




(the determination of (a) or (b) on technological level is due to the decision of the developer)

 **Rel. from:** () Facility (Production site, branch).Owner **to:** () Subject registration.

Owner subject (reference of subject from the facility).

 **Rel. from:** () Declaration (statements). **to:** () Subject registration.

The responsible subject of a report is always only one subject.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 Legal status			Subject LegalStatus Type		What is the (legal) status of the subject within the register.
 RegistrationID					Not changeable and unique across the lifetime for a subject. Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign" origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
 Entity			Entity		What BIH entity (FBIH, RS, Brčko) the subject is registered in (can be hidden in the structure of ID as well).

◆ Date of registration			DateTime		Date of first registration of the subject. Subsequent changes have to be deduced from the registration declarations.
◆ Subject reg. ID/JMBG/					External ID reference to the governmental register (State wide - ministry of interior).
◆ Subject RPG ID					External ID reference to the governmental register (RPG - FBIH).
◆ ..other ID???					May contain other IDs as well.
◆ Note			Str		Unlimited text field for internal notes of the administration.
◆ Name			Str		Human readable official name of the subject (company name, physical person forename and surname).
◆ Address			Addresses		
◆ PublicPhone			Str		Main official phone contact (publicly visible in public reports).
◆ PublicEmail			Str		Main official SMTP e-mail address contact (publicly visible in public reports).
◆ Purpose(Change type)					What was the last change done on the subject (part of the historically available data - see legend for " <i>thick blue lines</i> ").
◆ Editing reasons			Str		

Vineyard harvester registrations

Class

Represents the entire collection - an "entry point" into the data entities (e.g. primarily a list of vineyards facilities, secondarily a list of registered vineyard harvester subjects).

(no detailed attributes requested in tender terms and conditions)

Wine merchants registrations

Class

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered wine merchant subjects).
(no detailed attributes requested in tender terms and conditions)

Wine producer registrations

Class

Represents the entire collection - an "entry point" into the data entities (e.g. list of registered wine producer subjects).
(no detailed attributes requested in tender terms and conditions)

Entity

Enumeration

TBA

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ FBIH					
◆ RS					
◆ Brčko					

Subject LegalStatusType

Enumeration

TBA

Subject operation type

Enumeration

- vineyard harvester

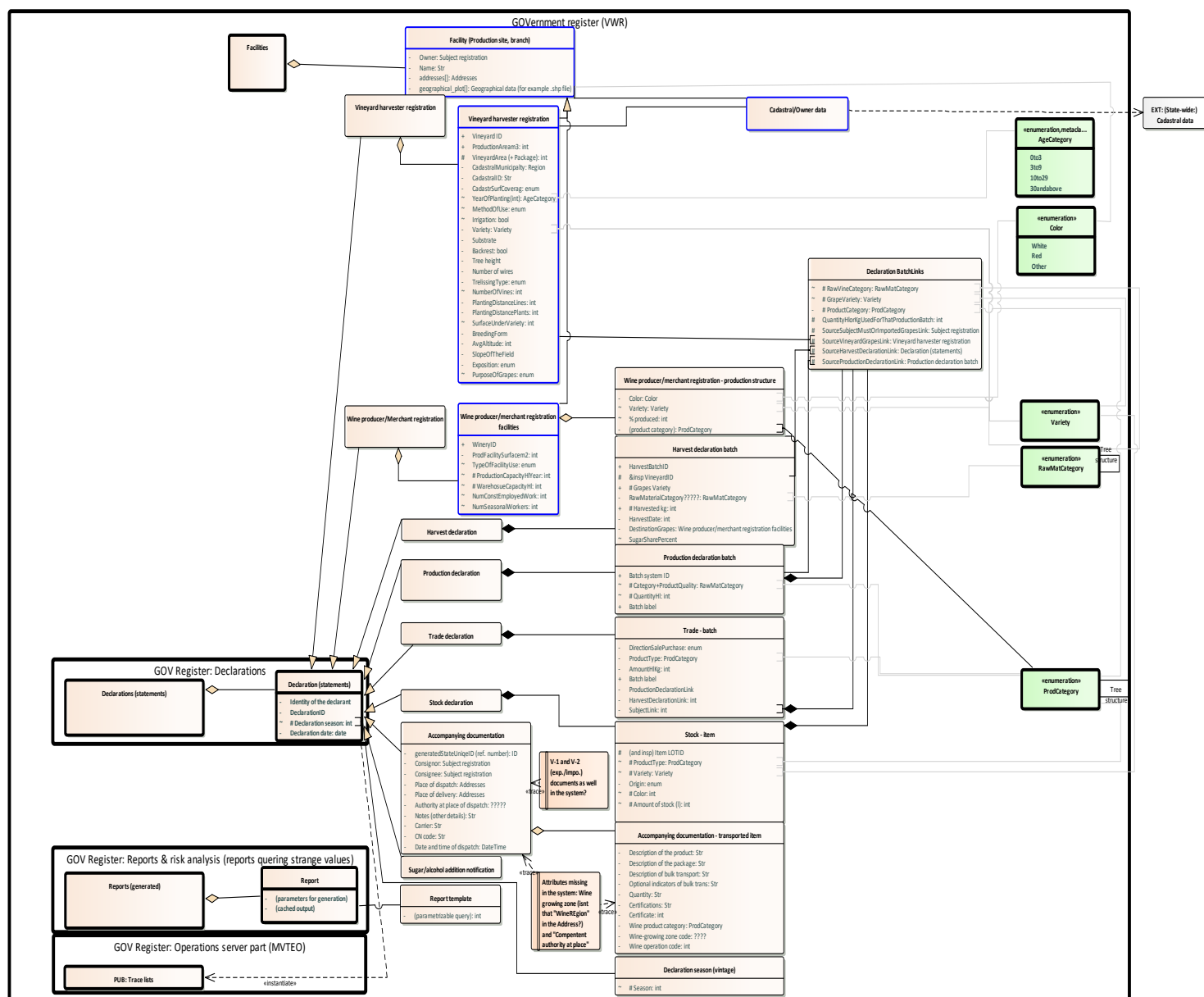
-
- wine producer
 - merchant
 - owner
 - other

Subject status type

Enumeration

- registered - new reg approval pending (-> reg. - reg. update pending; -> reg - approved (vin chng pend); -> reg - update req.; -> reg - approved; -> discarded; -> reg. - on-hold (adm. decission); -> reg. - on-hold (self req))
- registered - reg update approval pending (-> reg. - reg. update pending; -> reg - approved (vin chng pend); -> reg - update req.; -> reg - approved; -> discarded; -> reg. - on-hold (adm. ceission); -> reg. - on-hold (self req))
- registered - approved (vineyards change pending) (-> reg. - reg. update pending; -> reg - approved (vin chng pend); -> reg - update req.; -> reg - approved; -> discarded; -> reg. - on-hold (adm. decission); -> reg. - on-hold (self req))
- registered - update requested (-> reg. - reg. update pending;)
- registered - approved (-> reg - approved (vin chng pend); -> reg - update req.; -> discarded; -> reg. - on-hold (adm. decission); -> reg. - on-hold (self req))
- registered - on-hold (self req) (-> reg - approved; -> reg - update req.; -> discarded; -> reg. - on-hold (adm. decission); -> reg. - on-hold (self req))
- registered - on-hold (adm. decission) (-> reg - approved; -> reg - update req.; -> discarded;)
- discarded (-> reg. - reg. update pending;)

7.4 Data drafts (logical classes) (Subjects Declarations)



Accompanying documentation

Declaration (statements)Class

Document representing the declaration wine-related goods (wine, raw materials) being transported.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
generatedStateUnique ID (ref. number)			ID		
Consignor			Subject registration		
Consignee			Subject registration		
Place of dispatch			Addresses		
Place of delivery			Addresses		

Authority at place of dispatch			?????		
Notes (other details)			Str		
Carrier			Str		
CN code			Str		
Date and time of dispatch			DateTime		

Accompanying documentation - transported item

Class

Part of the document declaration, representing each of the wine-related goods (wine, raw materials) being transported.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
Description of the product			Str		
Description of the package			Str		
Description of bulk transport			Str		
Optional indicators of bulk trans			Str		
Quantity			Str		
Certifications			Str		
Certificate			int		
Wine product category			ProdCategory		
Wine-growing zone code			????		
Wine operation code			int		

Cadastral/Owner data

Class

Data referring to the cadaster and/or owners of the parcel of the facility.
(attributes TBA)

Declaration (statements)

Class

An statement can be "empty" (not entirely, the header declaration shall be submitted, but there will be none or zero batches)

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Rel. from: () Declaration (statements). to: () Subject registration.

The responsible subject of a report is allways only one subject.




Rel. from: () Declaration (statements). to: () Declarations (statements).

In context of a subject, for administration also without context (full list)

Rel. from: (0..1) Declaration (statements). to: (1) Document.

A report consists of one (multipage) document

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
Identity of the declarant					









 DeclarationID					An uniquely generated ID of the declaration document to be identifiable across the entire system (preferably across all the entity-instances as well).
 # Declaration season			int		Link to the season (declaration year, business year, vintage).
 Declaration date			date		When the declaration has been submitted (may be datetime as well).

Declaration BatchLinks

Class

When jumping (JOINing) through here, we may end either:

- on a declaration batch (lot) item, that is sourced from outside country (wine only! never vine nor must!)
- on a declaration batch (lot) item that is sourced from a subject but not a specific declaration/vineyard
- on a harvest declaration => vineyard registration
- on a vineyard registration

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 # RawVineCategory			RawMatCategory		What raw material category is the linked harvest.
 # GrapeVariety			Variety		What variety is the linked harvest.
 # ProductCategory			ProdCategory		What category is the linked product.
 QuantityHlorKgUsedForThatProductionBatch			int		Quantity of the linked product/grapes used within this linking.
 SourceSubjectMustOrImportedGrapesLink			Subject registration		Link to the subject (who sold/purchased the product or raw material to/from the declarant).
 SourceVineyardGrapesLink			Vineyard harvester registration		Link to the vineyard (from that the raw material has been obtained).
 SourceHarvestDeclarationLink			Declaration (statements)		Link to the harvest declaration where the raw material (used for the linked item) harvest has been declared.
 SourceProductionDeclarationLink			Production declaration batch		Link to the production declaration in which the product has been produced.


Declaration season (vintage)

Class

Every declaration is bound to some season identified by its year. Each season has some deadline, until various declarations shall be submitted (deadlines vary for each declaration type).

This does NOT apply for registrations, only declarations.


(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 # Season			int		Identification of the year (year number).

Facilities

Class

Represents the entire collection - an "entry point" into the data entities (e.g. list of a subject's facilities).

 **Rel. from:** () Subject registration. **to:** () Facilities.


This slightly irrationally directed relation has one important meaning: While of course from the perspective of a data storage (database) a subject is an aggregate of (0)..1..n locations (each location belongs to a subject while a subject may have multiple of them), the system foresees, that a "Facilities list" is as well one of the logical "user entry points" into the data of the system (eg. one of the main lists in the UI or other interfaces). So a list of facilities may be displayed, searched, filtered, aggregated/grouped/drilled etc. (especially for inspections, controls and similar reasons), while displaying the subjects behind each of the "Facility" records shown in the list.

Facility (Production site, branch)





Class

The representation of any unit or other organizational part of an subject, whose

- either: address differs from the main (headquarters) address given in the "Subject registration" entity
- or: registration of merchant/producer requires at least one facility, even when being in the same location as the main address (this may theoretically apply to a vineyard harvester (physical person) as well, when his only vineyard large enough to be registered is for example around his house etc.)

 **Rel. from:** () Facility (Production site, branch).Owner **to:** () Subject registration.

Owner subject (reference of subject from the facility).

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 Owner			Subject registration		Refers to a subject record - there shall be subjects in the register, that are not accessible directly through a list (apart from specific search parameter and/or administrators) yet their data are used/visible in the ownership information for a facility (vineyard, winery or sales building etc.).
 Name			Str		
 addresses[]			Addresses		Attribute is public for facilities of producers/merchants
 geographical_plot[]			Geographical data (for example .shp file)		

Harvest declaration

Declaration (statements)Class

Document representing the declaration of the harvest amount in the specific vine year (vintage).

Note: There are no harvest-declaration-specific, batch-related attributes for the declaration, but that may be re-specified during the initial analysis and such attributes may immerge.


(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)








Harvest declaration batch

Class

Line for every type of harvested grapes.

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 HarvestBatchID					Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign"

					origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
 &insp VineyardID					ID of the vineyard from the list of vineyards.
 # Grapes Variety					Variety of the grapes that were harvested.
 RawMaterialCategory????			RawMatCategory		
 # Harvested kg			int		Amount (weight) of the grapes harvested.
 HarvestDate			int		Exact date when the harvest has been performed.
 DestinationGrapes			Wine producer/merchant registration facilities		In what facility the grapes were delivered to (in case of multiple facilities the batch has to be split into multiple batches).
 SugarSharePercent					Amount of sugar measured in the grapes (must).

Production declaration

Declaration (statements)Class

Document representing the declaration of the production volume in the specific business year.

Note: There are no production-declaration-specific, batch-related attributes for the declaration, but that may be re-specified during the initial analysis and such attributes may immerge.

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)





Production declaration batch

Class

List of batches produced within declared production for a year.

Includes a set of reference to the originating source of inputs (must, grapes..) and their origin (purchase, vineyard ID).

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 Batch system ID					Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign" origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
 # Category+ProductQuality			RawMatCategory		What type of product has been produced.
 # QuantityHI			int		The volume of the product that has been produced.
 Batch label					How was this batch of the product internally labeled by the producer.

Report

Class

Specific instance of a template (with parameters set).

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ (parameters for generation)					Parameters to be used in the report template.
◆ (cached output)					The data of the report pre-computed to a specific date and time (for more static reports - yearly/monthly summaries etc.).

Report template

Class

Template (set of columns, formatting and database queries) for reports.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ (parametrizable query)			int		

Reports (generated)

Class

Lists of reports that have been generated in the system.

Stock - item

Class

Each item in document representing the declaration of the current warehouse stock.

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ (and insp) Item LOTID					Manufacturers (producers) identification of the lot/batch.
◆ # ProductType			ProdCategory		Type of product.
◆ # Variety			Variety		Variety of the item in stock.
◆ Origin			enum		1 – wine from RS, 2 – wine from FBH, 3 – wine from BD BH, 4 – wine from EU, 5 – wine from outside EU
◆ # Color			int		Wine color.
◆ # Amount of stock (l)			int		The volume of the item in stock.

Stock declaration

Declaration (statements)Class

Document representing the declaration of the current warehouse stock.

Note: There are no stock-declaration-specific, batch-related attributes for the declaration, but that may be re-specified during the initial analysis and such attributes may immerge.

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Sugar/alcohol addition notification

Declaration (statements)Class

Document declaring a notification of added sugar/alcohol.

Class properties (data attributes) TBA.


(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Trade - batch








Class

List of purchases/sales made of a specific batch of products.

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

 **Rel. from:** *() Operations.* **to:** *() Trade - batch.*

Multiple batches can be automatically rendered into report batches including the rendering of the document file.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 DirectionSalePurchase			enum		{Sales; Purchase}
 ProductType			ProdCategory		What type of product sale/purchase is being reported about in this item.
 AmountHIKg			int		How much of the product batch has been sold/purchased.
 Batch label					The label of the batch of the product.
 ProductionDeclarationLink					If the product has been obtained from a producer registered in the register, then ID of the production declaration.
 HarvestDeclarationLink			int		If the product has been obtained from a vineyard harvester registered in the register, then ID of the harvest declaration.
 SubjectLink			int		What subject has the product been obtained from (when purchased) or sold to (entire batch, in case of B2C the customers are not registered).

Trade declaration

Declaration (statements)Class

Document representing the declaration of the purchase and sales of a ready-made product volume in the specific business year.

Note: There are no trade-declaration-specific, batch-related attributes for the declaration, but that may be re-specified during the initial analysis and such attributes may immerge.

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Vineyard harvester registration

Declaration (statements)Class


Document representing a vineyard harvester registration. The document consists of multiple sections, each section representing a vineyard.

Note: There are no subject-specific, vineyard-related attributes for the role, but that may be re-specified during the initial analysis and such attributes may immerge.

Vineyard harvester registration

Facility (Production site, branch)Class

Date entity representing each facility of a vineyard harvester.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 Vineyard ID					Identification number of the vineyard. Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign"

					origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
◆ ProductionArea3			int		Area of the vineyard plot cultivated for vine grow.
◆ VineyardArea (+ Package)			int		The area of the vineyard.
◆ CadastralMunicipality			Region		Geographical region the vineyard belongs to.
◆ CadastralID			Str		ID of the cadastral estate.
◆ CadastralSurfCoverage			enum		Surface of the cadastral land that is covered by the vineyard.
◆ YearOfPlanting(int)			AgeCategory		The record shall keep the planting year, but on output the age category is shown. When on input the planting year is not known, then the category is selected and as planting year the following year is calculated: <ul style="list-style-type: none"> = now().year - 1/2 of category interval = now().year - 30 (for category 30 and above)
◆ MethodOfUse			enum		(OWNERSHIP, POSSESSION, LEASE, CONCESSION, ETC.)
◆ Irrigation			bool		If the vineyard is equipped with an irrigation system.
◆ Variety			Variety		TBA: Whether this shall be "RawMatCategory" or "Variety" or both (two attributes)
◆ Substrate					Type of soil.
◆ Backrest			bool		If the vineyard is equipped with backrests.
◆ Tree height					How high the plants are.
◆ Number of wires					Number of trellising wires.
◆ TrellisingType			enum		1. Wooden, 2. Concrete, 3. Steel, 4. Aluminum, 5. Other
◆ NumberOfVines			int		Number of plants in the trellising.
◆ PlantingDistanceLines			int		How distant are the lines from each other.
◆ PlantingDistancePlants			int		How distant are plants planted from each other.
◆ SurfaceUnderVariety			int		Land surface of the vineyard under the variety.
◆ BreedingForm					
◆ AvgAltitude			int		Altitude above the sea level.
◆ SlopeOfTheField					Slope of the land.
◆ Exposition			enum		Insolation exposition type.
◆ PurposeOfGrapes			enum		The intended usage of the grapes.

Wine producer/Merchant registration

Declaration (statements) Class

Document representing a wine producer registration. The document consists of multiple sections, each section representing a production facility.

Note: There are no subject-specific, winery-related attributes for the role, but that may be re-specified during the initial analysis and such attributes may immerge.

Wine producer/merchant registration - production structure

Class

Each line representing a type of product produced in the facility.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ Color			Color		Color of the product (wine color).
◆ Variety			Variety		Type (variety) of the wine.
◆ % produced			int		How many percent of the total production volume of the facility are being covered by this very type of product.
◆ (product category)			ProdCategory		

Wine producer/merchant registration facilities

Facility (Production site, branch)Class

Facility of a wine producer.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ WineryID					Unique identification number of the facility. Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign" origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
◆ ProdFacilitySurface m2			int		Floor surface of the facility.
◆ TypeOfFacilityUse			enum		1: Owner; 2: Co-owner; 3: Tenant; 4: Unknown owner; 5: Other (enter)
◆ # ProductionCapacity HIYear			int		Wine volume producible in the facility.
◆ # WarehosueCapacity HI			int		Wine volume storable in the facility.
◆ NumConstEmployed Work			int		How many workers are steadily employed in the facility.
◆ NumSeasonalWorkers			int		How many workers are employable additionally when necessary.

PUB: Trace lists

Class

Tracing of batches to harvest or purchase origins (based by batch number identification)

Color

Enumeration

Type (color of vine/wine).

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
--------------	----------	-------	-----------	------	-------------

White					
Red					
Other					

ProdCategory

Enumeration

Type of product (includes PGI/PDO, sweetness category or wine type, may contain variety as well).

For wine-region structure see as well:

- Determination and Allocation of Viticulture Regions (SR BiH OJ, 24/84)

Rel. from: () ProdCategory. **to:** () ProdCategory.

IMPORTANT NOTE: This is list is a tree-like or table-like multidimensional taxonomy structure. Since there are these 3 taxnomic denominators being employed

- varieties (type of wine)
- sugar mass concentration type ((nature, extra) brut, demi-brut, extra sec, sec, demi-sec, doux) and alcohol addition
- PDO/PGI/variety w.o. PDOPGI/wine w.o. PDOPGI... types (each multiple for every recognised location)
- sparkling/non-sparkling/pastoral...
- based on packaging (bulk/bottled)

and

- other products (alcoholic beverages based on wine, marc, lees etc., oils...)
- non-drinking products (tables grapes...)

Rel. from: () ProdCategory. **to:** () ProdCategory.

IMPORTANT NOTE: This is list is a tree-like or table-like multidimensional taxonomy structure. Since there are these 3 taxnomic denominators being employed

- varieties (type of wine)
- sugar mass concentration type ((nature, extra) brut, demi-brut, extra sec, sec, demi-sec, doux) and alcohol addition
- PDO/PGI/variety w.o. PDOPGI/wine w.o. PDOPGI... types (each multiple for every recognised location)
- sparkling/non-sparkling/pastoral...
- based on packaging (bulk/bottled)

and

- other products (alcoholic beverages based on wine, marc, lees etc., oils...)
- non-drinking products (tables grapes...)

RawMatCategory

Enumeration

Type (variety of vine/wine, includes eligibility of being material for PGI/PDO product, may contain variety as well).

For wine-region structure see as well:

- Determination and Allocation of Viticulture Regions (SR BiH OJ, 24/84)

Rel. from: () RawMatCategory. **to:** () RawMatCategory.

IMPORTANT NOTE: This is list is a tree-like or table-like multidimensional taxonomy structure. Since there are these 3 taxnomic denominators being employed

- varieties (type of wine)
- sugar mass concentration type ((nature, extra) brut, demi-brut, extra sec, sec, demi-sec, doux) and alcohol addition
- PDO/PGI/variety w.o. PDOPGI/wine w.o. PDOPGI... types (each multiple for every recognised location)
- sparkling/non-sparkling/pastoral...
- based on packaging (bulk/bottled)

and

- other products (alcoholic beverages based on wine, marc, lees etc., oils...)
- non-drinking products (tables grapes...)

Rel. from: () RawMatCategory. **to:** () RawMatCategory.

IMPORTANT NOTE: This is list is a tree-like or table-like multidimensional taxonomy structure. Since there are these 3 taxnomic denominators being employed

- varieties (type of wine)

- sugar mass concentration type ((nature, extra) brut, demi-brut, extra sec, sec, demi-sec, doux) and alcohol addition
- PDO/PGI/variety w.o. PDOPGI/wine w.o. PDOPGI... types (each multiple for every recognised location)
- sparkling/non-sparkling/pastoral...
- based on packaging (bulk/bottled)

and

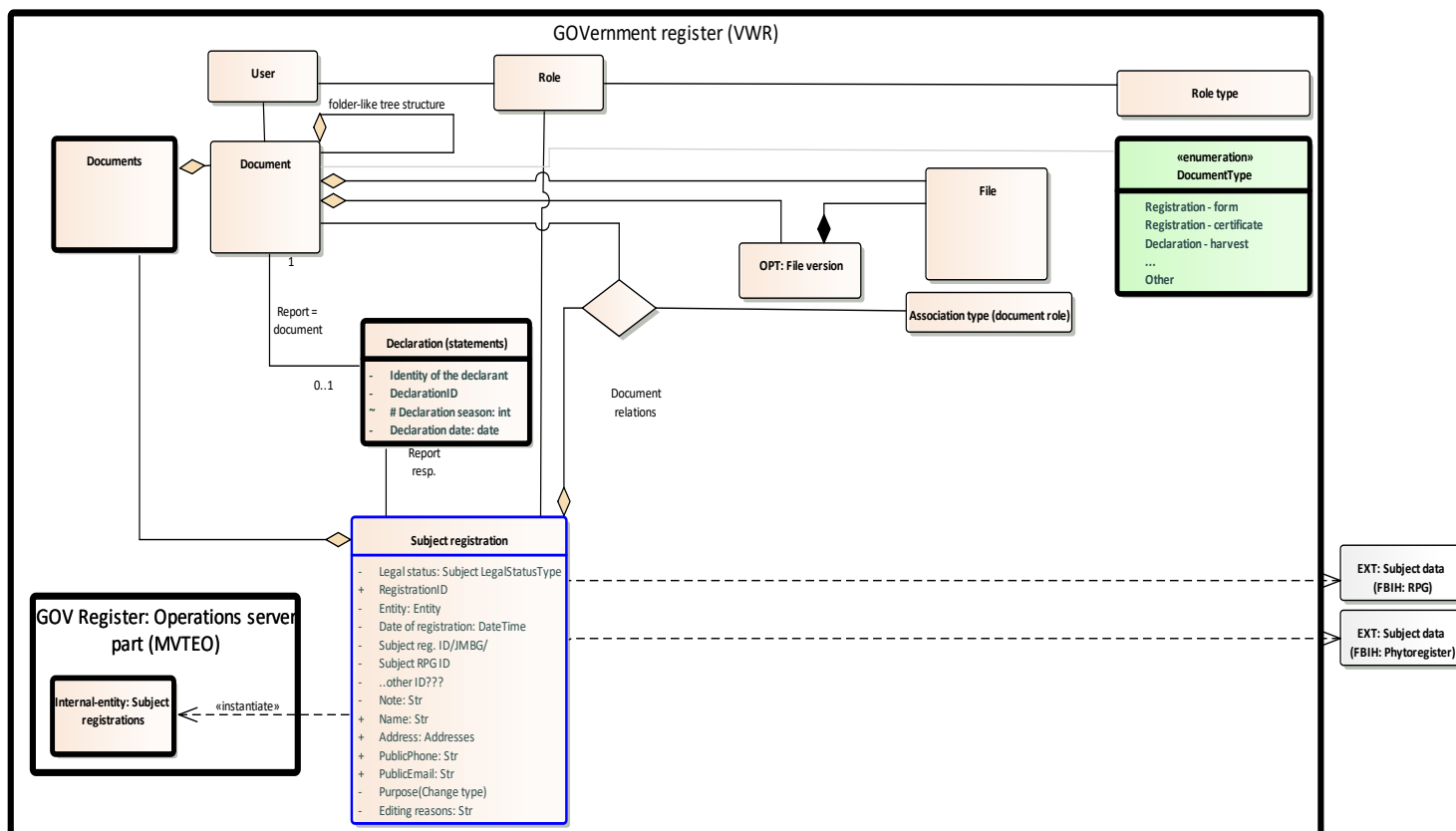
- other products (alcoholic beverages based on wine, marc, lees etc., oils...)
- non-drinking products (tables grapes...)

Variety

Enumeration

Type (variety of vine/wine).

7.5 Data drafts (logical classes) (Subjects documents,users)



Association type (document role)

Class

What type of association has (in what relation is) the document to the respective subject.

Declaration (statements)

Class

An statement can be "empty" (not entirely, the header declaration shall be submitted, but there will be none or zero batches)

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Rel. from: () Declaration (statements). **to:** () Subject registration.

The responsible subject of a report is allways only one subject.

Rel. from: () Declaration (statements). **to:** () Declarations (statements).

In context of a subject, for administration also without context (full list)

Rel. from: (0..1) Declaration (statements). **to:** (1) Document.

A report consists of one (multipage) document

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ Identity of the declarant					
◆ DeclarationID					An uniquely generated ID of the declaration document to be identifiable across the entire system (preferably across all the entity-instances as well).
◆ # Declaration season			int		Link to the season (declaration year, business year, vintage).
◆ Declaration date			date		When the declaration has been submitted (may be datetime as well).


Role

Class


Two types of roles:

- data related (see associations to subjects and productsets) functions (for subj ID=123 Create, Update; subj ID=234 Delete...)
- data related admin (set of subjects - geographical or creator-role based e.g. a "role" representing data ownership; subj.addr.district=123 Full) - this is for "Municipality administrators" logical role.
- system-wide (above all data, only functions-related) for example (WineBatches-own: Create,Delete)

(no detailed attributes requested in tender terms and conditions)

 **Rel. from:** () Reportset. **to:** () Role.

Some reportsets may be bound to system-wide roles (if the subject has access to specific functionalities of the system - for example advanced functionalities based on payments etc.) and some may be bound to specific subjects only (custom book-keeping).

 **Rel. from:** () Rules. **to:** () Role.

Some rulestes (operation from one batch into another) may be bound to system-wide roles (if the subject has access to specific functionalities of the system - for example advanced functionalities based on payments etc.) and some may be bound to specific subjects only (custom book-keeping).

Role type

Class

What type of role (enumeration) is the reference relation data entity "Role".

User


Class

List of users in the system.

Entity installation instance: In case the user is from another installation, the record is missing there.

Operational & synchronization server instance (MVTEO): The user has no details apart from ID, username and ID of instance to be redirected to.

(no detailed attributes requested in tender terms and conditions)

 **Rel. from:** () User. **to:** () Document.

every document has an author - the permissions for the document differ based on the author (role) and accessing user (role)

Document


Class

A document (file) uploaded into the system.


Can be:

- some (binary/text...) file
- but also a declaration (registration, harvest declaration etc.) - while these entities shall be stored as and appropriate RDBMS structure of data tables and their columns, relations etc., each declaration is also a "document" attached to the registered subject (and has to be downloadable and serializable as a PDF whose lay corresponds to the physical paper forms)


(no detailed attributes requested in tender terms and conditions)

 **Rel. from:** () Document. **to:** () Document.


The documents shall be organized in folders. A folder is either a "hardwired" organizational unit based on some attribute of the document (type of declaration etc.) or a special type of document-container that is parent of other documents (both this approaches may be mixed as technologically necessary).

 **Rel. from:** () Document. **to:** () Document.

The documents shall be organized in folders. A folder is either a "hardwired" organizational unit based on some attribute of the document (type of declaration etc.) or a special type of document-container that is parent of other documents (both this approaches may be mixed as technologically necessary).

 **Rel. from:** () User. **to:** () Document.

every document has an author - the permissions for the document differ based on the author (role) and accessing user (role)

 **Rel. from:** (0..1) Declaration (statements). **to:** (1) Document.
A report consists of one (multipage) document

Documents

Class

Represents the entire collection - an "entry point" into the data entities.
(no detailed attributes requested in tender terms and conditions)

EXT: Subject data (FBIH: Phytoregister)

Class

Represents the link to the external subject data. The detailed solution is left upon the detailed technical specification of the contractor, but it shall be most probably done as a list of various reference IDs to the respective register (information shared across entities). A list of attributes locked for updates may be a part of this data as well.

EXT: Subject data (FBIH: RPG)

Class

Represents the link to the external subject data. The detailed solution is left upon the detailed technical specification of the contractor, but it shall be most probably done as a list of various reference IDs to the respective register (information shared across entities). A list of attributes locked for updates may be a part of this data as well.

File

Class

The file binary data.

In case of declarations it shall be a PDF-version of the data submitted.

In case of certificates (registration report) it shall be a governmentally issued certificate that the subject is registered in the register.

In case of binary document: the binary form of the document.

May be held in any form for storage as seen fit by the implementor, yet it has respect the project deployment constraints.

OPT: File version

Class


The file may have multiple versions - e.g. while it is logically one single document, it may be, that it's binary representation (binary file) could've been updated multiple times.

Subject registration


Class

Registered subject for wine handling (growth/production-making/import/sale)

(Note: this list may also contain the list of companies/subjects in general, also foreign ones when used in import (trade, production) declaration)

 **Rel. from:** () Subject registration. **to:** () Facilities.

This slightly irrationally directed relation has one important meaning: While of course from the perspective of a data storage (database) a subject is an aggregate of (0)..1..n locations (each location belongs to a subject while a subject may have multiple of them), the system foresees, that a "Facilities list" is as well one of the logical "user entry points" into the data of the system (eg. one of the main lists in the UI or other interfaces). So a list of facilities may be displayed, searched, filtered, aggregated/grouped/drilled etc. (especially for inspections, controls and similar reasons), while displaying the subjects behind each of the "Facility" records shown in the list.


 **Rel. from:** () Association. **to:** () Subject registration.

1:1 One document may have multiple subjects it belongs to, however in usual scenario it will be associated to only one subject (the responsible subject who has submitted that document (harvest, production, stock) or that is being object of the document (inspection result)).


1:M A very specific situation occurs, when a purchase/production (sales) report of some wine of some vinegrower/wine producer contains reference to another entity. In such a case this relation has to be determinable:

a) either from the attribute of the "Report" (has to be always, since it is associated)















b) or also from the association of the document to multiple subjects
(the determination of (a) or (b) on technological level is due to the decision of the developer)

 **Rel. from:** () Facility (Production site, branch).Owner **to:** () Subject registration.

Owner subject (reference of subject from the facility).

 **Rel. from:** () Declaration (statements). **to:** () Subject registration.

The responsible subject of a report is allways only one subject.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 Legal status			Subject LegalStatus Type		What is the (legal) status of the subject within the register.
 RegistrationID					Not changeable and unique across the lifetime for a subject. Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign" origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
 Entity			Entity		What BIH entity (FBiH, RS, Brčko) the subject is registered in (can be hidden in the structure of ID as well).
 Date of registration			DateTime		Date of first registration of the subject. Subsequent changes have to be deduced from the registration declarations.
 Subject reg. ID/JMBG/					External ID reference to the governmental register (State wide - ministry of interior).
 Subject RPG ID					External ID reference to the governmental register (RPG - FBiH).
 ..other ID???					May contain other IDs as well.
 Note			Str		Unlimited text field for internal notes of the administration.
 Name			Str		Human readable official name of the subject (company name, physical person forename and surname).
 Address			Addresses		
 PublicPhone			Str		Main official phone contact (publicly visible in public reports).
 PublicEmail			Str		Main official SMTP e-mail address contact (publicly visible in public reports).
 Purpose(Change type)					What was the last change done on the subject (part of the historically available data - see legend for " <i>thick blue lines</i> ").
 Editing reasons			Str		

DocumentType

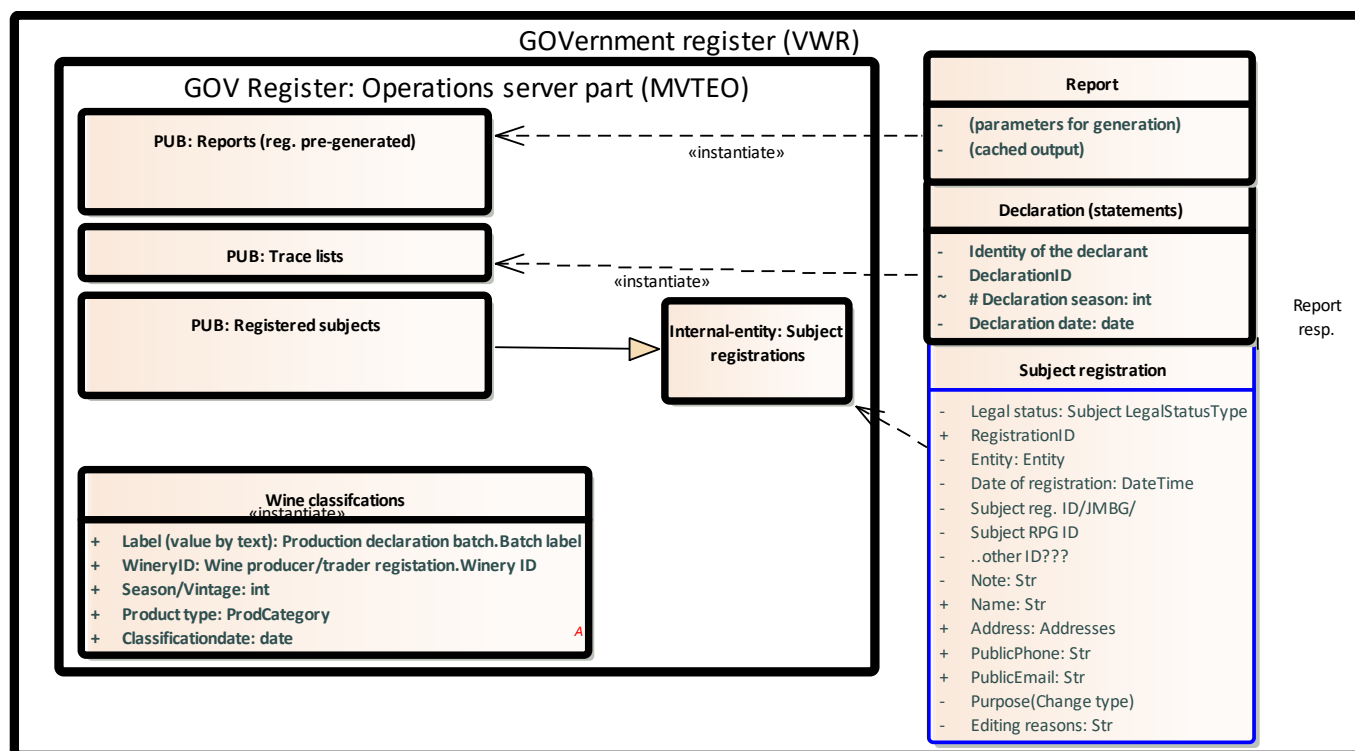
Enumeration

What type of document is the referencing data entity "Document".

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
--------------	----------	-------	-----------	------	-------------

◆ Registration - form					
◆ Registration - certificate					
◆ Declaration - harvest					
◆ ...					
◆ Other					

7.6 Data drafts (logical classes) (Operational statistics and sync)



Declaration (statements)

Class

An statement can be "empty" (not entirely, the header declaration shall be submitted, but there will be none or zero batches)

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Rel. from: () Declaration (statements). **to:** () Subject registration.

The responsible subject of a report is allways only one subject.

Rel. from: () Declaration (statements). **to:** () Declarations (statements).

In context of a subject, for administration also without context (full list)

Rel. from: (0..1) Declaration (statements). **to:** (1) Document.

A report consists of one (multipage) document

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
Identity of the declarant					
DeclarationID					An uniquely generated ID of the declaration document to be identifiable across the entire system (preferably across all the entity-instances as well).
# Declaration season			int		Link to the season (declaration year, business year, vintage).
Declaration date			date		When the declaration has been submitted (may be datetime as well).

Report

Class

Specific instance of a template (with parameters set).

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ (parameters for generation)					Parameters to be used in the report template.
◆ (cached output)					The data of the report pre-computed to a specific date and time (for more static reports - yearly/monthly summaries etc.).

PUB: Registered subjects

Internal-entity: Subject registrationsClass

List of registered subjects (for proper login redirection and subjects public tracing).

PUB: Reports (reg. pre-generated)

Class

Statistical reports (exports of "Reports (generated)", "Report" (parameters) and "Report templates"(if necessary) into the operation and statistical server).

PUB: Trace lists

Class

Tracing of batches to harvest or purchase origins (based by batch number identification)

Subject registration

Class

Registered subject for wine handling (growth/production-making/import/sale)

(Note: this list may also contain the list of companies/subjects in general, also foreign ones when used in import (trade, production) declaration)

◆ Rel. from: () Subject registration. to: () Facilities.

This slightly irrationally directed relation has one important meaning: While of course from the perspective of a data storage (database) a subject is an aggregate of (0)..1..n locations (each location belongs to a subject while a subject may have multiple of them), the system foresees, that a "Facilities list" is as well one of the logical "user entry points" into the data of the system (eg. one of the main lists in the UI or other interfaces). So a list of facilities may be displayed, searched, filtered, aggregated/grouped/drilled etc. (especially for inspections, controls and similar reasons), while displaying the subjects behind each of the "Facility" records shown in the list.

◆ Rel. from: () Association. to: () Subject registration.

1:1 One document may have multiple subjects it belongs to, however in usual scenario it will be associated to only one subject (the responsible subject who has submitted that document (harvest, production, stock) or that is being object of the document (inspection result)).

1:M A very specific situation occurs, when a purchase/production (sales) report of some wine of some vinegrower/wine producer contains reference to another entity. In such a case this relation has to be determinable:

a) either from the attribute of the "Report" (has to be always, since it is associated)

b) or also from the association of the document to multiple subjects

(the determination of (a) or (b) on technological level is due to the decision of the developer)

◆ Rel. from: () Facility (Production site, branch).Owner to: () Subject registration.

Owner subject (reference of subject from the facility).

◆ Rel. from: () Declaration (statements). to: () Subject registration.

The responsible subject of a report is allways only one subject.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ Legal status			Subject LegalStatus Type		What is the (legal) status of the subject within the register.
◆ RegistrationID					Not changeable and unique across the lifetime for a subject. Important note: This ID belongs to those attributes, that have to be synchronized in the operational

					statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign" origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
◆ Entity			Entity		What BIH entity (FBIH, RS, Brčko) the subject is registered in (can be hidden in the structure of ID as well).
◆ Date of registration			DateTime		Date of first registration of the subject. Subsequent changes have to be deduced from the registration declarations.
◆ Subject reg. ID/JMBG/					External ID reference to the governmental register (State wide - ministry of interior).
◆ Subject RPG ID					External ID reference to the governmental register (RPG - FBIH).
◆ ..other ID???					May contain other IDs as well.
◆ Note			Str		Unlimited text field for internal notes of the administration.
◆ Name			Str		Human readable official name of the subject (company name, physical person forename and surname).
◆ Address			Addresses		
◆ PublicPhone			Str		Main official phone contact (publicly visible in public reports).
◆ PublicEmail			Str		Main official SMTP e-mail address contact (publicly visible in public reports).
◆ Purpose(Change type)					What was the last change done on the subject (part of the historically available data - see legend for " <i>thick blue lines</i> ").
◆ Editing reasons			Str		

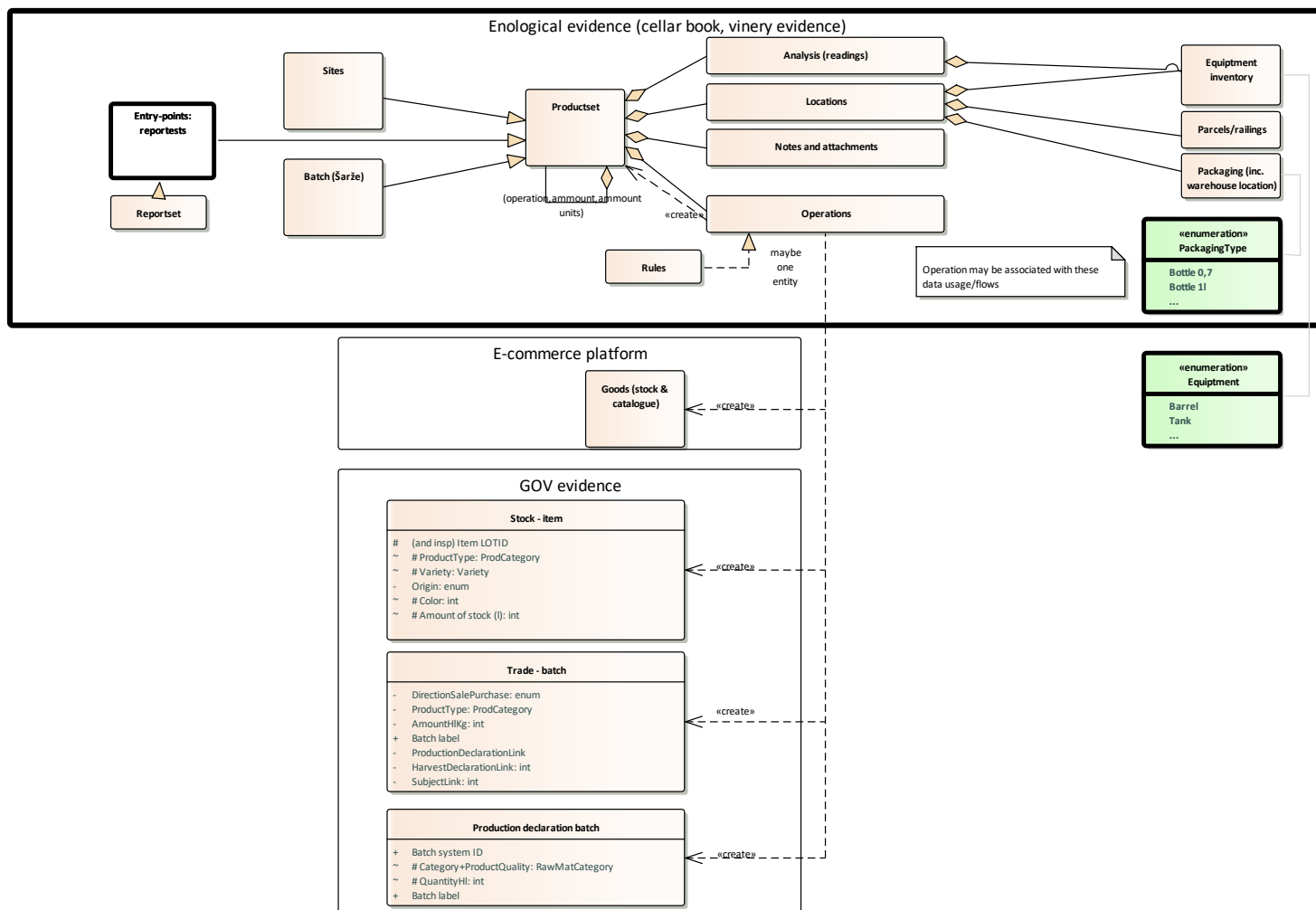
Wine classifications

Class

Lists of wine batches that have been classified (and accredited) in a laboratory.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ Label (value by text)			Production declaration batch.Batch label		Text used for the product label.
◆ WineryID			Wine producer/trader registration. Winery ID		Identification of the winery that has produced that product.
◆ Season/Vintage			int		In what vintage year the product has been produced.
◆ Product type			ProdCategory		What type is the product.
◆ Classificationdate			date		At what date has the product been classified.

7.7 Data drafts (logical classes) (Enology evidence)



Analysis (readings)

Class

Output data from any possible analysis.

Batch (Šarže)

ProductsetClass

A productset may be a lot/batch, but it may be split into multiple ones (for example different packaging or storage dispatch etc.).

Equipment inventory

Class

Inventory of:

- storage (or even production) equipment - so that the "Productset" can be located at the specified production stage
- laboratory equipment - identification of the analysis reading (laboratory equipment may represent various measurable values to be logged for a productset at specific stage of its existence)

May be created/administered by the user as separate list. May be created from and linked to an registered facility (vineyard, winery) or entirely from scratch (w/o link to a facility).

(A laboratory equipment may be for example a meteostation or a measurement of the soil properties or a certificate of such measurement, so it may indeed be linked to the vineyard as facility well).

Goods (stock & catalogue)

Class

Goods and product catalogue of products that are being offered by various users from the register. This entity has to be managed from the enological evidence (cellar book).

Locations

Class

An important extension attribute-like-entity of the "productset" - each batch can be stored in multiple locations (one batch stored in multiple smaller barrels, fermentation buckets, tanks...)

That goes for grapes as well - one batch may be grown on / harvested from multiple parcels, but also only on one land parcel within railing 1-10, the other batch in railings 11-20 etc.)

When it comes to packing the productset batches, it may also be packed as bulk (batches - numerical series of - boxes/tanks of grapes/must), but also batches of bottles sharing same etiquette/indentification etc.

Notes and attachments

Class

Internal notes of the producer.

(Multiple) binary files (files, not documents) may be attached, renamed, updated, deleted(removed entirely).

Operations


Class

Rules for those operations to be done (are available to the user) with "productset" (attributes modifications) based on:


- operation type
- current productset attributes (or the possibility to create a new input from extern)
- given attributes (input when the operation is called)

Output is


- productset entities/attributes (please note: there may be a M:N productset entity merge/split as result of the operation - from one harvested batch of grapes 2 various batches of must are made, one of them some blend for example so it merges with another batch in later operations, the another undergoing a different process)
- integrated data entities (for example to prepare in the current year production declaration)

 **Rel. from:** () Operations. **to:** () Trade - batch.

Multiple batches can be automatically rendered into report batches including the rendering of the document file.

 **Rel. from:** () Operations. **to:** () Productset.

Tje operations are abstract entities

 **Rel. from:** () Rules. **to:** () Operations.

"Rules" and "Operations" are in fact nearly the same, only "Rules" are fully automated. So it may be a single entity.

Packaging (inc. warehouse location)

Class

May be created/administered by the user as separate list.

Parcels/railings

Class

May be created/administered by the user as separate list. May be created from and linked to an registered facility (vineyard, winery) or entirely from scratch (w/o link to a facility).


Production declaration batch

Class

List of batches produced within declared production for a year.

Includes a set of reference to the originating source of inputs (must, grapes..) and their origin (purchase, vineyard ID).

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 Batch system ID					Important note: This ID belongs to those attributes, that have to be synchronized in the operational statistics and synchronization part of the system and thus it has to be UNIQUE across all the DEPLOYMENT

					INSTANCES!!! Moreover, the data entity identified by this ID has to be synchronizable back into the other entity-deployed instances of the system, so it must maintain not only the aforementioned uniqueness, but also it must provide identifiability of the "foreign" origin of the entity (e.g. that it is not an entity created and maintained in that deployment instance).
◆ # Category+ProductQuality			RawMatCategory		What type of product has been produced.
◆ # QuantityHL			int		The volume of the product that has been produced.
◆ Batch label					How was this batch of the product internally labeled by the producer.

Productset

Class

An abstract entity representing any "set" of wine-related inputs and interim products (from soil parcels (railing sets), plants, grapes, must, wine in various stages of their production up to the bottle, marc, wine lees and their (marc, lees) alcoholization,).

Please note: It is vital, that the productset has certain attributes used in the creation of declarations (harvest, stock, production) so these declarations can be generated automatically.

This applies also for those data needed by an automated operation of creating web-shop stock items in the catalogue (end-customer sales price, photograph, item text/description, web-shop item-specification attributes data etc.).

<https://www.zakonyprolidi.cz/cs/2017-88#prilohy>

✍ Rel. from: () Productset. to: () Productset.

A wineset may refer to multiple other winesets (the relation usually being a result of an operation).

✍ Rel. from: () Operations. to: () Productset.

Tje operations are abstract entities

✍ Rel. from: () Productset. to: () Productset.

A wineset may refer to multiple other winesets (the relation usually being a result of an operation).

Reportset

Class

This shall define, what "entry points" are available, such as for example: sites/vineyards list, planted varieties, harvest batches, must batches, sugar storage (batches). This shall be selectable form a menu and represent in fact "distinct" evidences (record keepings).

For each list there should be:

- SQL-like filtering (inc. specific year input - all the above are usually related to one year only!)
- Columns list
- Ordering / grouping of the resulting list

✍ Rel. from: () Reportset. to: () Role.

Some reportsets may be bound to system-wide roles (if the subject has access to specific functionalities of the system - for example advanced functionalitites based on payments etc.) and some may be bound to specific subjects only (custom book-keeping).

Rules

Class

Rules for automated "productset" attributes modifications (inc. integrated entities creations) based on:

- operation type
- current productset attributes
- output productset attributes/entities

✍ Rel. from: () Rules. to: () Role.

Some rulestes (operation from one batch into another) may be bound to system-wide roles (if the subject has access to specific functionalities of the system - for example advanced functionalitites based on payments etc.) and some may be bound to specific subjects only (custom book-keeping).

✍ Rel. from: () Rules. to: () Operations.

"Rules" and "Operations" are in fact nearly the same, only "Rules" are fully automated. So it may be a single entity.

Sites

ProductsetClass

More granular than facility - in what facility/department/other organizational unit is this productset being produced/located (this includes for example an entire site of multiple vineyards as well).

May be created/administered by the user as separate list. May be created from and linked to an registered facility or entirely from scratch (w/o link to a vineyard).







It is just a helper "grouping" of productsets, if the wine producer wishes to use so. Not to be confused with "Locations", that refer to the real source/whereabouts of the productset.

Stock - item

Class

Each item in document representing the declaration of the current warehouse stock.

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)


Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 (and insp) Item LOTID					Manufacturers (producers) identification of the lot/batch.
 # ProductType			ProdCategory		Type of product.
 # Variety			Variety		Variety of the item in stock.
 Origin			enum		1 – wine from RS, 2 – wine from FBH, 3 – wine from BD BH, 4 – wine from EU, 5 – wine from outside EU
 # Color			int		Wine color.
 # Amount of stock (l)			int		The volume of the item in stock.

Trade - batch








Class

List of purchases/sales made of a specific batch of products.

(Careful: read introductory note of this chapter about the state of declaration paper templates not being definitively settled, which may result in slight changes of the declarations/reports)

 Rel. from: () Operations. to: () Trade - batch.

Multiple batches can be automatically rendered into report batches including the rendering of the document file.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
 DirectionSalePurchase			enum		{Sales; Purchase}
 ProductType			ProdCategory		What type of product sale/purchase is being reported about in this item.
 AmountHlKg			int		How much of the product batch has been sold/purchased.
 Batch label					The label of the batch of the product.
 ProductionDeclarationLink					If the product has been obtained from a producer registered in the register, then ID of the production declaration.
 HarvestDeclarationLink			int		If the product has been obtained from a vineyard harvester registered in the register, then ID of the harvest declaration.
 SubjectLink			int		What subject has the product been obtained from (when purchased) or sold to (entire batch, in case of B2C the customers are not registered).

Equipment

Enumeration

Type of equipment.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ Barrel					
◆ Tank					
◆ ...					

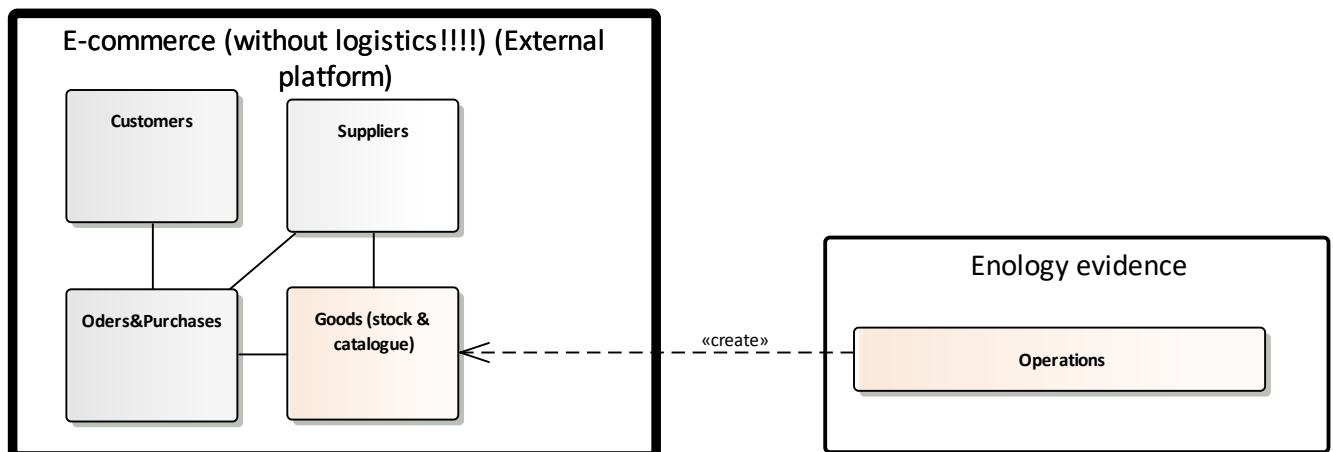
PackagingType

Enumeration

Type of packaging.

Attr. (name)	Not null	Is PK	Dat. type	Size	Description
◆ Bottle 0,7					
◆ Bottle 1l					
◆ ...					

7.8 Data drafts (logical classes) (E-commerce platform)



Customers

Class

(internal entity of the external platform - has nothing to do with the system, but has to be together with the orders to the users of the enological evidence who have placed their products in the "Goods" catalogue - using any possible channels for example e-mail, so that the users can perform logistic dispatch of the product to the customer who has ordered that).

Goods (stock & catalogue)

Class

Goods and product catalogue of products that are being offered by various users from the register. This entity has to be managed from the enological evidence (cellar book).

Orders&Purchases

Class

(internal entity of the external platform - has nothing to do with the system, but has to provide information about orders of specific customers to the users of the enological evidence who have placed their products in the "Goods" catalogue - using any possible channels for example e-mail).

Operations

Class

Rules for those operations to be done (are available to the user) with "productset" (attributes modifications) based on:

- operation type
- current productset attributes (or the possibility to create a new input from extern)
- given attributes (input when the operation is called)

Output is

- productset entities/attributes (please note: there may be a M:N productset entity merge/split as result of the operation - from one harvested batch of grapes 2 various batches of must are made, one of them some blend for example so it merges with another batch in later operations, the another undergoing a different process)
- integrated data entities (for example to prepare in the current year production declaration)

Rel. from: () Operations. to: () Trade - batch.

Multiple batches can be automatically rendered into report batches including the rendering of the document file.

Rel. from: () Operations. to: () Productset.

The operations are abstract entities

Rel. from: () Rules. to: () Operations.

"Rules" and "Operations" are in fact nearly the same, only "Rules" are fully automated. So it may be a single entity.

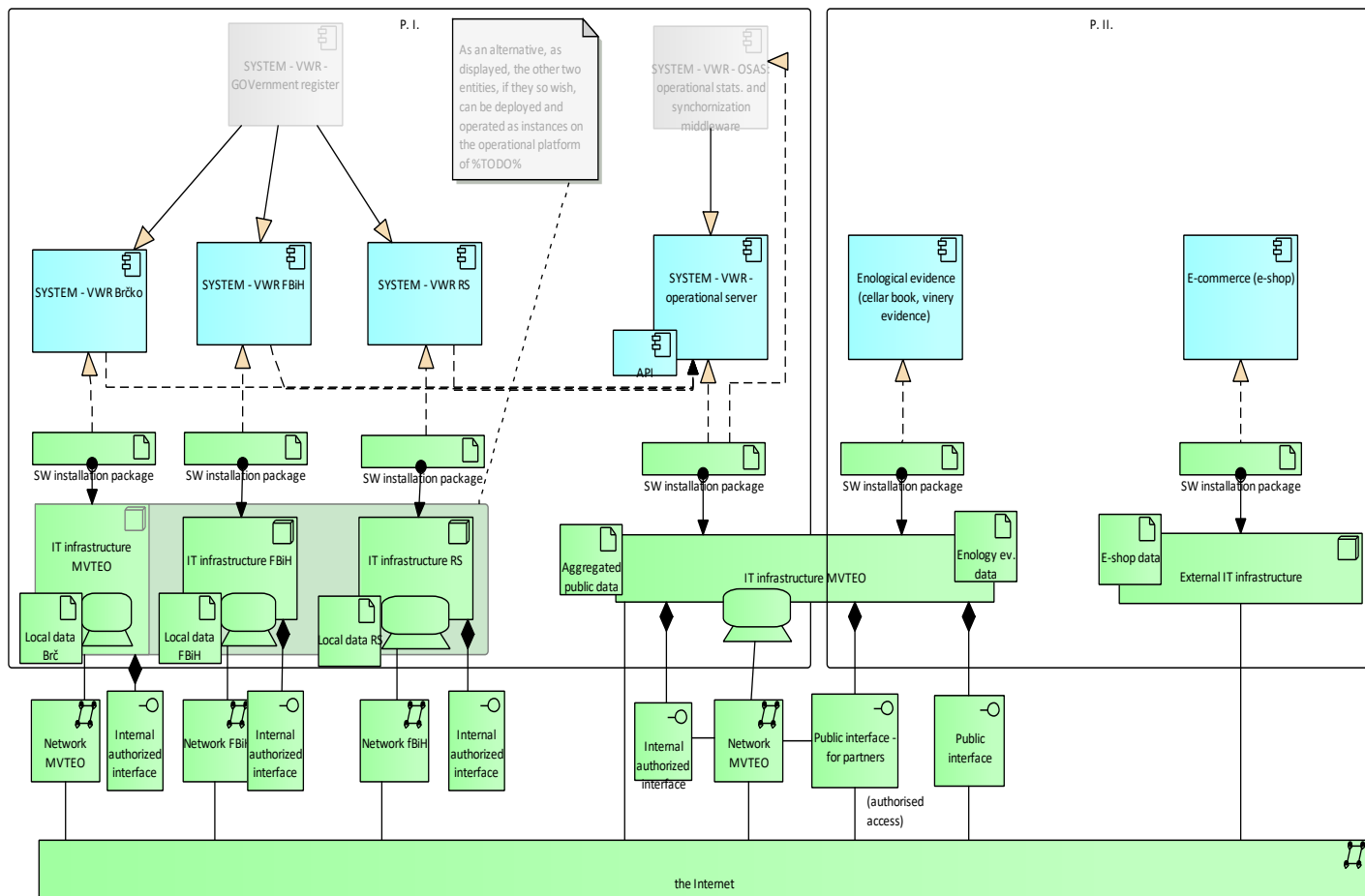
Suppliers

Class

(internal entity of the external platform - manageable also by registration of users in the enological evidence - the external platform has to provide this especially considering the regular payments to those suppliers who fulfilled orders of various customers)

8. System to-be (tender terms and conditions) - Deployment

8.1 Deployment - entity local instances with operational server over Internet



In this image we may observe following:

- 2 types of the system software - one for the "local" registration of vine growers/winemakers/wine traders and one for the aggregation and publication of the data. What each of the types of software does (= what agendas/business processes it shall support and what functions it shall provide, please refer to the previous "Functional architecture" diagrams).
- The first type of the system software (the "local" one) is - in this alternative - installed in 3 various and independent instances, each one being run on the distinct IT (network, servers) infrastructures of the three entities (links to the green elements), where the Brčko instance shall be deployed and operated on the platform of TBA As an alternative, as displayed, the other two entities, if they so wish, can be deployed and operated as instances on the platform of TBA
- As one may observe, the installations of the first type of software (the local) provides only an internal authorized interface, which is accessed by the employees (the "actors" - the human-like figures at the bottom of the picture) through the internal networks of the respective organizations of the entities. (Please note: Also, in this case a certain role-based access within each of the local installation is possible however it is not necessary and not distinguishable on this level of detail of the architecture).

- It is however expected, that these internal networks are interconnected with the Internet, thus being able to reach a special interface (to the most right at the bottom - the interface "for partners") of the second type of the software (the "central" one).
- The OSAS middleware software is installed at a fourth location (again a distinct hardware and network infrastructure) and besides its internal administration interface) it shall provide also 1. the interface for the other 3 instances of the software to communicate the data into it and 2. a public interface to present the data to the public consumers such as the customs officers, inspectors, wide public etc.
- Parallel to the middleware, there shall be the installation of the Enology evidence as well. That does not necessarily stipulate nor prevent that the module shall be installed or run on the same machine(s), server instances or applications. Yet the preliminary idea is, that is SHALL be hosted as an independent instance (site) on the same machines as those one hosting the OSAS middleware, where the underlying database should be the same RSDbMs software but a different database. Since it is expected, that the RDBMs servers should be the same, this shall be possible (including, if both the contractors agree, the possibility of direct integration between databases where possible and not violating the requirements for API integration). In case there shall be different technologies chosen in P.I. and P.II., these shall be hosted in adjacent environments/machines.
- Please refer to "Functional architecture" diagrams for "login, registration") in order no to forget the Login/Log-out functionalities of middleware and enology evidence depending on the 3 instances of the "local" systems as well.

Please note: The fact, that the systems are described as "locals" here, does NOT influence their architecture.

➤ **Aggregated public data** (::«ArchiMate_Artifact»)

Technology artifact - represents the data storage to be deployed on the various hardware.

➤ **Enology ev. data** (::«ArchiMate_Artifact»)

Technology artifact - represents the data storage to be deployed on the various hardware.

➤ **E-shop data** (::«ArchiMate_Artifact»)

Technology artifact - represents the data storage to be deployed on the various hardware.

➤ **Local data Brč** (::«ArchiMate_Artifact»)

Technology artifact - represents the data storage to be deployed on the various hardware.

➤ **Local data FBiH** (::«ArchiMate_Artifact»)

Technology artifact - represents the data storage to be deployed on the various hardware.

➤ **Local data RS** (::«ArchiMate_Artifact»)

Technology artifact - represents the data storage to be deployed on the various hardware.

➤ **SW installation package** (::«ArchiMate_Artifact»)

Technology artifact - represents the application binaries to be deployed on the various hardware.

➤ **API** (::«ArchiMate_ApplicationComponent»)

To avoid doubt: The technological approach and methods used to fulfil the functions linked to the "API" are at sole discretion of the contractor as shall be decided during analysis and system design. (see [AR013](#))

Any automated synchronization is possible, starting from a 'simple' database replication up to complex application logic accessible through various protocol such as REST/SOAP with higher markup for data serializations such as but not limited to XML/JSON etc. The contractor is however advised, that not important what solution shall be chosen, the contractor is bearing the entire cost for the solution deployment completely within the originally fixed and contractually obligatory price.

To avoid doubt: The "API" as depicted here is intended only for access by the other parts of the system itself, yet there shall be another API provided by each of the instance for subject data and declaration manipulation, covering all here listed application functions under the conditions described in [FR047 API provision](#).

➤ **Enological evidence (cellar book, vinery evidence)** (::«ArchiMate_ApplicationComponent»)

A "helping" part (module) of the system: Not used in the governmental evidence, just as a value-added-service to the registrants.

➤ **SYSTEM - VWR - GOVERNMENT register** (::«ArchiMate_ApplicationComponent»)

This item represents the part of the system that is used for supporting of the governmental administration processes as foreseen by the law - the module of the application responsible for local registries to register:

- vineyard harvesters
- wine producers
- wine merchants
- their declarations (harvest, production, stock, trade, winification/sugar addition)
- and their relevant documents

including the:

- reports and statistics from that

➤ **SYSTEM - VWR - OSAS: operational stats. and synchornization middleware**

(::«ArchiMate_ApplicationComponent»)

This item represents the module of the application responsible for the operational statistics aggregation and synchronization of the registry.

9. Tender requirements - Glossary

Abbrev. or term	Meaning and/or description
AAA	Authentication, Authorization and Audit
ACL	Access List - a list of users and their authorizations.
AD	Microsoft Active Directory - a set of Applications and services used to control users, computers, resources and their roles and access within a so called "Windows Domain" network.
administrative decision	A legal act of issuing an official decision, carried out by the governmental/entity-level/municipal governing authority.
ADSL	Asymmetric Digital Subscriber Line - a data communications technology that enables data transmission over copper telephone lines.
API	Application Programming Interface - An interface designed to be accessed, deserialized and used by automated electronic means such as computer programs etc.
APIF	Agencia za posredničke, informatičke i finansijske usluge - Agency for broker, information and financial services of RS, www.apif.net
Application	A software application used to support some process.
AR	Architectural requirement / Architecture requirement
ArchiMate	A notation for software/hardware/orgware inventarization, organization and design.
B/Byte MB/MegaByte	Unit for information data size. T/G/M/k used in customary business manner, unless specified together with Ti/Gi/Mi/ki (1024^n), then the T/G/M/k are used as IEC 1000^n.
BiH	The entire state of Bosna and Hercegovina
Brč	The Brčko District - a single administrative unit of local self-government existing under the sovereignty of Bosnia and Herzegovina.
canton	Organizational sub-division unit of FBiH.
CISTA	see "UKZUZ"
CVS	Concurrence version system(s) - system for storage of (usually textual) data, mostly source code and related files, handling concurrence access and versioning.
ČR	Česká republika - a country in central Europe.
ČRA	Česká rozvojová agentura - Czech development agency - an organizational unit of the Czech government in ČR, funding specific projects.
data entity	A data record/sentence, whose attributes relate to the same real-world object. Not to be confused with the term "entity" of the business-political scope in the country Bosna and Hercegovina.
data-entity	see IT "data entity"
date	When used as data type may represent either a calendar date or a calendar date and time type of data.
DB	Database - may refer either to the data itself or an entire RDBMs and its services.
deactivate	Please see "delete"
decision	see "administrative decision"
delete	Please carefully evaluate the usage of word "delete", there are data-entities, that do not foresee real removal of data when "deleting" them, just invalidating them (deactivating the data record, so it does not appear in GUI lists). There may be gui lists whose filtering options may allow for filtering/displaying the deactivated data as well.
dep.	Department
Deployment	Making some application or entire IT system operational and available for its users to use its functionalities.
entity	One of the two entities (autonomous country parts) forming the state of Bosna and Hercegovina. As third self-governed district (can be considered as 3rd site/instance in terms of IT system) there is the district of Brčko. Note: In order to avoid confusion with the word "entity" used in RDMS or other data-related contexts, this project uses for such a RDBMs or data-related entity the term "data entity", see glossary.

enum	Enumeration - a fixed set of (most typically) integer values with each of them having a specific meaning. It may be also represented as a code-list table or other technology representation of such data-entity).
ERD	Entity Relationship Diagram - a diagram showing entities of an ontology (eventually with or w/o their attributes) and their mutual relations.
E-SSO	Enterprise Single-Sign-On - a (SW) solution for centralized user authentication and authorization management within a network/organization.
EU	European union
Excel	Microsoft Office Excel - software for spreadsheet processing.
FAZ	(FAZM, FAI, FAIM) Federalni Agromediteranski Zavod Mostar (Federal Agromediterranean Institute in Mostar) https://www.faz.ba/en
FBiH	One of the two entities forming BiH: the Federation of Bosna and Hercegovina
file	Set of electronic data belonging together
FR	Functional requirement
geoposition	Data describing the geographical position.
geospatial	Data (technological or logical) describing a geographical position or (more typically) a geographical space/area (formed from multiple positions and relations thereof).
GIS	Geographic Information System - a system used for storing, displaying and management of geographic data (maps etc.) and various layer of geospatial information based on the base (map, geographic grid etc.) layer.
GPS	Global Positioning System
GPS coordinate	A generic data form of geographic latitude/longitude in any of the usual formats DD (decimal degrees), DMC (degrees, minutes, seconds) etc.
GUI	Graphical User Interface - interface of a software designed to be used by humans by displaying information in a graphical form typical for common inter-human understanding.
HW	Hardware
Hyper-V	Virtualization environment of the Windows platform (MS) used to run multiple "virtual" computers on one single computer hardware.
I/O	Input/Output
I/Os	plural form of I/O: Inputs / Outputs
ID	Identifier / identification number
inc	abbrev. Included/Include/Including
inspection	see inspection-control
inspection-control	Because of the ambivalent term of "inspection", the documentation is using two different terms to distinguish between these two concepts: "inspection" (a single sole word) = the process of governmental check of the operational legitimacy of the subject, done by the federal "Inspection". This process may result into administrative decisions of remediation or corrective duties, penalties or even cancellation of registration/operation of the subject (a close-down). "inspection-control" = a process conducted by the FAZ, focused on the compliance of the land-estate registration part (especially vineyards). The resulting corrective measures are focused on the corrected and approved plot geospatial information in the registry.
int	Integer - a binary data structure representation of an integer number.
Internet	An open computer network on a global level, using common protocols with their numerical and identification ranges and assignments being administered by the IANA authority and its sub-accreditees.
IR	Integration requirement
IT	Information technology
KM	Konvertibilna Marka - Bosnia and Hercegovina convertible mark - local currency in BiH
LDAP	Lightweight Directory Access Protocol - a protocol used to access tree-organized data structures, typically structures of user account data (such as MS AD).
LOD	Level-of-detail - how detailed is the subject depicted.
LR	(software) Legal requirement
M*	Any project Milestone - can be any milestone from the project schedule table.

merchant	a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, other than private consumers or retailers, who holds stocks of wine products with commercial purposes or is involved in their trade and possibly also bottles them, except distilleries; "retailer" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, whose business activity includes the sale directly to the consumer of wine and must in small quantities defined by this Law and regulations derived from the Law, having regard to the special features of trade and distribution, but excluding persons who use cellars equipped for storing or facilities for bottling wine in large quantities, and those who engage in itinerant trading in wine transported in bulk;
Mf	The project final Milestone when the warranty period starts (see project schedule table).
MfA	Ministry for Agriculture, water-management and forestry in FBiH
middleware	See "operational statistics and synchronization middleware"
MoA	Ministry of agriculture (either RS or FBiH)
module	A part of an application.
MR	(data) Migration requirement
MS	Microsoft - a major global software provider.
MS AD	see "AD"
MVC	Model-View-Controller - a programming paradigm e.g. how a software application source code is internally organized and understood by its programmers.
MVTEO (MOFTER)	BiH - Ministry for foreign trade and economic relations (some documents may feature the abbrev. "MOFTER")
Mw	The project ending Milestone when the warranty period finishes (see project schedule table).
network	Multiple computers and other electronic devices interconnected together by a common electric and logic protocol.
operational statistics and synchronization middleware	A single-instance part deployed and operated on the MVTEO infrastructure used as a broker for data synchronization between the entity-deployed instances, as well as a single-entry point for login/registration and displaying public aggregated statistics, lists of subject and registered classified wines.
OR	Operating / Operational requirement
orgware	Set of organizational measures (administrative decrees, people, their organization by roles and responsibilities and procedural standards etc.) achieving some common goal.
ORM	Object-Relational Mapping - a technique representing RDBMs (or other data-storage) objects as code classes with create-retrieve-update-delete or other business functionality, making the client-database communication transparent.
OS	Operating system - basic application to provide user interaction with a computer, especially the service of loading and launching other applications.
OSAS	See.: operational statistics and synchronization middleware
OU / MS AD OU	Organizational unit - a logical data unit containing data of an MS AD
OW	see "orgware"
P.I.	One of the two joint projects for the entire system of Vine and wine register - project no. I. (GOV register and the middleware). For details please see "System business environment description" document, chapter "Functional architecture - project split".
P.II.	One of the two joint projects for the entire system of Vine and wine register - project no. II. (Enology evidence and E-commerce platform). For details please see "System business environment description" document, chapter "Functional architecture - project split".
PA	Project action requirement
PC	Project cooperation requirement/specification
PHPA	National plant protection agency of MVTEO BiH
PL	(project) Legal requirement
PM	Project management / Project management requirement
PO	Project Output requirement
PR	Performance requirement
pref	abbrev. of "Preference", "Preferences", "Preferred" or "Preferably"

prefs	abbrev of "Preferences"
productset	A term established in this documentation for use in the project to described the data-entity "productset" of "enology evidence" part of the system (see definition of the Class diagram in "Data entity" description chapter.) Note: The logic of the word "productset" is comparable to terms "LOT" or (production) "batch", yet these terms are slightly ambivalently understood in the target business environment BIH GOV, so in order to prevent misunderstanding the author of ToR has deliberately chosen an artificial neologism. It is advisable to pay attention to this problem as well when concerning the "LOT"/"Batch" data attributes of Wine classification and Production declaration data-entities .
px	pixels - a basic unit of graphical display of a computer output on a computer screen
Q/A	Question / Answer
QA	Quality assurance
RAM	Random access memory - a fast volatile computer memory holding data and software being currently executed.
RDBMS	Relational database management system - an IT Application used to store and retrieve data entities interconnected together (referenced between themselves).
Register	In the scope of this document: the aggregate of technical, organizational and other measures to provide the record and evidence of the data in question.
registrant	The subject (legal/physical person of business entrepreneur) who has the legal obligation to be registered in the Register based on meeting certain conditions/criteria.
remove	please see "delete"
reportset	A term introduced in this documentation for use in the project describing a "set of (administrators) setup of filters, table queries and columns including their user-friendly names" used as first and main (entry point) selector of displaying of information from the "productsets" of "enology evidence" in the system.
Rešenje	Local term for the act of "administrative decision".
RPG	Registar poljoprivrednih gazdinstava - Register of agricultural subjects/farmers/persons in FBIH https://fmpvs.gov.ba/registar-poljoprivrednih-gazdinstava/
RS	One of the two entities forming BiH: the Republika Srpska.
script	How various characters/letters are depicted on a computer screen (based on their originating handwriting such as "Latin", "Cyrillic" etc.)
SLA	Service level agreement - measurable parameters how fast / in what deadlines / what quality or durability and continuity some service should be delivered.
SQL	Structure Query Language - a language specified and maintained by the appropriate authority used to manipulate data and data structures in RDBMs.
SR	Security requirement
SW	Software
TBA	To-Be-Announced = the details of the entity / theme introduced in previous text will be stated later or shall be investigated as part of the analysis in the project early stages.
Tender###	Tender proposal description requirement
TODO	To be done = missed residual document creation notes. In case where it does not obfuscate any vital information or any possible variant of specification that might be stated in place of a "TODO" text cannot lead to substantial project/product changes ignore and treat as TBA. In case where this might strongly influence the tender proposal and/or budget, please raise a question to the awarding authority.
TR	Testing requirement
tracepaths	A term introduced in this documentation do described a set of data-entities and/or functionalities of the system used to provide the traceability through various paths of declarations(production, harvest), facilities(vineyards) and subjects in order to provide the best-effort information of the origin of the product (usually wine).
UKZUZ	(alt.: UZUS,CISTA) Ústřední kontrolní a zkušební ústav zemědělský - Central institute for supervision and testing in agriculture - an organizational unit of the Czech government in ČR.
UML	Unified Modelling Language - a set of visualization objects and rules of usage and meaning thereof used to capture and communicate the description of their counterparts in an IT orgware-software-

	technology system (e.g. a notation used for software design), specified and managed by the Object Management Group, currently in version 2.5.1
UR	User requirement (non-functional requirement applicable the entire application).
ver	abbrev. Version
vineyard harvester	a natural or legal person, or a group of natural or legal persons, whatever legal status is granted to the group and its members, whose holding is situated within the Bosnia and Herzegovina territory and who holds an area with one or more vineyards; "harvester" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, who gathers the harvest of grapes from an area planted with vines in order to market those grapes for the production of wine products by third parties, or to process them into wine products in his holding, or have them processed on his behalf, with commercial purposes
web-shop	An application (usually providing a web GUI) designed and providing functionalities for displaying, searching, choosing and purchasing of goods by (the web-pages) visitors aka customers.
wine producer	a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, who processes himself fresh grapes, musts or new wine still in fermentation into wine or must with commercial purposes, or has them processed on his behalf; "processor" means a natural or legal person or a group of such persons, whatever legal status is granted to the group and its members, by whom or on whose behalf the processing of wines is carried out, the result of which being: wines, liqueur wines, sparkling and semi-sparkling wines, aerated sparkling and semi-sparkling wines, quality sparkling wines or quality aromatic sparkling wines;
WS	Web-service - a type of API accessible over a network.
WSes	plural form of "Web service" (Web Services)



**Tender ToR P.I/II.: notation
explanatory notes**
Vine and Wine Register in BIH

Document information

Document name:	Tender ToR P.I/II.: notation explanatory notes		
Project name:	Vine and Wine Register in BIH	Document version:	0.92
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[illegible]

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1. System documentation - System documentation - written legend (linked docs)

The following document describes the most important notation parts and perspectives (viewpoints) used in the documentation and the explanation of their meaning.

Disclaimer note: While these descriptions and explanations are being based on the current "ArchiMate notation ver 3.1" managed by the OMG (Object Management Group), this document is NOT intended as educational, training or instruction material. This is a mere legend that shall aid the orientation of readers of an adjacent documentation based on the ArchiMate notation.

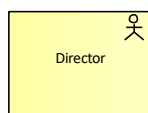
1.1 System documentation - written legend (linked docs) - Orgchart - organization schema

The perspective describes the main overview of organization and other subjects involved and what their mutual relations and characteristics are:

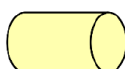
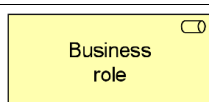
Elements used:



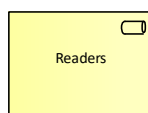
An "**Actor**" - a specific existing person, organizational unit or anything, that can be related to a specific existing subject in the real world.



(the specific actor: Mr. Director, a CEO of a company/organization)



A "**Role**" - a set of responsibilities or any other organizational assignments of an actor.



(role for any actor, who is acting as "Reader" (of data) in the system)

Relations used:

Association

A ————— B

The element "A" is **associated** to the element "B". That means, that there is some relation between the two elements - what the relation is, can be deduced:

- either from the nature (type) of the two elements
- or by additional description of the association relation

Example: A "car"(A) is associated to its "owner"(B). We could add the name "ownership" to the "association".

The most typical one: A "man"(A) is associated to his "wife"(B).



Composition

A

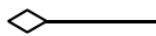


B

The element "A" is **composed** from element(s) "B" ("C", "D"...). If the elements B,C.. were not there, the element "A" would not (logically) exist. *Example: a car consists of its mechanical parts (motor, wheels, driving wheel, cabin...) - if there were no parts there would be no car.*

Aggregation

A

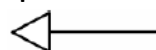


B

The element "A" aggregates the element(s) "B" ("C", "D"...). The element "A" exists on its own, but the element(s) "B", (C, D...) are inside/within the element "A".
Example: A bookshelf exists on its own, even when empty we can speak about a bookshelf there. But the bookshelf can aggregate books inside.

Specialization

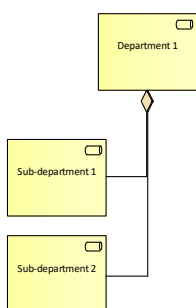
A



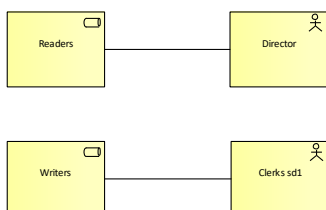
B

The element "B" is a specific kind of "A", that means "B" has all the properties that are defined in "A", but "B" is somehow more specific and may add some special additional description/properties/behaviour that "A" does not have.
Example: The object "Granny Smith apple" variety is a "specialization" of object "an apple". The "Granny Smith" apples are apples - they have the right shape, cellular structure, seed core, stem. But apart from other apples (red/yellow "Jonathans" for example), "Granny Smith" apples are always light green colour and have much more sour taste than other apples. That (specific colour and sourness) makes the "Granny Smiths" variety a special (more specific) apples then the generic term "an apple" can describe". Btw. the aforementioned "Jonathan" apple is a specialization of "an apple" as well.

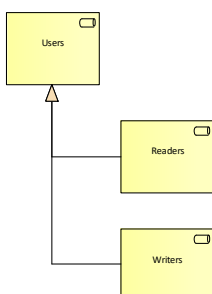
Examples:



"Department 1" is a department on its own (some people - managers for example - belong just do "Department 1"), but there are two more sub-departments (1 and 2) that are organizationally subordinated (made part of) "Department 1"



Director (a specific person in the real world, or also a specific "seat"/"position") has the role of the "Reader" in some system, while some "clerk std1" is in a "writer" role. (What exactly the roles mean, that is not specified here - either it can be written in the textual description, or, more common, the "Readers" and "Writers" elements can be part of a different diagram where there are associated to some functions (see: Function diagram).



While "Readers" and "Writers" are both roles in some system, they both share the same origin, they are of the same offspring, they are both "Users". (Note: This does NOT necessarily mean, that there is some role of "Users" that would consist of two roles "Readers" and "Writers", NO! This only says, that "Readers" and "Writers" both **share the same characteristics** as "Users", so they must **be regarded as** "Users" as well, while, in comparison to "Users", they bear some more specific characteristics.)



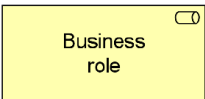
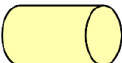
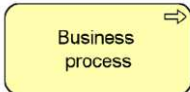
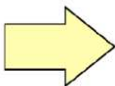
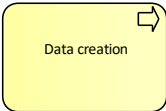
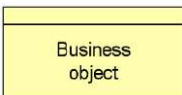
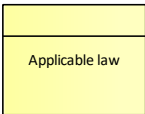
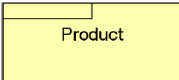


1.2 System documentation - written legend (linked docs) - Organizational processes

The perspective describes:

- what (business) processes exist in an organization and by what roles/actors are they being carried out (=to what roles/actors they are associated),
- what business objects (data, documents, papers, notes, law, regulations or even coffee cups) are being used within the processes (used = either as directive, or as consumable or being created etc.),
- and [optionally] what parts of an organization are related to each other (See "Orgchart - organization schema").

Elements used:

		An " Actor " - a specific existing person, organizational unit or anything, that can be related to a <u>specific</u> existing subject in the real world. (See "Orgchart - organization schema")
		A " Role " - a set of responsibilities or any other organizational assignments of an actor. (See "Orgchart - organization schema")
		A " Process " - describes some business behaviour of actors/roles: e.g. what they are doing. The process itself may be detailed either 1. in a textual description in the element, or 2. in some adjacent linked diagram somewhere else in the documentation.
		<i>Somebody (here we don't know who) is creating some data (here we do not know what data).</i>
		Any concept being the " object " of the processes - data, documents, papers, notes, law, regulations or even coffee cups that are somehow affected by the processes.
		(The object representing the applicable law)
		A " Product " that is usually representing any outcome from a process.

Relations used:

Association		
A	_____	B
The element "A" is <u>associated</u> to the element "B". That means, that there is some <u>relation</u> between the two elements - what the relation is, can be deduced:		
<ul style="list-style-type: none">· either from the nature (type) of the two elements· or by additional description of the association relation		



Triggering



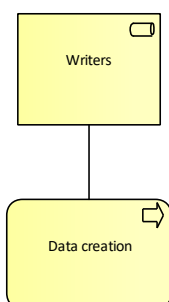
This is temporal or causal relationship between "A" and "B" ("B" follows / is triggered by "A").

Transfer/Flow

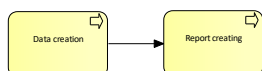


This relation notifies that something (data, information, material) **flows** from "A" to "B". ("B" may be also the instance of the data itself, or the object representing the data may be associated as a third "C" element with the relation line.)

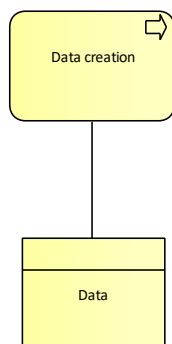
Examples:



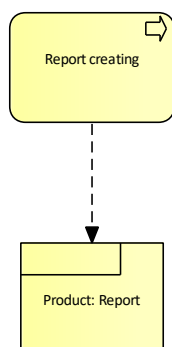
"Writers" perform the process of "Data creation" (maybe also "responsible for" "Data creation" process etc., the detailed description is usually part of the naming/stereotype of the relation).



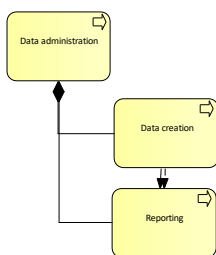
The process of "Data creation" is followed by process "Report creating".



The process "Data creating" is somehow associated with the business object "Data". In this case the "Data" relation to the process is not detailed.



The product "Report" is output of data flow from the process "Report creating".



The business process "Data administration" is not a process on its own, but it is a logical process concept being formed by two process "Data creation" and "Reporting". The process "Reporting" follows after the process "Data creation" and some data from "Data creation" flow into the "Reporting" process.

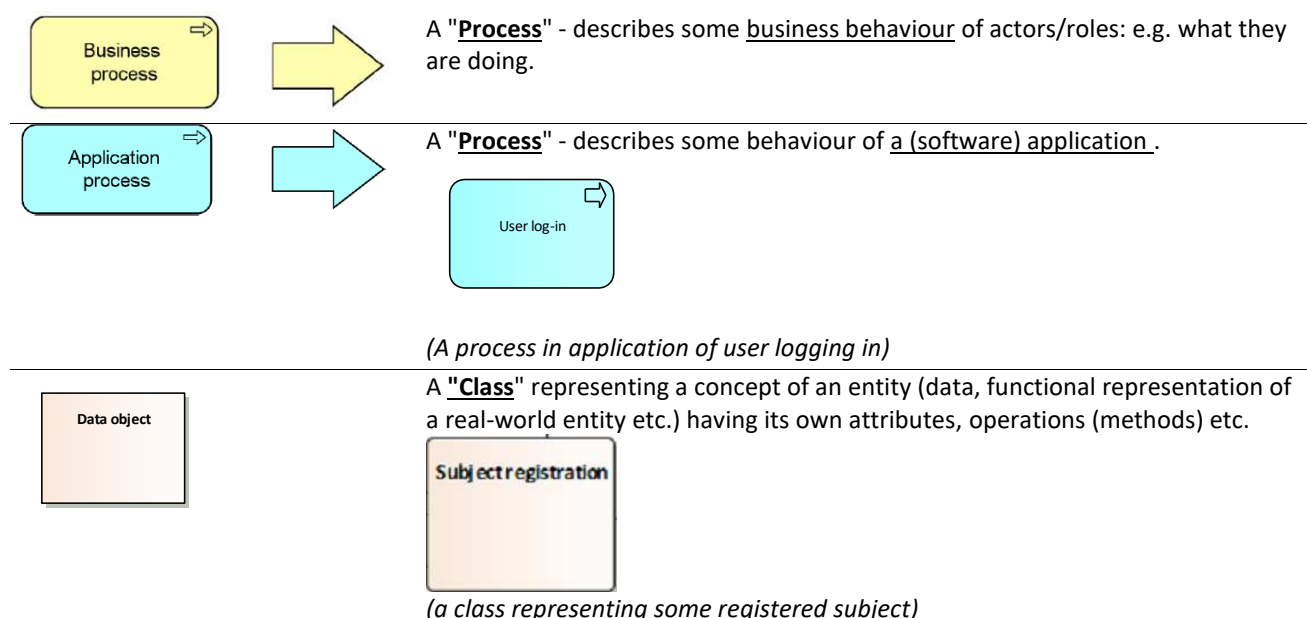


1.3 System documentation - written legend (linked docs) - Application processes

The perspective describes:

- what (application) processes exist in an (typically software) application and what are their mutual relations, that means
 - the process flow
 - or the process structure
- what data objects (in this particular document being represented by UML "Class" elements, which are taken from a different notation) are being used within the processes

Elements used:



Relations used:

Association		
A	————— B	The element "A" is associated to the element "B". That means, that there is some <u>relation</u> between the two elements - what the relation is, can be deduced: <ul style="list-style-type: none">· either from the nature (type) of the two elements· or by additional description of the association relation
Triggering		
A	————→ B	This is temporal or causal relationship between "A" and "B" ("B" follows / is triggered by "A").
Transfer/Flow		
A	-----> B	This relation notifies that something (data, information, material) flows from "A" to "B". ("B" may be also the instance of the data itself, or the object representing the data may be associated as a third "C" element with the relation line.)
Composition		
A	◆———— B	The element "A" is composed from element(s) "B" ("C", "D"...). If the elements B,C.. were not there, the element "A" would not (logically) exist. <i>In case of processes it means, that a process ("A") is being composed of sub-processes ("B").</i>
Aggregation		
		The element "A" aggregates the element(s) "B" ("C", "D"...). The element "A" exists on its



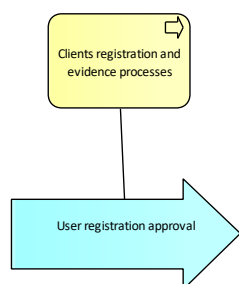
Tender ToR P.I/II.: notation explanatory notes

Vine and Wine Register in BIH

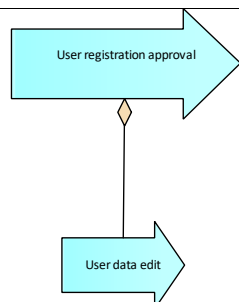


A		B own, but the element(s) "B", (C, D...) are inside/within the element "A". <i>In case of processes it means, that a process ("A") contains (apart of its own functionality) also the functionality/process steps of sub-processes ("B").</i>
Specialization		
A		B The element "B" is a specific kind of "A", that means "B" has all the properties that are defined in "A", but "B" is somehow more specific and may add some special additional description/properties/behaviour that "A" does not have. <i>Example: The object "Granny Smith apple" variety is a "specialization" of object "an apple". The "Granny Smith" apples are apples - they have the right shape, cellular structure, seed core, stem. But apart from other apples (red/yellow "Jonathans" for example), "Granny Smith" apples are always light green colour and have much more sour taste than other apples. That (specific colour and sourness) makes the "Granny Smiths" variety a special (more specific) apples then the generic term "an apple" can describe". Btw. the aforementioned "Jonathan" apple is a specialization of "an apple" as well.</i>

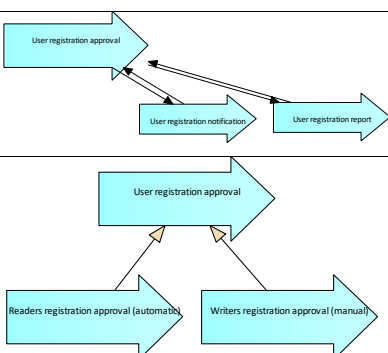
Examples:



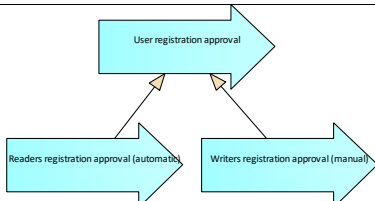
The application process of "User registration approval" is associated with the business process "Clients registration and evidence process".
Note: In this case the "is associated" means usually **"is supported by"** yet it might be any other association type (usually noted in the notes or name label).



The "User registration approval" process has a sub-process (part of it) "User data edit".



The process "User data approval" is adjacent to "User registration notification" and "User registration report". The adjacent processes follow after the "User data approval" yet may lead back to it (e.g. they are part of the "User data approval" but following after it has been done completely).



The processes "Writers registration approval (manual)" and "Readers registration automatic (automatic)" are in fact both the same as "User registration approval" - the processes for "Writers" and "Readers" share most similarities with the "User registration approval" that resembles those aspects of "Readers" and "Writers" that are the same for them both. The "Readers" and "Writers" processes then describe only those aspects that are different to the "Users" process.

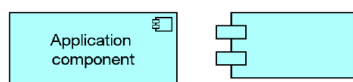


1.4 System documentation - written legend (linked docs) - Application functions (functional structure)

The perspective describes:

- application module structures
- and what functions they consists of
- and how the functions access/communicate between each other

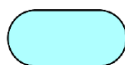
Elements used:



A "**module/part of an application**" (can be an entire program (like MS Word), or part of it (like Mail Merge in MS Word) or also an entire suite of programs (MS Office)).



A "**particular functionality**" of the component - for example: editing the font style. The level-of-detail may vary, depending on the diagram and its aim - a functionality may be an entire "editing font style" or just "setting boldness of the font".

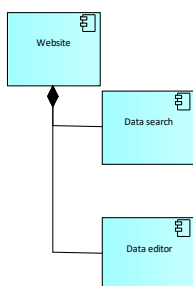


Some kind of "**Service**" the application component or function provides to the other function/components/applications.

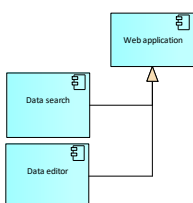
Relations used:

Association A — B	The element "A" is associated to the element "B". That means, that there is some <u>relation</u> between the two elements - what the relation is, can be deduced: · either from the nature (type) of the two elements · or by additional description of the association relation <i>For example: An application function can be associated with an application component, that means, that it is expected or that the component has that particular funcion(ality).</i>
Composition A ◆ B	The element "A" is composed from element(s) "B" ("C", "D"...). If the elements B,C.. were not there, the element "A" would not (logically) exist. <i>In case of components it means, that a component ("A" - some logical SW) is being composed of sub-components ("B"). For example: MS Office is composed of Word, Excel ... if all those applications were not there, then there would be no MS Office.</i> <i>In case of functions it means, that a function ("A") is not a function on its own, but is composed of functions "B", ("C", "D"...). For example an "user registration" function is composed of "username creation" and "password setting". If those were not present, we would not have an "user registration".</i>
Aggregation A ◇ B	The element "A" aggregates the element(s) "B" ("C", "D"...). The element "A" exists on its own, but the element(s) "B", (C, D...) are inside/within the element "A". <i>In case of components it means, that a component ("A") contains (apart of its own content/functions) also another sub-units ("B").</i>
Access A -.-> B	This relation notifies that "A" accesses "B". ("B" is the provider of some functionality or services that are being used/consumed by "A").
Specialization A < B	The element "B" is a specific kind of "A", that means "B" has all the properties that are defined in "A", but "B" is somehow more specific and may add some special additional description/properties/behaviour that "A" does not have. <i>For example "A"="word processor" (a type/kind of a software application) and "B"=MS Word (a specific instance of a "word processor").</i>

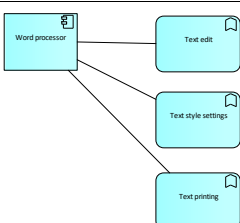
Examples:



The website "Website" is composed of two parts ("Data search" website and "Data editor" website). The website "Website" itself has no 'own' functions or attributes of existence, it is only a logical container for the "Data search" and "Data editor".



The "Data search" and "Data editor" are both components of the kind "Web application" - e.g. they are both web applications, so they provide some functionalities and behaviour we would expect from a generic "web application" (usage in web browser, hyperlinks, forms, buttons etc.), but each of them provides this functionality in a specific manner, each of them does it a little bit differently.



The application (component) of "Word processor" has the functions of "Text edit", "Text style settings" and "Text printing".

(Note: The relation may be also a "composition", that would mean: The component of "Word processor" is being composed of functions of "Text edit", "Text style.... etc.)

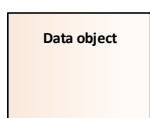


1.5 System documentation - written legend (linked docs) - (Data) classes description

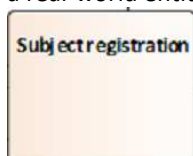
The perspective describes:

- conceptual term/objects when speaking about the data in a system
- and what attributes they have
- and how are they related between each other

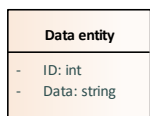
Elements used:



A "**Class**" representing a concept of an entity (data, functional representation of a real-world entity etc.) having its own attributes, operations (methods) etc.



(a class representing some registered subject)



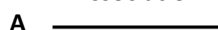
The "**attributes**" of the class (here the "ID" and "Data"). These are some properties that can be assigned to the class object.

The most basic data types (the part after semicolon ":"), describing what kind of data are to be stored in the attribute, are:

- int (Int) = an integer numerical value: 1, 102, 345423493 etc.
- dec (Dec) = a decimal value containing some fractional part 1.23, 3.14, 340,2323E23 etc.
- str (Str) = a string (usually of readable text-characters)
- date, datetime, time = machine-representable data of human perceiving of time-flow

Relations used:

Association



The element "A" is **associated** to the element "B". That means, that there is some relation between the two elements - what the relation is, can be deduced:

- either from the nature (type) of the two elements
- or by additional description of the association relation

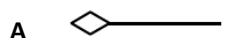
For example: A class ("A") is associated with another class ("B"), so the class "B" bears some extended data, that can (but do not have to) be part of the data properties (attributes) of class ("A").

Composition



The element "A" is **composed** from element(s) "B" ("C", "D"...). **Important: in the class diagram this relation slightly changes its meaning: it is a compulsory association, that means: While the class "A" has its subjectivity on its own (technically it could exist without the "B"), it is expected, that an integral part of the data of "A" is also one or more instances of data "B".**

Aggregation



The element "A" aggregates the element(s) "B" ("C", "D"...).

In class diagram, this relation has a slightly more illustrative meaning: For example a class ("A") representing a kind of data view (a list of search results) is aggregating lots of instances of class "B" which may represent each and every row of the list (representing some type of data records the list is enlisting).

Examples:



Student registration
- Card ID: int
- Student Name: string

This entity represents a type of registration of students, stating, that every registered student shall have these two information registered:

- his/her/its name
- his/her/its student card ID number

One may regard the Class entity and its Attributes as a prototype of an table header:

Student registration (table)	
CardID	Student Name
00001	Student Name 1
88888	Student Name 2



Every student registration, apart from the attributes of the student him/her/it -self, also consists of a list of registered classes the student wishes to attend:

Students registration with classes		
Student registration		Enrolled classes
CardID	Student Name	{Class Code, Class name}
00001	Student Name 1	{"M001", "Maths beginners"} {"L002", "Literature advanced"} {"MUS", "Musical education"}
88888	Student Name 2	{"L001", "Literature beginners"} {"L002", "Literature advanced"} {"ENG1", "English - beginners"}



1.6 System documentation - written legend (linked docs) - System deployment (IT technology)

The perspective describes:

- by what "artefacts" are application "components" represented
- where (on what nodes/devices) are the "artefacts" deployed
- how are the nodes/devices interconnected by networks

Elements used:

		A " module/part of an application " (can be an entire program (like MS Word), or part of it (like Mail Merge in MS Word) or also an entire suite of programs (MS Office)).
		An " Artefact " - representing a piece of data (in the case of deployment diagram this can be also binary executable data, executable scripts, intermediate language packs such as MSIL or JVM bytecode). (Note: In a full ArchiMate Technology layer deployment diagram, it is advisable to use the element of "Software system" as well, but for the brevity and readability of the documentation in this context it is being left out.)
		A " Node " representing a computational or physical technology resource , that is capable of manipulating/working with data ("Artefact") or communicating with other resources
		A " Device " is a more specific type of a "Node", representing a physical (only) technology resource , that is capable of manipulating/working with data ("Artefacts") or communicating with other resources.
		Technology " Interface " - a point of access where some services offered by a "Node"/"Device"/"Network" can be accessed and consumed (used).
		" Communication network " - an entire set of hardware/software structures used to interconnect other devices together for (automated, machine-) communication.

Relations used:

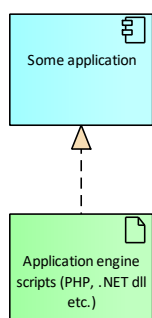
Association		The element "A" is associated to the element "B". That means, that there is some relation between the two elements - what the relation is, can be deduced: <ul style="list-style-type: none">· either from the nature (type) of the two elements· or by additional description of the association relation <i>For example: An application function can be associated with an application component, that means, that it is expected or that the component has that particular function(ality).</i>
Assignment		The element "A" is assigned to the element "B", that means, that "B" is allocated for some responsibility/action/governance/etc. of/towards "A". <i>Example: A "role" may be assigned to an "actor".</i> Note: This is a more specific type of "association" it "assigns" "A" to "B" (makes "B" responsible for "A") rather than a less specific relation of "association" (which can mean any kind of relation).
Composition		The element "A" is composed from element(s) "B" ("C", "D" ...). If the elements B,C.. were not there, the element "A" would not (logically) exist. <i>In case of components it means, that a component ("A" - some logical SW) is being composed of sub-components ("B"). For example: MS Office is composed of Word, Excel ... if all those applications were not there, then there would be no MS Office.</i> <i>In case of functions it means, that a function ("A") is not a function on its own, but is</i>



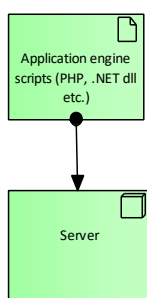
composed of functions "B", ("C", "D"...). For example an "user registration" function is composed of "username creation" and "password setting". If those were not present, we would not have an "user registration".

Realization	
A	The "A" is an embodiment, realization, concrete specific representation of (a more abstract) "B". For example: "The apple I'm holding in my hand" is a "realization" of the generic concept "an apple". Or: The installation data on a disk are a "realization" of the software application I'm about to install.
Access	
A	This relation notifies that "A" <u>accesses</u> "B". ("B" is the provider of some functionality or services that are being used/consumed by "A").

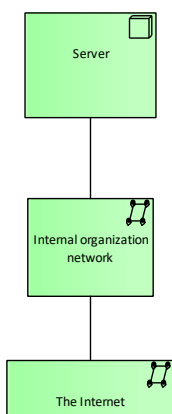
Examples:



The artefact "Application engine scripts" is a realization of "Some application" (component), e.g. the "Application engine scripts" are the tangible form of the "Some application"



The "Application engine scripts" artefact is assigned to "Server" node, e.g. in the context of this documentation, the "Application engine scripts" are installed on the "Server" (but please pay attention, in case of artefact representing data (database files) it means rather "stored on" etc.).



The node "Server" is connected to "Internal organization network", which is connected to "The Internet" network.
Note: Depending on the level-of-detail and more "logical" or "technological" perspective (that can be guessed from the overall context of the diagram) it does not have necessarily to mean, that the "internet organization network" is connected directly to "The Internet". It may be that case (if that was strictly a technology/hardware diagram, then an (node/device) element representing some router/firewall is missing), but it may not (when being a "logical" diagram, it refers rather about the possible interconnections/communication paths available to the "Server").



2. System documentation - Names syntax (linked doc)

sign	Example	Usage and explanation, real-world example
()	(<i>helper</i>)	HELPER package/diagram/element = contains helping elements/objects/diagrams not directly related to the business/project matter of the model or not intended for structured observation/study/reading. (<i>metamodel</i>) (<i>3rd party repo</i>)
xx ()	Package (<i>note</i>)	package/diagram/element NOTE, attribute = either gives note about superior entity (when there are multiple objects/elements of the same name but being breakdowns of different parents/superiors) OR gives note about some character attribute of the object xxxx (<i>some_generic_model-wide_entity</i>) xxxx (<i>with detailed data</i>) xxxx (<i>elements repository</i>) = combination of both meanings of '()' - a helper package, but since it is part of the business of the model, the brackets are used in a "note"-like fashion.
-	PerspectiveA - PerspectiveB (space)(dash)(space)	STRUCTURING linear in-package elements'/diagrams'/packages' names lists = reader's visual helper of tree-like structuring of same-level information when describing different areas. Area1 - <i>processes</i> Area2 - <i>processes</i> Area2 - <i>processes with data</i>
-	PerspectiveA-PerspectiveB (dash w/o adjacent spaces)	LINK package/diagrams = links (associates) two adjacent structures or elements lists together (links elements of PerspectiveA to elements in PerspectiveB). It happens in the same notation/layer/area logic (but may be used with "cross-link" interchangeably) <i>Processes - Functions</i> Typical relation used between elements of A and B: association
×	PerspectiveA×PerspectiveB	CROSS-LINK package/diagrams = links (associates) two <u>seemingly unrelated</u> structures or elements lists but in <u>completely different perspective/views</u> together (links elements of PerspectiveA to elements in PerspectiveB). It crosses the boundaries of the notation/layer/area logic to perform a cross-linking/associating of related entities (but may be used with "cross-link" interchangeably) [archimate] <i>Processes</i> × [uml] <i>Classes</i> Typical relation used between elements of A and B: association
->	PerspectiveA->PerspectiveB	BREAKDOWN (drill-down) diagrams = increasing of LOD (level-of-detail) (perspectiveB is a more detailed structure diagram/breakdown of perspective A); may cross boundaries (Modules -> Functions) or may stay in the same diagram (orgchart: Ministry -> Departments) Typical relations used between elements of A and B: aggregation/composition (breakdown) <i>realization/generalization (inheritance)</i>
, + /	Perspective of A,B,C Perspective of A+B+C Perspective of A/B/C	MULTIINFO package/diagram/element = the perspective may contain multiple same-level information (same-level but different taxonomies) at once <i>Processes ministryA, ministryB</i> = the diagram describes the processes of two ministerial organizations (both adjacent on the same level of logic, but completely independent) Typical relations used between elements of A and B: association, trace
[] xx	[cond] PerspectiveA [note] PerspectiveA	CONDITION or AREA package/diagram/element/text = either gives a note about superior area entity or area of focus (this differs to '()') since they are only attributed to a superior entity in a "local" sense, while '[]' are typically assigning the



Tender ToR P.I/II.: notation explanatory notes

Vine and Wine Register in BIH



		<p>object/element to a much more broader area/perspective valid in the entire model) OR describes some condition that has to be met so that the perspective/element applies (is applicable) to the solution/situation etc.</p> <p><i>[windows] Specific processes</i> = the diagram described specific processes that are to be executed only in a specific environment</p> <p><i>[Module1] Processes</i> = diagram belongs to descriptions of the Module1</p> <p><i>[Module1] Processes (divA)</i> = diagram belongs to descriptions of the Module1 and is only a partial diagram of processes of "divA", there will be probably some diagram <i>[Module1] Processes (divB)</i> and also some <i>[Module2] Processes</i></p>
:	PerspectiveA: perspectiveAdetail	DETALING remark = only a textual expansion of the previous text

Příloha č. 2 / *Annex 2*
Položkový rozpočet / *Itemised Budget*

Položkový rozpočet

Příloha č. 2

Milník.položka	Obsah položky	Cena za položku v CZK
M1.1	Analýza na místě dle PA002	60 000,0
M1.2	Analýza v ČR dle PA003	60 000,0
M1.3	Analýza ostatní dle PO005, PO006	120 000,0
M1.1-3	CELKEM cena za zpracování dodávky dle M1 (Smlouva, sekce V. čl 2. písm. a)) (součet za výše uvedené položky)	240 000,0
Mf.1.1	Subjekty (FR0001..FR0001.7)	420 000,0
Mf.1.2	Subjekty editace, synchronizace, seznamy (FR0002..FR0004.x)	240 000,0
Mf.1.3	Deklarace (FR005...FR007)	240 000,0
Mf.1.4	Dokumenty, deklarace jako dokumenty (FR006...FR0010)	240 000,0
Mf.1.5	Reporty, statistiky, KPI (FR0011...FR0015)	300 000,0
Mf.1.6	Veřejné součásti (FR0016...FR0019)	300 000,0
Mf.1.7	Průřezové funkcionality (FR0042...FR0046)	180 000,0
Mf.1.8	Průřezové funkcionality API a administrace (FR0047...FR0048)	180 000,0
Mf.1.9	Všeobecné funkční požadavky s dopadem na implementaci, zálohování, integrace (UR005, UR006, UR007, UR009, AR005, AR011, AR012, IR001..IR006)	180 000,0
Mf.1.10	Ostatní výše neuvedené, pokud nejsou součástí M1 nebo Mf.2-5	120 000,0
Mf.1 software mezisoučet	<i>Dodaný software, implementace, testování, opravy, úpravy, aktualizace, záplaty, zdrojové kódy dle PO014 ... PO016 (suma všech položek Mf.1.x výše)</i>	2 400 000,0
Mf.2	PA004 Akceptace na místě	24 000,0
Mf.3	PA005 Školení uživatelů na místě	60 000,0
Mf.4	Ostatní: Dokumentace dle PO001..PO013	60 000,0
Mf.5	Ostatní: Licence dle AR009	198 000,0
Celková cena za zpracování dodávky dle Mf (Smlouva, sekce V. čl 2. písm. b)) – součet položek výše (tj. bez započtení položek či celkové ceny sekce V. čl. 2. písm a), pouze součet odsazených položek bezprostředně nad tímto řádkem zde).		2 742 000,0
<u>CELKOVÁ CENA CELÉHO PLNĚNÍ (M1+Mf) v CZK</u>		2 982 000

Itemized Budget

Annex 2

Milestone.item	Item content	Price per item in CZK
M1.1	On-site analysis in accordance with PA002	60 000,0
M1.2	Analysis in Czech Republic in accordance with PA003	60 000,0
M1.3	Other analysis in accordance with PO005, PO006	120 000,0
M1.1-3	TOTAL price for processing delivery in accordance with M1 (Contract, Section V, Article 2(a)) (sum of above items)	240 000,0
Mf.1.1	Entities (FR0001...FR0001.7)	420 000,0
Mf.1.2	Editing entities, synchronization, lists (FR0002...FR0004.x)	240 000,0
Mf.1.3	Declarations (FR005...FR007)	240 000,0
Mf.1.4	Documents, declarations as documents (FR006...FR0010)	240 000,0
Mf.1.5	Reports, statistics, KPIs (FR0011...FR0015)	300 000,0
Mf.1.6	Public components (FR0016...FR0019)	300 000,0
Mf.1.7	Cross-sectional functionalities (FR0042...FR0046)	180 000,0
Mf.1.8	Cross-sectional API and administration functionalities (FR0047...FR0048)	180 000,0
Mf.1.9	General functional requirements with impact on implementation, backup, integration (UR005, UR006, UR007, UR009, AR005, AR011, AR012, IR001...IR006)	180 000,0
Mf.1.10	Other not listed above, unless part of M1 or Mf.2-5	120 000,0
Mf.1 software subtotal	<i>Delivered software, implementation, testing, fixes, modifications, updates, patches, source code in accordance with PO014 ... PO016 (sum of all items Mf.1.x above)</i>	2 400 000,0
Mf.2	PA004 Acceptance on site	24 000,0
Mf.3	PA005 On-site user training	60 000,0
Mf.4	Other: Documentation in accordance with PO001...PO013	60 000,0
Mf.5	Other: Licence in accordance with AR009	198 000,0
Total price for processing delivery in accordance with Mf (Contract, Section V, Article 2(b)) - sum of above (i.e. not including items or total price for Section V, Article 2(a), only the sum of the indented items immediately above this line here).		2 742 000,0
<u>TOTAL PRICE FOR WHOLE PERFORMANCE (M1+Mf) in CZK</u>		2 982 000,0

Příloha č. 3

Seznam oprávněných osob

Za objednatele:

ve věcech smluvních: Ing. Michal
Minčev, MBA

ve věcech organizačních: Jan
Wikturna, e-mail:
[REDACTED], tel.:
[REDACTED].

ve věcech technických: Ing.
Lukáš Plachý, e-mail:
[REDACTED], tel.: [REDACTED]
[REDACTED]

Za zhotovitele:

ve věcech smluvních: Ing. Tomáš
Hanych

[REDACTED]

[REDACTED]

ve věcech organizačních –
Projektový manažer: Boris
Matušica

[REDACTED]

[REDACTED]

ve věcech technických:

Analytik / IT architekt: Armin
Vetreš [REDACTED]

[REDACTED]

2 programátoři:

David Viktor, [REDACTED]
[REDACTED]

Jiří Lekeš [REDACTED]
[REDACTED]

Annex 3

List of Authorised Persons

Representing the Client:

in contractual matters: Ing. Michal
Minchev, MBA

in organisational matters: Jan
Wikturna, e-mail:
[REDACTED], tel.:
[REDACTED]

in technical matters: Ing. Lukáš
Plachý, e-mail: [REDACTED],
tel.: [REDACTED]

Representing the Contractor:

in contractual matters: Ing. Tomáš
Hanych

[REDACTED]

[REDACTED]

in organisational matters - Project
manager: Boris Matušica

[REDACTED]

[REDACTED]

in technical matters:

Analyst and/or Solution architect:
Armin Vetreš

[REDACTED]

[REDACTED]

2 programmers:

David Viktor, [REDACTED]
[REDACTED]

Jiří Lekeš [REDACTED]
[REDACTED]

Za MOFTER:

ve věcech technických: Senad
Kadrovic, email:
[REDACTED]

ve věcech smluvních: Vanja
Avram, email:
[REDACTED]

Za MOAFWM:

ve věcech technických: Mr. Mario
Mance, email:
[REDACTED]

ve věcech smluvních: Brankica
Tomaš, email:
[REDACTED]

Za MOAWMF:

ve věcech technických: Veldin
Polovina, email:
[REDACTED]

ve věcech smluvních: Emir
Rascic, email:
[REDACTED]

Za BD BIH:

ve věcech smluvních a
technických: Milenko Ninković,
email:
[REDACTED]

On behalf of MOFTER:

in technical matters: Mr. Senad
Kadrovic, email:
[REDACTED]

in contractual matters: Mrs. Vanja
Avram, email:
[REDACTED]

On behalf of MOAFWM:

in technical matters: Mr. Mario
Mance, email:
[REDACTED]

in contractual matters: Mr. Brankica
Tomaš, email:
[REDACTED]

On behalf of MOAWMF:

in technical matters: Mr. Veldin
Polovina, email:
[REDACTED]

in contractual matters: Mr. Emir
Rascic, email:
[REDACTED]

On behalf of BD BIH:

in contractual and technical matters:
Mr. Milenko Ninković, email:
[REDACTED]



Příloha č. 4 - Osobní údaje předávané dodavateli

Annex No. 4 – Personal data specification

Účel zpracování / Purpose of data processing:
Zpracování podle ustanovení čl. 6 odst. 1 písm. b) Nařízení (EU) 2016/679 (GDPR) / Processing according to article 6 (1) (b) REGULATION (EU) 2016/679 (GDPR) Zpracování je nezbytné pro plnění smlouvy k veřejné zakázce / Processing is necessary for performance of mandate contract
Kategorie subjektů údajů / Data subject categories:
zaměstnanci Správce, kontaktní osoby partnerů zapojených v projektu rozvojové spolupráce / employees and contact persons of the Czech Development Agency, the Contractor and other project partners of the Czech Development Agency
Personal data categories:
jméno, příjmení, sídlo, bydliště, datum narození, rodné číslo, podpis, emailová adresa, telefonní číslo, IČO / name, surname, registered office, address, date of birth, signature, email address, phone number, registration number, business licence, function

Příloha č. 5 / Annex 5



Česká rozvojová agentura

Nerudova 3, 118 50 Praha 1
tel.: +420 251 108 130, fax: +420 251 108 225
www.czechaid.cz

Subjekt údajů/ Data subject:

Jméno/Name:	Boris
Příjmení/Surname:	Matušica
Datum narození/ Date of Birth:	28.3.1994
Bydliště/ Address:	Mlýnářska 36/25, Sereď 92601
Osoba vykonávající rodičovskou zodpovědnost / Person holding parent responsibility:	

1. Timto udělují České republice - České rozvojové agentuře, se sídlem Nerudova 3, 118 50 Praha 1, Česká republika, IČO: 75123924, (dále jen „Správce“), souhlas se zpracováním mých níže specifikovaných osobních údajů ve smyslu Nařízení Evropského parlamentu a Rady (EU) 2016/679 ze dne 27. dubna 2016 o ochraně fyzických osob v souvislosti se zpracováním osobních údajů a o volném pohybu těchto údajů a o zrušení směrnice 95/46/ES, (dále jen „GDPR“). / I hereby give my consent to the Czech Republic – Czech Development Agency, registered office Nerudova 3, Prague, Post Code 118 50, Czech Republic, Registered number: 75123924 (hereinafter the “Controller”) to the processing of my personal data specified below under the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (hereinafter the “GDPR”).
 2. Udělují Správci souhlas, aby v souvislosti s aktivitami Správce v oblasti zahraniční rozvojové spolupráce zpracovával mé jméno, příjmení a bydliště a pořizoval fotografie mé osoby a videozáznamy mé osoby a zveřejňoval je: / I give consent to the Controller to process my name, surname and address and take photographs and videos of me in connection with activities of the Controller in development cooperation and publish them:
 - v tištěných prezentačních materiálech/ in printed presentation materials
☒ ANO/ YES ☐ NE/NO
 - na internetových stránkách Správce/ on Controller’s websites
☒ ANO/ YES ☐ NE/NO
 - úctu Správce na Youtube/ on Controller’s Youtube account
☒ ANO/ YES ☐ NE/NO
 - účtech Správce na sociálních sítích (např.: Twitter, Facebook, Instagram)/ on Controller’s accounts on social media networks (e.g.: Twitter, Facebook, Instagram)
☒ ANO/ YES ☐ NE/NO
 - jako ilustrační fotografie ke sdělením Správce na jeho internetových stránkách a účtech na sociálních sítích a v prezentačních materiálech Správce/ as illustrational photographs to the Controller’s announcements on Controller’s websites and accounts on social media networks and Controller’s presentation materials
☒ ANO/ YES ☐ NE/NO
- za účelem prezentace aktivit Správce v oblasti zahraniční rozvojové spolupráce./ in order to present Controller’s activities in development cooperation.
3. Beru na vědomí, že mám následující práva / I acknowledge to have following rights:
 - a) právo vzít souhlas kdykoliv zpět (e-mailem nebo dopisem zaslanými na kontaktní adresu Správce), / right to withdraw my consent anytime (by mail or letter sent to the contact address of the Controller),
 - b) právo požadovat po Správci informaci o tom, jaké mé osobní údaje jsou zpracovávány, / right to request information about which of my personal data are processed,
 - c) právo požadovat po Správci vysvětlení ohledně zpracování osobních údajů, / right to request explanation about processing of personal data,
 - d) právo vyžádat si u Správce přístup k těmto osobním údajům a tyto nechat aktualizovat nebo opravit, / right to request access to the personal data and let them update or rectify,
 - e) právo požadovat po Správci výmaz těchto osobních údajů, / right to request erasure of the personal data,
 - f) právo vznést námitku proti zpracování a právo na přenositelnost osobních údajů, / right to object to processing of personal data nad right portability of personal data,
 - g) právo podat stížnost u dozorového úřadu (Úřad pro ochranu osobních údajů), / right to lodge complaint to the supervisory authority (Office for Personal Data Protection),



Česká rozvojová agentura

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tel.: +420 251 108 130, fax: +420 251 108 225
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h) doba uložení osobních údajů se odvíjí od naplnění účelu, k jakému byly osobní údaje zpracovány, a řídí se interními předpisy Správce. Poté, co nebude již možné, aby Správce osobní údaje zpracovával za výše stanoveným účelem, dojde v přiměřené době k jejich likvidaci. / *archiving depends on the fulfilment of the purpose for which the personal data were processed and is governed by the internal regulations of the Controller. Once it is no longer possible for the Controller to process the personal data for the above stated purpose, they will be disposed in reasonable time.*

Datum/ Date:9.6.2023.....


.....
Podpis subjektu údajů/



Česká rozvojová agentura

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tel.: +420 251 108 130, fax: +420 251 108 225
www.czechaid.cz

Subjekt údajů/ Data subject:

Jméno/Name:	Jiří
Příjmení/Surname:	Lekeš
Datum narození/ Date of Birth:	28.12 1988
Bydliště/ Address:	Na Šibeníku 6, Olomouc 77900
Osoba vykonávající rodičovskou zodpovědnost / Person holding parent responsibility:	

1. Tímto uděluji České republice - České rozvojové agentuře, se sídlem Nerudova 3, 118 50 Praha 1, Česká republika, IČO: 75123924, (dále jen „Správce“), souhlas se zpracováním mých níže specifikovaných osobních údajů ve smyslu Nařízení Evropského parlamentu a Rady (EU) 2016/679 ze dne 27. dubna 2016 o ochraně fyzických osob v souvislosti se zpracováním osobních údajů a o volném pohybu těchto údajů a o zrušení směrnice 95/46/ES, (dále jen „GDPR“). / *I hereby give my consent to the Czech Republic – Czech Development Agency, registered office Nerudova 3, Prague, Post Code 118 50, Czech Republic, Registered number: 75123924 (hereinafter the “Controller”) to the processing of my personal data specified below under the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (hereinafter the “GDPR”).*
2. Uděluji Správci souhlas, aby v souvislosti s aktivitami Správce v oblasti zahraniční rozvojové spolupráce zpracovával mé jméno, příjmení a bydliště a pořizoval fotografie mé osoby a videozáznamy mé osoby a zveřejňoval je: / *I give consent to the Controller to process my name, surname and address and take photographs and videos of me in connection with activities of the Controller in development cooperation and publish them:*
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 - na internetových stránkách Správce/ *on Controller’s websites*
☒ ANO/ YES ☐ NE/NO
 - účtu Správce na Youtube/ *on Controller’s Youtube account*
☒ ANO/ YES ☐ NE/NO
 - účtech Správce na sociálních sítích (např.: Twitter, Facebook, Instagram)/ *on Controller’s accounts on social media networks (e.g.: Twitter, Facebook, Instagram)*
☒ ANO/ YES ☐ NE/NO
 - jako ilustrační fotografie ke sdělením Správce na jeho internetových stránkách a účtech na sociálních sítích a v prezentačních materiálech Správce/ *as illustrational photographs to the Controller’s announcements on Controller’s websites and accounts on social media networks and Controller’s presentation materials*
☒ ANO/ YES ☐ NE/NO
3. Beru na vědomí, že mám následující práva / *I acknowledge to have following rights:*
 - a) právo vzít souhlas kdykoliv zpět (e-mailem nebo dopisem zaslanými na kontaktní adresu Správce), / *right to withdraw my consent anytime (by mail or letter sent to the contact address of the Controller),*
 - b) právo požadovat po Správci informaci o tom, jaké mé osobní údaje jsou zpracovávány, / *right to request information about which of my personal data are processed,*
 - c) právo požadovat po Správci vysvětlení ohledně zpracování osobních údajů, / *right to request explanation about processing of personal data,*
 - d) právo vyžádat si u Správce přístup k těmto osobním údajům a tyto nechat aktualizovat nebo opravit, / *right to request access to the personal data and let them update or rectify,*
 - e) právo požadovat po Správci výmaz těchto osobních údajů, / *right to request erasure of the personal data,*
 - f) právo vznést námitku proti zpracování a právo na přenositelnost osobních údajů, / *right to object to processing of personal data nad right portability of personal data,*
 - g) právo podat stížnost u dozorového úřadu (Úřad pro ochranu osobních údajů), / *right to lodge complaint to the supervisory authority (Office for Personal Data Protection),*




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h) doba uložení osobních údajů se odvíjí od naplnění účelu, k jakému byly osobní údaje zpracovány, a řídí se interními předpisy Správce. Poté, co nebude již možné, aby Správce osobní údaje zpracovával za výše stanoveným účelem, dojde v přiměřené době k jejich likvidaci. / *archiving depends on the fulfilment of the purpose for which the personal data were processed and is governed by the internal regulations of the Controller. Once it is no longer possible for the Controller to process the personal data for the above stated purpose, they will be disposed in reasonable time.*

Datum/ Date:
09.06.2023


.....
Podpis subjektu údajů/
Signature of the data subject



Česká rozvojová agentura

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Subjekt údajů/ Data subject:

Jméno/Name:	Dávid
Příjmení/Surname:	Vikar
Datum narození/ Date of Birth:	18.1.2001
Bydliště/ Address:	Chemická 955, 14800, PRAHA 4, ČR
Osoba vykonávající rodičovskou zodpovědnost / Person holding parent responsibility:	

1. Tímto uděluji České republice - České rozvojové agentuře, se sídlem Nerudova 3, 118 50 Praha 1, Česká republika, IČO: 75123924, (dále jen „Správce“), souhlas se zpracováním mých níže specifikovaných osobních údajů ve smyslu Nařízení Evropského parlamentu a Rady (EU) 2016/679 ze dne 27. dubna 2016 o ochraně fyzických osob v souvislosti se zpracováním osobních údajů a o volném pohybu těchto údajů a o zrušení směrnice 95/46/ES, (dále jen „GDPR“). / I hereby give my consent to the Czech Republic – Czech Development Agency, registered office Nerudova 3, Prague, Post Code 118 50, Czech Republic, Registered number: 75123924 (hereinafter the “Controller”) to the processing of my personal data specified below under the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (hereinafter the “GDPR”).
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☒ ANO/ YES ☐ NE/NO
 - účtu Správce na Youtube/ on Controller’s Youtube account
☒ ANO/ YES ☐ NE/NO
 - účtech Správce na sociálních sítích (např.: Twitter, Facebook, Instagram)/ on Controller’s accounts on social media networks (e.g.: Twitter, Facebook, Instagram)
☒ ANO/ YES ☐ NE/NO
 - jako ilustrační fotografie ke sdělením Správce na jeho internetových stránkách a účtech na sociálních sítích a v prezentačních materiálech Správce/ as illustrational photographs to the Controller’s announcements on Controller’s websites and accounts on social media networks and Controller’s presentation materials
☒ ANO/ YES ☐ NE/NO
- za účelem prezentace aktivit Správce v oblasti zahraniční rozvojové spolupráce./ in order to present Controller’s activities in development cooperation.
3. Beru na vědomí, že mám následující práva / I acknowledge to have following rights:
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 - b) právo požadovat po Správci informaci o tom, jaké mé osobní údaje jsou zpracovávány, / right to request information about which of my personal data are processed,
 - c) právo požadovat po Správci vysvětlení ohledně zpracování osobních údajů, / right to request explanation about processing of personal data,
 - d) právo vyžádat si u Správce přístup k těmto osobním údajům a tyto nechat aktualizovat nebo opravit, / right to request access to the personal data and let them update or rectify,
 - e) právo požadovat po Správci výmaz těchto osobních údajů, / right to request erasure of the personal data,
 - f) právo vznést námitku proti zpracování a právo na přenositelnost osobních údajů, / right to object to processing of personal data nad right portability of personal data,
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Datum/ Date: 9.6.2023


Podpis subjektu údajů/
Signature of the data subject



Subjekt údajů/ Data subject:

Jméno/Name:	Sumija
Příjmení/Surname:	Bukvić Omanović
Datum narození/ Date of Birth:	04. 11. 1996
Bydliště/ Address:	Visoko, Topuzovo Polje bb
Osoba vykonávající rodičovskou zodpovědnost / Person holding parent responsibility:	

1. Tímto uděluji České republice - České rozvojové agentuře, se sídlem Nerudova 3, 118 50 Praha 1, Česká republika, IČO: 75123924, (dále jen „Správce“), souhlas se zpracováním mých níže specifikovaných osobních údajů ve smyslu Nařízení Evropského parlamentu a Rady (EU) 2016/679 ze dne 27. dubna 2016 o ochraně fyzických osob v souvislosti se zpracováním osobních údajů a o volném pohybu těchto údajů a o zrušení směrnice 95/46/ES, (dále jen „GDPR“). / I hereby give my consent to the Czech Republic – Czech Development Agency, registered office Nerudova 3, Prague, Post Code 118 50, Czech Republic, Registered number: 75123924 (hereinafter the “Controller”) to the processing of my personal data specified below under the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (hereinafter the “GDPR”).
 2. Uděluji Správci souhlas, aby v souvislosti s aktivitami Správce v oblasti zahraniční rozvojové spolupráce zpracovával mé jméno, příjmení a bydliště a pořizoval fotografie mé osoby a videozáznamy mé osoby a zveřejňoval je: / I give consent to the Controller to process my name, surname and address and take photographs and videos of me in connection with activities of the Controller in development cooperation and publish them:
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☒ ANO/ YES ☐ NE/NO
 - na internetových stránkách Správce/ on Controller’s websites
☒ ANO/ YES ☐ NE/NO
 - účtu Správce na Youtube/ on Controller’s Youtube account
☒ ANO/ YES ☐ NE/NO
 - účtech Správce na sociálních sítích (např.: Twitter, Facebook, Instagram)/ on Controller’s accounts on social media networks (e.g.: Twitter, Facebook, Instagram)
☒ ANO/ YES ☐ NE/NO
 - jako ilustrační fotografie ke sdělením Správce na jeho internetových stránkách a účtech na sociálních sítích a v prezentačních materiálech Správce/ as illustrational photographs to the Controller’s announcements on Controller’s websites and accounts on social media networks and Controller’s presentation materials
☒ ANO/ YES ☐ NE/NO
- za účelem prezentace aktivit Správce v oblasti zahraniční rozvojové spolupráce./ in order to present Controller’s activities in development cooperation.
3. Beru na vědomí, že mám následující práva / I acknowledge to have following rights:
 - a) právo vzít souhlas kdykoliv zpět (e-mailem nebo dopisem zaslanými na kontaktní adresu Správce), / right to withdraw my consent anytime (by mail or letter sent to the contact address of the Controller),
 - b) právo požadovat po Správci informaci o tom, jaké mé osobní údaje jsou zpracovávány, / right to request information about which of my personal data are processed,
 - c) právo požadovat po Správci vysvětlení ohledně zpracování osobních údajů, / right to request explanation about processing of personal data,
 - d) právo vyžádat si u Správce přístup k těmto osobním údajům a tyto nechat aktualizovat nebo opravit, / right to request access to the personal data and let them update or rectify,
 - e) právo požadovat po Správci výmaz těchto osobních údajů, / right to request erasure of the personal data,
 - f) právo vznést námitku proti zpracování a právo na přenositelnost osobních údajů, / right to object to processing of personal data nad right portability of personal data,
 - g) právo podat stížnost u dozorového úřadu (Úřad pro ochranu osobních údajů), / right to lodge complaint to the supervisory authority (Office for Personal Data Protection),



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Datum/ Date: 21.06.2023

Sumea Bukud Omarovic
Podpis subjektu údajů/
Signature of the data subject

**Subjekt údajů/ Data subject:**

Jméno/Name:	Armin
Příjmení/Surname:	Vatreš
Datum narození/ Date of Birth:	03.06.1983.
Bydliště/ Address:	Grbavička 101 Sarajevo
Osoba vykonávající rodičovskou zodpovědnost / Person holding parent responsibility:	

1. Tímto uděluji České republice - České rozvojové agentuře, se sídlem Nerudova 3, 118 50 Praha 1, Česká republika, IČO: 75123924, (dále jen „Správce“), souhlas se zpracováním mých níže specifikovaných osobních údajů ve smyslu Nařízení Evropského parlamentu a Rady (EU) 2016/679 ze dne 27. dubna 2016 o ochraně fyzických osob v souvislosti se zpracováním osobních údajů a o volném pohybu těchto údajů a o zrušení směrnice 95/46/ES, (dále jen „GDPR“). / *I hereby give my consent to the Czech Republic – Czech Development Agency, registered office Nerudova 3, Prague, Post Code 118 50, Czech Republic, Registered number: 75123924 (hereinafter the “Controller”) to the processing of my personal data specified below under the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (hereinafter the “GDPR”).*
 2. Uděluji Správci souhlas, aby v souvislosti s aktivitami Správce v oblasti zahraniční rozvojové spolupráce zpracovával mé jméno, příjmení a bydliště a pořizoval fotografie mé osoby a videozáznamy mé osoby a zveřejňoval je: / *I give consent to the Controller to process my name, surname and address and take photographs and videos of me in connection with activities of the Controller in development cooperation and publish them:*
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 - na internetových stránkách Správce/ *on Controller’s websites*
☒ ANO/ YES ☐ NE/NO
 - účtu Správce na Youtube/ *on Controller’s Youtube account*
☒ ANO/ YES ☐ NE/NO
 - účtech Správce na sociálních sítích (např.: Twitter, Facebook, Instagram)/ *on Controller’s accounts on social media networks (e.g.: Twitter, Facebook, Instagram)*
☒ ANO/ YES ☐ NE/NO
 - jako ilustrační fotografie ke sdělením Správce na jeho internetových stránkách a účtech na sociálních sítích a v prezentačních materiálech Správce/ *as illustrational photographs to the Controller’s announcements on Controller’s websites and accounts on social media networks and Controller’s presentation materials*
☒ ANO/ YES ☐ NE/NO
- za účelem prezentace aktivit Správce v oblasti zahraniční rozvojové spolupráce./ *in order to present Controller’s activities in development cooperation.*
3. Beru na vědomí, že mám následující práva / *I acknowledge to have following rights:*
 - a) právo vzít souhlas kdykoliv zpět (e-máilem nebo dopisem zaslanými na kontaktní adresu Správce), / *right to withdraw my consent anytime (by mail or letter sent to the contact address of the Controller),*
 - b) právo požadovat po Správci informaci o tom, jaké mé osobní údaje jsou zpracovávány, / *right to request information about which of my personal data are processed,*
 - c) právo požadovat po Správci vysvětlení ohledně zpracování osobních údajů, / *right to request explanation about processing of personal data,*
 - d) právo vyžádat si u Správce přístup k těmto osobním údajům a tyto nechat aktualizovat nebo opravit, / *right to request access to the personal data and let them update or rectify,*
 - e) právo požadovat po Správci výmaz těchto osobních údajů, / *right to request erasure of the personal data,*
 - f) právo vznést námitku proti zpracování a právo na přenositelnost osobních údajů, / *right to object to processing of personal data nad right portability of personal data,*
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h) doba uložení osobních údajů se odvíjí od naplnění účelu, k jakému byly osobní údaje zpracovány, a řídí se interními předpisy Správce. Poté, co nebude již možné, aby Správce osobní údaje zpracovával za výše stanoveným účelem, dojde v přiměřené době k jejich likvidaci. / *archiving depends on the fulfilment of the purpose for which the personal data were processed and is governed by the internal regulations of the Controller. Once it is no longer possible for the Controller to process the personal data for the above stated purpose, they will be disposed in reasonable time.*

Datum/ Date: 09.06.2023.

.....
Podpis subjektu údajů/
Signature of the data subject

**AMENDMENT TO THE MEMORANDUM OF UNDERSTANDING
BETWEEN
THE MINISTRY OF FOREIGN AFFAIRS OF THE CZECH REPUBLIC
AND
THE MINISTRY OF FOREIGN AFFAIRS OF BOSNIA AND HERZEGOVINA
CONCERNING DEVELOPMENT COOPERATION,
SIGNED IN SARAJEVO ON 22 JUNE 2006**

The Ministry of Foreign Affairs of the Czech Republic and the Ministry of Foreign Affairs of Bosnia and Herzegovina (hereinafter referred as "Participants"),

Wishing to strengthen the existing cordial relations between the Czech Republic and Bosnia and Herzegovina;

Desiring to foster development cooperation between the two countries in conformity with the objectives of economic and social development of Bosnia and Herzegovina;

have reached the following understanding on amendment to the Memorandum of Understanding between the Ministry of Foreign Affairs of the Czech Republic and the Ministry of Foreign Affairs of Bosnia and Herzegovina concerning Development Cooperation, signed in Sarajevo on 22 June 2006:

I.

1. Supplies of the material, goods, works and services financed by the Czech contribution for purpose of implementing the program of development cooperation between the Participants' States, and imported into Bosnia and Herzegovina or obtained locally for the benefit of the development cooperation projects will be exempted from any duties, taxes (including VAT), fees, levies or any other charges applicable in conformity with law of Bosnia and Herzegovina. Any such costs that have been already paid will be returned consequently to the payer. Material, goods, works and services imported from the Czech Republic into Bosnia and Herzegovina for the purpose of implementing joint activities in the framework of development cooperation between the Czech Republic and Bosnia and Herzegovina will be exempted from any duties, taxes (including VAT), fees, levies or any other charges applicable in conformity with law of Bosnia and Herzegovina. Any such costs that have been already paid will be returned consequently to the payer.

II.

1. This Amendment will come into operation on the date of its signature.
2. The provisions of this Amendment will be also applicable to the specific development cooperation projects launched prior to its coming into operation.

Signed in duplicate in Sarajevo, on *2 April* 2009, in the English language.

FOR AND ON BEHALF OF THE
MINISTRY OF FOREIGN AFFAIRS
OF THE CZECH REPUBLIC



FOR AND ON BEHALF OF THE
MINISTRY OF FOREIGN AFFAIRS
OF BOSNIA AND HERZEGOVINA

