**ANNEX 1**

# Digital Europe Programme (DIGITAL)

# Description of the action (DoA)

**Part A**

**Part B**

# DESCRIPTION OF THE ACTION (PART A)

## COVER PAGE

*Part A of the Description of the Action (DoA) must be completed directly on the Portal Grant Preparation screens.*

| **PROJECT**<br>*Grant Preparation (General Information screen) — Enter the info.* | |
|---|---|
| **Project number:** | 101120003 |
| **Project name:** | EDIH Northern and Eastern Bohemia |
| **Project acronym:** | EDIH NEB |
| **Call:** | DIGITAL-2022-EDIH-03 |
| **Topic:** | DIGITAL-2022-EDIH-03-INITIAL |
| **Type of action:** | DIGITAL-SIMPLE |
| **Service:** | CNECT/A/04 |
| **Project starting date:** | fixed date: 1 May 2023 |
| **Project duration:** | 36 months |

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# PROJECT SUMMARY

**Project summary**

*Grant Preparation (General Information screen) — Provide an overall description of your project (including context and overall objectives, planned activities and main achievements, and expected results and impacts (on target groups, change procedures, capacities, innovation etc)). This summary should give readers a clear idea of what your project is about.*

*Use the project summary from your proposal.*

The main objective of EDIH NEB is to support the digital transformation of SMEs, start-ups, mid-caps, and public entities and to create the best possible conditions to ensure the long-term commercial success of all those involved by increasing their competitiveness, capacity for action, and effectiveness in processes, products, or services that use advanced digital technologies EDIH NEB is a significant part of the innovation infrastructure in the Liberec and Hradec Králové regions (CZ05 Northeast). In this respect, the natural industrial and research centres that are the cities of Liberec and Hradec Králové are important European hubs of support for research, development, and innovation. Moreover, the Liberec region is a world leader in the development of industrial technologies for the production of nanomaterials and related nanotechnologies. EDIH NEB concentrates on digitisation and artificial intelligence in connection with digital modelling, the simulation of technological processes, sensor technology, etc.
The coverage of cooperation and services by the EDIH NEB consortium has 4 geographical dimensions. EDIH NEB primarily targets the territory of the Liberec and the Hradec Králové Region. The second catchment dimension of the unique and other digitisation services on offer is the rest of the Czech Republic.
The third entirely fundamental geographical dimension, one which is absolutely unique within the Czech Republic in light of the geographical position of the Liberec and Hradec Králové regions in the border region with Poland and Germany, is expansion of the quality cooperation already in existence as part of what is known as Euroregion Nisa, and to some extent Euroregion Glacensis (Saxony, Lower Silesia, Opole).
The fourth geographical dimension to the cooperation, exchange of experience, and offer of services which the EDIH NEB consortium brings takes the shape of other foreign cooperation within the territory of the EU, or indeed worldwide.

# LIST OF PARTICIPANTS

**PARTICIPANTS**

*Grant Preparation (Beneficiaries screen) — Enter the info.*

| Number | Role | Short name | Legal name | Country | PIC |
|---|---|---|---|---|---|
| 1 | COO | ARR | ARR - AGENTURA REGIONALNIHO ROZVOJE SPOL SRO | CZ | 999813145 |
| 2 | BEN | VUTS | VUTS AS | CZ | 998726551 |
| 3 | BEN | NCA | NARODNI KLASTROVA ASOCIACE | CZ | 939904490 |
| 4 | BEN | CIRI | CENTRUM INVESTIC ROZVOJE A INOVACI | CZ | 883107207 |
| 5 | BEN | TUL | TECHNICKA UNIVERZITA V LIBERCI | CZ | 999856213 |
| 6 | BEN | UHK | UNIVERZITA HRADEC KRALOVE | CZ | 999865719 |
| 7 | BEN | AEC AS | AEC AS | CZ | 891208259 |

# LIST OF WORK PACKAGES

**Work packages**

*Grant Preparation (Work Packages screen) — Enter the info.*

| Work Package No | Work Package name | Lead Beneficiary | Effort (Person-Months) | Start Month | End Month | Deliverables |
|---|---|---|---|---|---|---|
| WP1 | Project management and coordination | 1 - ARR | 180.00 | 1 | 36 | D1.1 – Client database<br>D1.2 – Evaluation reports<br>D1.3 – Project progress reports<br>D1.4 – Project final report |
| WP2 | Test Before Invest | 1 - ARR | 279.36 | 1 | 36 | D2.1 – Proposals for changes in the field of digitisation (i.e. a report on the implementation of each Test before Invest service) |
| WP3 | Training and skills development | 1 - ARR | 21.24 | 1 | 36 | D3.1 – Certificates from courses / internships |
| WP4 | Networking / building the innovation ecosystem | 3 - NCA | 88.20 | 1 | 36 | D4.1 – In-depth analysis of EDIH target groups in the Czech Republic and abroad.<br>D4.2 – Database of cooperating entities at regional, national, and EU level (clusters, incubators, chambers of commerce, universities, representatives of regional politics, etc., EDIH in the EU) - excepting EDIH clients, because it's output D 1.1 |
| WP5 | Support to find investments | 1 - ARR | 39.60 | 1 | 36 | D5.1 – Number of submitted grant / loan / other financial resources or documented cooperation in finding suitable financial resources<br>D5.2 – Screening sources of financing |
| WP6 | Communication and dissemination | 1 - ARR | 63.00 | 1 | 36 | D6.1 – Dissemination and Exploitation |

## Work package WP1 – Project management and coordination

| Work Package Number | WP1 | Lead Beneficiary | 1. ARR |
|---|---|---|---|
| Work Package Name | Project management and coordination | | |
| Start Month | 1 | End Month | 36 |

| Objectives |
|---|
| Successfully achieve the goals, indicators, outputs and other attributes of the project<br>Effectively manage the people involved in the project<br>Manage and monitor the processes in the project<br>Set up effective communication in the project and with the EC<br>Properly process implementation reports and payment requests<br>Educate the implementation team |

| Description |
|---|
| T1.1: Meetings (eDIH team meetings, meetings with EC representatives, etc.): Meetings within the project team, with representatives of the EC or the eDIH network for the purposes of project management. ARR will manage activity and work closely with all partners. Regular meetings of representatives of consortium partners a minimum of once a month.<br>T1.2: Meetings (eDIH team meetings, meetings with EC representatives, etc.): Coordination of work and activities within the eDIH implementation team, i.e. cooperation between the individual partners of the consortium. Use of CRM tools, client database, shared tools, etc.<br>T1.3: Monitoring and evaluation (evaluation plan): Monitoring the implementation of EDIH NEB services, feedback from clients.<br>Monitoring the digital maturity of the target group (primarily within the Test Before Invest activity), evaluation of the results of individual project activities. Use of EC tool for evaluation of the digital maturity of target groups. Each partner evaluates the digital maturity of EDIH clients. The Lead Partner processes information in a comprehensive manner.<br>T1.4: Financial management: Monitoring how the budget is drawn, changes in the budget, eligibility of expenditures, etc. Processing payment requests.<br>T1.5: Reporting (implementation reports): Compiling implementation reports, monitoring the achievement of project activities, indicators, schedule, outputs, etc.<br>T1.6: Cooperation with the EC (DTA) and eDIH network (training of eDIH staff, working with the EC information system, etc.): Cooperation within the eDIH network and with the EC during project management, reciprocal exchange of information, experience, training the EDIH team and<br>involvement in other activities of The Digital Transformation Accelerator. Cooperation of all members of the consortium within the eDIH network and with EC as required. Training provided to the implementation team on an ongoing basis (approximately 15 per year).<br>This task addresses the liaison and co-operation activities with Digital Transformation Accelerator (DTA).<br>The EDIH will:<br>-provide to the DTA the necessary data/information on the overall Key Performance Indicators on an annual basis or on request by the DTA;<br>-participate actively in the relevant support activities of the DTA, such as matchmaking, training and capacity building events;<br>-participate actively in the “Train the trainer” programme organised by the DTA, to acquire the needed knowledge on how to use the digital capacities supported by Digital Europe programme, with the objective to help the EDIH stakeholders to make use of them.<br>This task only covers the specific activities for collaboration with DTA. The periodic reporting will include a description of the activities performed in<br>collaboration with the DTA. |

## Work package WP2 – Test Before Invest

| Work Package Number | WP2 | Lead Beneficiary | 1. ARR |
|---|---|---|---|
| Work Package Name | Test Before Invest | | |

| Start Month | 1 | End Month | 36 |
|---|---|---|---|

| Objectives |
|---|
| To increase the digital maturity of the target group of the EDIH NEB project<br>To increase the competitiveness of enterprises on global markets and increase their productivity<br>To provide SMEs with the necessary institutional and technological support for the deployment of digital technologies<br>To make digital transformation services more accessible to SMEs<br>To promote digital innovation To develop a sustainable economic business model<br>Therein, the activity incorporates services in the area of Test Before Invest and evaluation of the digital maturity of clients in cooperation with DTA, as well as possible cooperation with EDIH within the Czech Republic and outside the Czech Republic, if the scope of EDIH NEB professional services is insufficient |

| Description |
|---|
| T2.1: Speech recognition and synthesis, natural language understandingExpected number of clients of services: 3 per year. Expected number of hours of work with clients: approximately 500 hours per year. Workload approximately 0.3. From cost category C3: we envisage the use of, for example, cloud storage sites, renting computing capacity for training models on computer GPU clusters, etc.<br>T2.2: Machine learning and neural networks: Expected number of clients of services: 4 per year Expected number of hours of work with clients: approximately 400 Workload approximately 0.2. From cost category C3: the required material for work, e.g. graphic cards for calculations, data storage sites, cameras.<br>T2.3: Cloud robotics, cybernetics, robotic swarm, collaborative robots: Expected number of clients of services: 5 per year. Expected number of hours of work with clients: approximately 750. Workload approximately 0.4. From cost category C3: we envisage the purchase of specific services in the development and testing of effectors or the design and manufacture of equipment for handling products with the help of a robot.<br>T.2.4: irtual and augmented reality (3D printing/3D scanning, sensors, super-precision optics, access to Big-data, mathematical and physical modelling and simulation), digital twin: Expected number of clients of services: 42 per year. Expected number of hours of work with clients: approximately 3,950. Workload approximately 2.2. From cost category C3: the required material, for example computer software, PC, material for 3D printing, the use of cloud storage sites, tests according to standards (e.g. for radio transmission resistance, emissions), the preparation of HDRi maps, etc.<br>T.2.5: Autonomous vehicles, electromobility, Edge Computing: Expected number of clients of services: 2 per year. Expected number of hours of work with clients: approximately 160. Workload approximately 0.2.<br>T.2.6: Industrial Internet of Things (IIoT), use of AI and advanced analytics, data processing, IoT, bioinformatics: Expected number of clients of services: 43 per year. Expected number of hours of work with clients: approximately 2,900. Workload approximately 1.6. From cost category C3: external production of customised components for PCB boards and electronics of specific IIoT sensors, external calibration and certification services for sensors, external certification services for IIoT equipment for operation in wireless bands LoRa, SigFox, external expert consultancy.<br>T.2.7: Digital audits, smart city, web systems and applications, etc.: Expected number of clients of services: 60 per year. Expected number of hours of work with clients: approximately 3,000. Workload approximately 1.9. From cost category C3: expert within the Platinn network, external expert consultancy, consumables for Test before Invest.<br>T.2.8: Penetration tests: Expected number of clients of services: 4 per year Expected number of hours of work with clients: approximately 680. Workload approximately 0.4<br>T.2.9: Cybersecurity audits, advice: Expected number of clients of services: 6 per year. Expected number of hours of work with clients: approximately 300. Workload approximately 0.4<br>T.2.10: Other digitisation services: Expected number of clients of services: 6 per year. Expected number of hours of work with clients: approximately 240. Workload approximately 0.15 |

## Work package WP3 – Training and skills development

| Work Package Number | WP3 | Lead Beneficiary | 1. ARR |
|---|---|---|---|
| Work Package Name | Training and skills development | | |
| Start Month | 1 | End Month | 36 |

| Objectives |
|---|

To increase employees' knowledge in the field of digitisation (artificial intelligence, cybersecurity) in connection with the current needs of the labour market
To offer different levels of digital education
To accompany digital education with demonstrations in practice
To use modern technologies in digital education

| Description |
|---|
| T.1: Training courses: Specialised courses for SMEs / public administration. Examples of course targeting (a specific topic will be chosen according to current client<br>demand) Cyber security, Data analysis and visualisation, AI and its use,<br>AM technologies, etc. We envisage 22 courses a year, we expect about 215 participants a year. In budget item C3: Refreshments, rental, technology, instructors, course materials, etc.<br>T3.2: Internships: Internships for the target group of the project in order to gain experience of innovative technologies, digitisation, artificial intelligence, cyber security. Sharing good practice within enterprises, research organisations, public bodies, etc. We envisage 3 internships a year. We expect 5 participants a year. In budget item C3: Mentoring during internships, documents for internships, etc. |

## Work package WP4 – Networking / building the innovation ecosystem

| | | | |
|---|---|---|---|
| **Work Package Number** | WP4 | **Lead Beneficiary** | 3. NCA |
| **Work Package Name** | Networking / building the innovation ecosystem | | |
| **Start Month** | 1 | **End Month** | 36 |

| Objectives |
|---|
| To create links between enterprises, public administration, and other entities, such as clusters, innovation entities, incubators, associations, chambers of commerce,<br>regional stakeholders, etc.<br>To actively communicate and share information within the European EDIH network, jointly organise events, find solutions for EDIH clients in the field of digitisation<br>together with other EDIHs in the EU in the event that the competency of EDIH NEB cannot satisfy the need in question<br>To search for new clients of EDIH NEB<br>To link demand for digital solutions with supply<br>To motivate companies and public organisations to proceed with digital transformation<br>To map out the environment of the region in the field of digitisation |

| Description |
|---|
| T4.1: Matchmaking/networking/B2B events (at regional/national/EU level):<br>- Connecting representatives of public administrations, companies and other organisations forming the innovation ecosystem in the region, at national level, in the EU: Organisation of roundtable conferences, platforms, business meetings, etc.<br>- Cooperation with regional stakeholders, clusters, incubators, EEN, chambers of commerce, associations, innovation actors: exchange of offers and requests from the target group, search for new innovative solutions, cooperation on events (outside WP3 actions). We expect around 400 participants in these activities a year<br>We envisage the organisation of a digitisation platform 2 times a year, 3 conferences a year (1 in the Liberec region, 1 in the Hradec Králové region, 1 outside the region), approximately 7 business meetings a year, 4 round tables a year (e.g. for representatives of public administration), bilateral meetings with representatives of the target group. Costs in budget item C3: Refreshments, rental, technology, instructors / experts, event website, event materials, interpreting, presentation, etc.<br>T4.2: Cooperation within the eDIH network and with other organisations at national/EU level:<br>Sharing experiences<br>- Cooperation in events beyond the activities listed in WP Training and skills development (cooperation in events of other eDIH/other organisations)<br>- Cooperation in addressing the needs of the target group in the field of digitisation and related activities outside the eDIH NEB activities We envisage cooperation with around 50 organisations at national / European level |

| |
|---|
| T4.3: Analysis / mapping: In-depth analysis of target groups in the Czech Republic and abroad. Identification and diversification of target groups for individual EDIH NEB<br>services. An important base for the activities of the group marketing team.<br>Another objective is to specify the best way of addressing sub-target groups in follow-up marketing activities. The segmentation of target groups will be determined according to their endogenous and exogenous potential, interest in sub-areas of digitisation services, and what entities in the consortium have to offer, as well as the condition for further synergies. |

## Work package WP5 – Support to find investments

| | | | |
|---|---|---|---|
| **Work Package Number** | WP5 | **Lead Beneficiary** | 1. ARR |
| **Work Package Name** | Support to find investments | | |
| **Start Month** | 1 | **End Month** | 36 |

| **Objectives** |
|---|
| To make it easier for EDIH NEB clients to finance proposed solutions in the field of digitisation, artificial intelligence, cyber security<br>To monitor potential sources of funding<br>To offer practical assistance in finding financial resources and using them |

| **Description** |
|---|
| T5.1: Sources of financing, investment: Screening grant sources in the field of digitalisation, cooperation in securing financial resources for specific solutions (grants, loans, exchanges, venture capital, etc.) and cooperation in preparing applications for the given financial source<br>T5.2: Investor days: The organisation or joint organisation of investor days for EDIH NEB clients, 52 cooperation with EDIH NEB clients in preparing investor days. Support for the involvement of EDIH NEB clients in investor days. Approximately 2 events a<br>year. C3 costs include refreshments, rental, expert for cooperation, etc. |

## Work package WP6 – Communication and dissemination

| | | | |
|---|---|---|---|
| **Work Package Number** | WP6 | **Lead Beneficiary** | 1. ARR |
| **Work Package Name** | Communication and dissemination | | |
| **Start Month** | 1 | **End Month** | 36 |

| **Objectives** |
|---|
| 1 / To attract the attention of target groups and generate potential customers among them. One part of the activity is dedicated to the target group that is able to define its need for digitisation and the other part to the group that does not know its needs and must come to realise the potential of digitisation. The aim here is to increase the number of entities in the target group that know their needs in the field of digitisation and to continue to work with them.<br>2 / To build a base of EDIH NEB contacts with which it is possible to work into the future (potential / new / returning customers).<br>3 / To build brand awareness<br>a / among the target group and to gain credibility<br>b / outside the target group in order to build the repute of the region |

| **Description** |
|---|
| T6.1: Communication plan (plan of dissemination and Exploitation): The communication plan defines EDIH's vision and mission and its impact on the |

ecosystem of the region. It elaborates the process for fulfilling this vision and mission in relation to the target groups of the project. It defines content, communication channels, campaigns, budget. The plan is updated twice a year. The first plan will be created no later than 6 months after the commencement of the project.
Chief marketing manager: Creates the communication plan, is responsible for its implementation. Consortium members: comment on the plan, jointly responsible for implementation.
T6.2: Websites & content marketing (articles, videos, podcasts, etc.). Supportive communication channels for websites: The website is part of the Lead Partner's website and is a key carrier of relevant and valuable content: articles, videos, podcasts / information on digital technologies and trends, advice shops (how to ...), positive references. It is administered based on a content plan (content mkt). This also takes in management of the websites of individual partners to EDIH NEB.
Chief marketing manager: process management and coordination, content distribution, consortium members: creation of content. Activities include:
- management of the ARR website of ARR and the websites of partners to EDIH NEB
- the creation of articles, videos, podcasts.

The use of channels to ascertain web traffic:
1 / SEO - search engine optimisation - compiling an analysis of keywords
2 / Remarketing - a campaign targeting visitors to the website in the form of PPC Google Adwords
3 / Newsletter - news sent out to a database of contacts
4 / Social networks and media (see below)
Chief marketing manager: management of support channels
T6.3: Visual identity: Includes: Logo, font, icons, graphic manual, photographs. We will continuously apply everything to websites, social networks and other online channels, publicity materials, letterheads, business cards, etc.
Chief marketing manager: management and coordination of work with visual identity
Consortium members: work with visual identity
This activity also involves the production / printing of publicity materials (leaflets, roll-ups, brochures, billboards, items, etc.).
T6.4: Social networks & media: Serves as an amplifier of EDIH NEB content of (primarily located on the website). As for social networks, we will target LinkedIn / Facebook (sorted by relevance). Setting up profiles, organic and paid distribution of articles, paid publicity of websites (publicity continuously distributed throughout project implementation). As for Media Relations: Building relationships with journalists. Regular advertising / publications about EDIH in the press (approximately monthly).
Targeted online marketing.
Both the Lead Partner and the individual partners will participate in carrying out the activity, individual partners following the lead of the Lead Partner. Other activities in this area: Information campaign on national television in educational programmes (TUL).
T6.5: Digital awareness campaigns: Educational events in support of spreading awareness of the need for the region (or target groups) to digitise. Networking at events, relationships with customers and potential EDIH partners are created and cultivated (approximately 4 events a year).
Sub-campaigns regarding selected awareness-raising topics will be ongoing at the same time, online, on the following axis: communication content-websites-social networks, media, remarketing.
Spreading awareness at events organised by other entities, distribution of EDIH NEB publicity materials, presentation of EDIH NEB at trade fairs, etc. (approximately 6 times a year). Roles: Chief marketing manager - campaign management Consortium members: campaign executive.

# STAFF EFFORT

**Staff effort per participant**

*Grant Preparation (Work packages - Effort screen) — Enter the info.*

| Participant | WP1 | WP2 | WP3 | WP4 | WP5 | WP6 | Total Person-Months |
|---|---|---|---|---|---|---|---|
| 1 - ARR | 90.00 | 72.00 | 3.60 | 21.60 | 10.80 | 36.00 | 234.00 |
| 2 - VUTS | 10.80 | 25.20 | 3.60 | 7.20 | 3.60 | 7.20 | 57.60 |
| 3 - NCA | 18.00 | 10.80 | | 36.00 | 3.60 | 10.80 | 79.20 |
| 4 - CIRI | 7.20 | | 7.20 | 18.00 | 10.80 | 3.60 | 46.80 |
| 5 - TUL | 10.80 | 111.60 | 5.40 | 5.40 | 7.20 | 5.40 | 145.80 |
| 6 - UHK | 36.00 | 45.36 | 1.44 | | 3.60 | | 86.40 |
| 7 - AEC AS | 7.20 | 14.40 | | | | | 21.60 |
| **Total Person-Months** | 180.00 | 279.36 | 21.24 | 88.20 | 39.60 | 63.00 | 671.40 |

# LIST OF DELIVERABLES

**Deliverables**

*Grant Preparation (Deliverables screen) — Enter the info.*

*The labels used mean:*

*Public — fully open (⚠ automatically posted online)*
*Sensitive — limited under the conditions of the Grant Agreement*
*EU classified —RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444*

| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
|---|---|---|---|---|---|---|
| D1.1 | Client database | WP1 | 1 - ARR | DATA — data sets, microdata, etc | SEN - Sensitive | 36 |
| D1.2 | Evaluation reports | WP1 | 1 - ARR | R — Document, report | PU - Public | 36 |
| D1.3 | Project progress reports | WP1 | 1 - ARR | R — Document, report | SEN - Sensitive | 18 |
| D1.4 | Project final report | WP1 | 1 - ARR | R — Document, report | SEN - Sensitive | 36 |
| D2.1 | Proposals for changes in the field of digitisation (i.e. a report on the implementation of each Test before Invest service) | WP2 | 1 - ARR | R — Document, report | SEN - Sensitive | 36 |
| D3.1 | Certificates from courses / internships | WP3 | 1 - ARR | R — Document, report | PU - Public | 36 |
| D4.1 | In-depth analysis of EDIH target groups in the Czech Republic and abroad. | WP4 | 3 - NCA | R — Document, report | PU - Public | 18 |
| D4.2 | Database of cooperating entities at regional, national, and EU level (clusters, incubators, chambers of commerce, universities, representatives of regional politics, etc., EDIH in the EU) - excepting EDIH clients, because it's output D 1.1 | WP4 | 3 - NCA | DATA — data sets, microdata, etc | SEN - Sensitive | 36 |

**Deliverables**

*Grant Preparation (Deliverables screen) — Enter the info.*

*The labels used mean:*

*Public — fully open (⚠ automatically posted online)*
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| Deliverable No | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month) |
|---|---|---|---|---|---|---|
| D5.1 | Number of submitted grant / loan / other financial resources or documented cooperation in finding suitable financial resources | WP5 | 1 - ARR | DATA — data sets, microdata, etc | SEN - Sensitive | 36 |
| D5.2 | Screening sources of financing | WP5 | 1 - ARR | R — Document, report | PU - Public | 36 |
| D6.1 | Dissemination and Exploitation | WP6 | 1 - ARR | R — Document, report | PU - Public | 6 |

## Deliverable D1.1 – Client database

| Deliverable Number | D1.1 | Lead Beneficiary | 1. ARR |
|---|---|---|---|
| Deliverable Name | Client database | | |
| Type | DATA — data sets, microdata, etc | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 36 | Work Package No | WP1 |

| Description |
|---|
| EDIH NEB client database with contacts and services provided |

## Deliverable D1.2 – Evaluation reports

| Deliverable Number | D1.2 | Lead Beneficiary | 1. ARR |
|---|---|---|---|
| Deliverable Name | Evaluation reports | | |
| Type | R — Document, report | Dissemination Level | PU - Public |
| Due Date (month) | 36 | Work Package No | WP1 |

| Description |
|---|
| Interim and ex post evaluation report (fulfilment of activities, outputs, indicators, project objectives), English language |

## Deliverable D1.3 – Project progress reports

| Deliverable Number | D1.3 | Lead Beneficiary | 1. ARR |
|---|---|---|---|
| Deliverable Name | Project progress reports | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 18 | Work Package No | WP1 |

| Description |
|---|
| The implementation of the project, the progress of the project outputs and indicators will be continuously monitored by the general manager of EDIH NEB. An interim report on the project implementation will be prepared in month 18, which will include an assessment of all relevant WPs towards the achievement of the defined project objectives, outputs and indicators. |

## Deliverable D1.4 – Project final report

| Deliverable Number | D1.4 | Lead Beneficiary | 1. ARR |
|---|---|---|---|
| Deliverable Name | Project final report | | |
| Type | R — Document, report | Dissemination Level | SEN - Sensitive |
| Due Date (month) | 36 | Work Package No | WP1 |

| Description |
|---|

| |
|---|
| The implementation of the project, the progress of the project outputs and indicators will be continuously monitored by the general manager of EDIH NEB. A final report on the project implementation will be prepared in month 36, which will include an assessment of all relevant WPs towards the achievement of the defined project objectives, outputs and indicators. |

## Deliverable D2.1 – Proposals for changes in the field of digitisation (i.e. a report on the implementation of each Test before Invest service)

| | | | |
|---|---|---|---|
| **Deliverable Number** | D2.1 | **Lead Beneficiary** | 1. ARR |
| **Deliverable Name** | Proposals for changes in the field of digitisation (i.e. a report on the implementation of each Test before Invest service) | | |
| **Type** | R — Document, report | **Dissemination Level** | SEN - Sensitive |
| **Due Date (month)** | 36 | **Work Package No** | WP2 |

| **Description** |
|---|
| A4 PDF format, English language (approx. 1-2 pages per service), overview of services, see above |

## Deliverable D3.1 – Certificates from courses / internships

| | | | |
|---|---|---|---|
| **Deliverable Number** | D3.1 | **Lead Beneficiary** | 1. ARR |
| **Deliverable Name** | Certificates from courses / internships | | |
| **Type** | R — Document, report | **Dissemination Level** | PU - Public |
| **Due Date (month)** | 36 | **Work Package No** | WP3 |

| **Description** |
|---|
| around 220 certificates from courses / internships, A4, English language |

## Deliverable D4.1 – In-depth analysis of EDIH target groups in the Czech Republic and abroad.

| | | | |
|---|---|---|---|
| **Deliverable Number** | D4.1 | **Lead Beneficiary** | 3. NCA |
| **Deliverable Name** | In-depth analysis of EDIH target groups in the Czech Republic and abroad. | | |
| **Type** | R — Document, report | **Dissemination Level** | PU - Public |
| **Due Date (month)** | 18 | **Work Package No** | WP4 |

| **Description** |
|---|
| A4 format, PDF version, number of pages, Czech Language |

## Deliverable D4.2 – Database of cooperating entities at regional, national, and EU level (clusters, incubators, chambers of commerce, universities, representatives of regional politics, etc., EDIH in the EU) - excepting EDIH clients, because it's output D 1.1

| | | | |
|---|---|---|---|
| **Deliverable Number** | D4.2 | **Lead Beneficiary** | 3. NCA |

| | | | |
|---|---|---|---|
| **Deliverable Name** | Database of cooperating entities at regional, national, and EU level (clusters, incubators, chambers of commerce, universities, representatives of regional politics, etc., EDIH in the EU) - excepting EDIH clients, because it's output D 1.1 | | |
| **Type** | DATA — data sets, microdata, etc | **Dissemination Level** | SEN - Sensitive |
| **Due Date (month)** | 36 | **Work Package No** | WP4 |

| **Description** |
|---|
| Database of contacts and type of coopration (approximately 50 entities) |

## Deliverable D5.1 – Number of submitted grant / loan / other financial resources or documented cooperation in finding suitable financial resources

| | | | |
|---|---|---|---|
| **Deliverable Number** | D5.1 | **Lead Beneficiary** | 1. ARR |
| **Deliverable Name** | Number of submitted grant / loan / other financial resources or documented cooperation in finding suitable financial resources | | |
| **Type** | DATA — data sets, microdata, etc | **Dissemination Level** | SEN - Sensitive |
| **Due Date (month)** | 36 | **Work Package No** | WP5 |

| **Description** |
|---|
| Confirmation having submitted applications for a grant / loan / other source of financing (approximately 6 times a year) |

## Deliverable D5.2 – Screening sources of financing

| | | | |
|---|---|---|---|
| **Deliverable Number** | D5.2 | **Lead Beneficiary** | 1. ARR |
| **Deliverable Name** | Screening sources of financing | | |
| **Type** | R — Document, report | **Dissemination Level** | PU - Public |
| **Due Date (month)** | 36 | **Work Package No** | WP5 |

| **Description** |
|---|
| Regular reporting to clients on sources of financing (approximately once a month) |

## Deliverable D6.1 – Dissemination and Exploitation

| | | | |
|---|---|---|---|
| **Deliverable Number** | D6.1 | **Lead Beneficiary** | 1. ARR |
| **Deliverable Name** | Dissemination and Exploitation | | |
| **Type** | R — Document, report | **Dissemination Level** | PU - Public |
| **Due Date (month)** | 6 | **Work Package No** | WP6 |

| **Description** |
|---|
| compilation of the dissemination and exploitation plan within 6 months |

# LIST OF MILESTONES

**Milestones**

*Grant Preparation (Milestones screen) — Enter the info.*

| Milestone No | Milestone Name | Work Package No | Lead Beneficiary | Means of Verification | Due Date (month) |
|---|---|---|---|---|---|
| 1 | Interim evaluation report | WP1 | 1-ARR | Evaluation report prepared. Preparation of an interim evaluation report for the period from the 1st to the 18th month of the project implementation on the progress of implementation of activities, outputs, indicators and objectives of the project. The milestone is the achievement of at least 30% of the expected outputs/indicators. | 20 |
| 2 | Communication plan | WP6 | 1-ARR | The elaborated plan | 6 |

# LIST OF CRITICAL RISKS

**Critical risks & risk management strategy**

*Grant Preparation (Critical Risks screen) — Enter the info.*

| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
|---|---|---|---|
| 1 | External risks: Serious epidemics, pandemics, and similar situations within the territory, economic downturn | WP4, WP5, WP2, WP6, WP1, WP3 | Epidemics/pandemics are among the more significant risks to the project. The economy slowed during COVID-19; in some cases, companies simply opted to resolve basic operational problems, meaning there was no will to deal with development. On the other hand, a fundamental need was manifested for a higher degree of digitisation, which helps companies and public administration stay in business or keep on functioning in spite of the unfavourable conditions in society. This risk has currently been eliminated both by the retreating pandemic and by |

**Critical risks & risk management strategy**

*Grant Preparation (Critical Risks screen) — Enter the info.*

| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
|---|---|---|---|
| | | | the experience gained by all stakeholders (i.e. being able to survive on the market during a pandemic). |
| 2 | Financial risks: Not obtaining a subsidy and No funding for the project, project financing | WP4, WP2, WP5, WP6, WP1, WP3 | The need to find alternative sources of finance if the subsidy is not obtained. This is currently the fundamental prerequisite for the execution of the project. Project partners are economically-stable organisations having a long history. Some partners are linked to public entities, and together they deal with project funding. Project funding has been discussed, the risks have been minimised. Financing of the project is solved in case of eligible project expenses from the European Commission resources and the remaining part from national resources. Any ineligible expenditure may be covered by the project income. The individual partners are financially stable organisations that have considered the financial risks of the project and assume their responsibilities in this context. |
| 3 | Operating risks: Failure to meet project indicators | WP4, WP2, WP5, WP6, WP1, WP3 | Indicators have been realistically set, according to the previous experience of partners and according to the type of services and the capacity of the partners. Achievement of the set indicators will be continuously monitored by the project Lead Partner and, if necessary, steps will be taken to eliminate the risk of failure to achieve those indicators. |
| 4 | Operating risks: Insufficient interest among the target group in EDIH NEB services | WP4, WP2, WP5, WP3 | We dealt with the elimination of this risk during project planning and preparation. Adequate market research and analysis of the environmental were carried out. The consortium partners also draw on their own experience. Activities were included in the project that are important to the target group, that are in demand, and that correspond to current market needs. We will also support interest in the services on offer through communication and dissemination activities. |
| 5 | Operating risks: Ineffective communication within the EDIH NEB team | WP1 | The initial setting of cooperation and communication within the partner grouping is laid down in a consortium agreement. The fundamental processes of managing the consortium and the project have already been defined. An organisation team has been set up for the project and primary responsibility for the individual activities of EDIH NEB and the methods of cooperation, communication, and record-taking have been determined. |

**Critical risks & risk management strategy**

*Grant Preparation (Critical Risks screen) — Enter the info.*

| Risk number | Description | Work Package No(s) | Proposed Mitigation Measures |
|---|---|---|---|
| 6 | Operating risks: Lack of competency among personnel, personnel turnover | WP1 | Most of the positions within the implementation team are occupied by existing employees of partner organisations who have the appropriate, provable competencies. The selection of other team members will respect the set qualification requirements for the position in question. Staff turnover, however, is a natural part of operation. It is necessary to work with it and to solve the problems that it brings in a timely manner. The risk is, inter alia, eliminated by partners that are strong in terms of personnel and qualification and that know how to solve these problems with a high degree of flexibility. |
| 7 | Rapid changes in emerging technologies | WP2 | EDIH must acknowledge the risk associated with the rapid development of new technologies and must adapt flexibly to such changes. We expect the implementation team to undergo training as part of the project. |

# TECHNICAL DESCRIPTION (PART B)

| History of changes | | |
|---|---|---|
| Version | Publication date | Change |
| 1.0 | 9.2.2023 | WP1, T1.6: description added with the word "DTA": Cooperation with the EC (DTA) and eDIH network (training of eDIH staff, working with the EC information system, etc.). And we have added text to the DTA. |
| 1.0 | 9.2.2023 | We remove the milestones and deliverables tables WP1 to WP6. Only in WP6 we kept Dissemination and exploitation. |

| PROJECT | |
|---|---|
| **Project name:** | **EDIH Northern and Eastern Bohemia** |
| **Project acronym:** | **EDIH NEB** |
| **Coordinator contact:** | [redacted] ARR – Agentura regionálního rozvoje,spol.s r.o.: [redacted]<br>[redacted] ARR – Agentura regionálního rozvoje, spol. s r.o.: [redacted] |

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# PROJECT SUMMARY

**INTRODUCTORY INFORMATION ON THE EDIH NEB PROJECT:**

The EDIH NEB project was submitted in February 2022 in the 1st round of Call: DIGITAL-2021-EDIH-01, Proposal number: SEP-210812702.The project passed through evaluation and obtained such a score that met the minimum points threshold. However, due to an insufficient level of allocation, the project was placed in the pile.

For this reason, we are submitting an application for the 2nd round of Call: DIGITAL-2022-EDIH-03. We updated the text according to the conditions of this 2nd call and according to the additional requirements of the partners. As part of this application, we have primarily supplemented the information that was listed in the evaluation as inadequately described.

At the same time, the consortium of EDIH partners continued cooperation in support of increasing the digital maturity of the region and creating a suitable environment for mutual cooperation, cooperation with other important entities in the region, outside the region, and outside the Czech Republic. We have also expanded cross-border cooperation to include further partnerships with Smart System Hub GmbH Dresden.

We continuously disseminate information about existing DIH NEB activities at https://www.dih-northeast.cz/, as well as through events, personal meetings, social networks, and other information tools.

# 1. RELEVANCE

## 1.1 Objectives and activities

**Objectives and activities**

*Describe how the project is aligned with the objectives and activities as described in the Call document. How does the project address the general objectives and themes and priorities of the call? What is the project's contribution to the overall Digital Europe Programme objectives?*

**The main objective of EDIH NEB** is to support the digital transformation of SMEs, start-ups, mid-caps, and public entities and to create the best possible conditions to ensure the long-term commercial success of all those involved by increasing their competitiveness, capacity for action, and effectiveness in processes, products, or services that use advanced digital technologies.

Sub-objectives in relation to the target group of the project:

- To make digital transformation accessible
- To increase the level of digital transformation
- To improve and streamline production and commercial processes, services
- To concentrate knowledge in the sphere of digital technologies in the region
- To provide the necessary institutional and technological support for deployment of the digital technologies and procedures that correspond to digital transformation

**As far as institutions are concerned, the project is based on a platform of expert and research institutions / companies that have been in existence for many years, all connected within a consortium:**

- ✓ ARR - Agentura regionálního rozvoje, spol. s r.o. (Agency for Regional Development - **ARR** - Lead Partner)
- ✓ the Technical University of Liberec (**TUL**)
- ✓ the University of Hradec Králové (**UHK**)
- ✓ **VÚTS** a.s.
- ✓ **AEC** a.s.
- ✓ Národní klastrová asociace (National Cluster Association - **NCA**)
- ✓ Centrum investic, rozvoje a inovací (Centre for Investment, Development and Innovation - **CIRI**)

The individual partners are described in more detail in chapter 2.3.

**EDIH NEB is a significant part of the innovation infrastructure in the Liberec and Hradec Králové regions (CZ05 Northeast). In this respect, the natural industrial and research centres that are the cities of Liberec and Hradec Králové are important European hubs of support for research, development, and innovation. Moreover, the Liberec region is a world leader in the development of industrial technologies for the production of nanomaterials and related nanotechnologies. EDIH NEB concentrates on digitisation and artificial intelligence in connection with**

**digital modelling, the simulation of technological processes, sensor technology, etc.**

**Main geographical coverage:**

The coverage of cooperation and services by the EDIH NEB consortium has 4 geographical dimensions. EDIH NEB primarily targets the territory of **the Liberec Region and the Hradec Králové Region (NUTS2 CZ05 Northeast)**. The second catchment dimension of the unique and other digitisation services on offer is the rest of the Czech Republic.

The third entirely fundamental **geographical dimension, one which is absolutely unique within the Czech Republic in light of the geographical position of the Liberec and Hradec Králové regions in the border region with Poland and Germany,** is expansion of the quality cooperation already in existence as part of what is known as **Euroregion Nisa, and to some extent Euroregion Glacensis.** This is an area that borders Poland and Germany (Saxony, Lower Silesia, Opole Voivodeship). Specific cooperation between sub-entities in the regions of all 3 countries began in the past and is now being extended to include digitisation and mutual cooperation in support of the digital transformation of companies and public administration. Cooperation with certain entities is also documented in the form of a letter of intent (see the chapter 2.3). The fourth geographical dimension to the cooperation, exchange of experience, and offer of services which the EDIH NEB consortium brings takes the shape of other foreign cooperation within the territory of the EU, or indeed worldwide. High-quality and extremely close cooperation by EDIH NEB within the EU is built on involvement in the strong European EDIH4MANU network, encompassing a total of 25 EDIH groups from throughout the EU (see Networking).

**Specific objectives of the EDIH NEB project:**

- To contribute toward fulfilling the EC objective of having 90 % of companies with at least a basic level of digitisation by 2030
- To contribute toward achieving the EC's objective of having 75% of companies using advanced digital technologies by 2030
- To support SMEs in the development, testing, and implementation of advanced production technologies and business organisation methods, as corresponding to the elements of Industry 4.0.
- To bring together academic and business spheres
- To connect knowledge and skills in the field of digitisation, to increase the number of employees with knowledge of advanced digital technologies
- To arrange cooperation between EDIH NEB clients and the EDIH network
- To introduce innovations in the technological areas on which EDIH NEB focuses
- To support the introduction of modern and intelligent technologies that facilitate energy savings, raise the living standards of the population, and are kind to the environment and to support the implementation of the Green Deal in general


- To intensify cooperation in unique digitisation knowledge in the NUTS 2 region and to develop the regional, national, and international innovation ecosystem
- To strengthen cross-border cooperation and support for new synergies within the CZ / D / PL border regions
- To present the results of EDIH NEB activities to the public and motivate the target group
- To streamline public administration

**In the long term, EDIH NEB will support a sustainable economic model where productivity and competitiveness do not come at the expense of limited resources.** Support for digital transformation thus helps transform **the economy in the direction of emission-free operation** in accordance with the European Green Deal.

EDIH NEB enables the project's target group to access key knowledge, software, technology platforms, prototype solutions, and testing systems, thus improving the quality of their production, business processes, and services and facilitating the manufacture of products or the provision of services with high added value, and in turn supporting the development of the economy based on knowledge.

In addition to research capacities, EDIH NEB also focuses on regional domains of specialisation (within RIS3 strategy), as well as the technological and sectoral structure of the local business environment.

**The regional domains of innovative specialisations in the Liberec Region (LK) and the Hradec Králové Region (HK) coincide in five areas** (advanced engineering, advanced transport equipment, means of transport and their components, electronics, optoelectronics, optics, electrical engineering and IT, new textile materials, and technologies for multidisciplinary application). The technological trend of augmented and virtual reality shows the highest degree of overlap with regional domains of specialisation. The more general trends of artificial intelligence and robotics also display a high level of overlap.

**EDIH NEB services are primarily linked to the following key sectors: Advanced Engineering, Automotive industry, Aerospace, Optics, Nanotechnology, and Healthcare.**

**EDIH NEB primarily targets its activities at supporting digitisation with a link to artificial intelligence (AI), and secondarily to cyber security as an integral part of digitisation.**

Overview of main EDIH NEB services in the area of Test Before Invest (elaborated in more detail later):

**In relation to AI:**

- **Speech recognition and synthesis, natural language comprehension**
- **Machine learning and neural networks**
- **Cloud robotics, cybernetics, swarm robotics, collaborating robots, digital twin**
- **Virtual and augmented reality (3D printing and 3D scanning, sensor technology, super-precision optics, access to Big-data, mathematical-physical modelling and simulation)**
- **Autonomous vehicles, electromobility, Edge Computing**
- **Industrial Internet of Things (IIoT), the use of AI and advanced analytics, data processing, IoT, bio-informatics**
- **Other services in the field of digitisation**

***Cross-sectional topics*: digital audits, smart city, web systems and applications, etc.**

**In relation to cyber security:**

- **Cybersecurity audits**
- **Penetration testing**
- **Comprehensive preparation of SMEs for security certifications**

**Target groups**: EDIH NEB services are generally designed to support the development of SMEs, including start-ups, larger companies (mid-caps), and public sector entities. Within its activities, EDIH NEB brings together a number of experts, researchers, regional stakeholders, representatives of clusters, and other institutions connected by the topic of digitisation. It is responsible for the creation of a functioning ecosystem in this area and focuses on bringing together SMEs, academia, and research. The consortium partners have knowledge and technologies (see Test Before Invest services below) that can be used by both businesses and public organisations. They have established cooperation with both sectors as part of their activities. The majority of **EDIH NEB's clients** are small and medium-sized enterprises engaged in the sectors specified above, this ensuing from the characteristics of the sectoral division of the primary region and from the experience of individual partners.

Thanks to the wide range of services which EDIH NEB provides, EDIH clients come from an extremely diverse range of sectors: the manufacturing industry, particularly in the field of machining, textile, printing, food, packaging, and medical technology. Moreover, SMEs from the sphere of engineering, the automotive industry, plastics, foundries, the medical or glassmaking industries. For some services, SMEs from sales, marketing, or design and prototype studios, product designers, ICT companies, and larger manufacturing / construction companies.

The demand identified means that some EDIH services are targeted at companies that are seeking automation, development, the construction and building of special-purpose machines, handling equipment, conveyors, and testing equipment.

The **description of the needs** of EDIH clients is based on previously-implemented mapping of the innovative environment, field surveys, round tables, meetings of technological platforms, and other resources that describe EDIH activities. The group of respondents mainly comprises companies from the fields of advanced engineering, the automotive industry, the aerospace industry, optics, nanotechnology, and health care, etc.

Despite the diversity of clients and their focus, their needs are more or less the same. These needs are addressed by the services provided by EDIH NEB and its design. The largest area of need can be integrated under the automation, robotisation, and digitisation of processes. In order to automate and digitise their processes, clients deal with the implementation of various types of sensors for data collection. Sensors might use optical and optoelectronic systems, 3D laser scanning, ultrasonic technologies, and a number of other technologies.

Data can be monitored within the entire production process (production monitoring system) and within individual workplaces through machine vision. In order to efficiently optimise processes and planning, clients have to deal with the processing of large amounts of data. By analysing large data sets, clients can identify patterns and generate predictions. Clients use machine learning in the development of a new product, in production, in optimising the production chain, etc. The current technological trend lies in the transition from own ICT infrastructure to cloud computing. Clients use Internet services instead of their own applications, servers, databases, networks, and software.

As part of their activities, clients may encounter the situation in which it is necessary for them to carry out product or process testing before including it in the portfolio. Using computer simulations and advanced calculations, clients can gain significant savings in time and money in comparison with prototype testing. One of the advanced simulation methods that

clients can use is the digital twin, which is a virtual, data-driven simulation of a machine, product, process or system in the real world.

For some clients, 3D technology is one of the key needs from the perspective of digitisation. The main types of this technology are 3D scanning, which allows you to convert objects into digital form and work with them, and 3D printing, which allows you to convert a digital object into physical form using a wide range of materials. Connectivity is another important need that clients handle within the context of digitisation. With an expanding amount of IoT equipment, it is necessary to provide reliable and secure communication channels. Depending on the client's needs, various types of networks can be used, from networks with high energy performance to 5G networks with high transmission speeds.
The need for secure communication channels becomes increasingly important as the concept of Smart Factors becomes broader. Clients with a higher degree of digitisation require the protection of connectivity between devices. The increasing number of devices connected to a private network poses a threat from the perspective of cybersecurity. Any sufficiently insecure device is a potential access point for a cyber attack. Ensuring cybersecurity is therefore an integral part of digitisation.
The main clients of EDIH NEB also include public administration, whose needs may differ from SMEs. The main needs of public administration include the automation and digitisation of processes, the development of 5G networks and ICT infrastructures in general, the development of Smart City solutions and the use of smart technologies, the collection of data on transport, the weather, the functioning of public buildings, security, the environment, etc.
Some EDIH NEB services are aimed at small companies that do not have their own development departments or that are specifically focused on other industries and are unskilled in the specialisations on offer. Typical of the clients in this area are companies from the sphere of customised electronics and production machines, as well as young start-ups engaging in micromobility and last mile mobility, service robotics, etc.
EDIH clients also include industrial enterprises that do not have sufficient HR capacity, specialising in IT operating infrastructure and IT security. The range of EDIH services is also intended for design and prototype SMEs that do not have the necessary technical facilities and that need verification of structural elements or small-series test series.
As far as public administration clients are concerned, there are 663 municipalities in the LK and HK regions, 86 of which have town status. Over 100 municipalities have more than 1,000 inhabitants. These municipalities fall within the potential target group of EDIH NEB. Attention will also be paid to other public institutions, such as regional authorities, hospitals (15), education facilities (approximately 1,200), other organisations receiving contributions from municipalities and towns, entities owned / established by public entities, etc. From this point of view, modernisation and innovation in public administration have become a requirement (E-government, the use of AI in public administration, education, cyber security, etc.).
If enterprises do not respond to current trends, they risk losing the ability to stay competitive, will not increase their innovation performance, and may have to face up to changes in production chains, for example. The need for a higher level of digitisation transformation at enterprises is therefore evident. It is also important to eliminate reluctance on the part of the public sector to innovate and to support cooperation with the private sector in the development of digitisation. That is why EDIH NEB helps public authorities establish contacts with companies that are ready to provide the necessary digital technology solutions, and can therefore help them fully exploit the potential of innovation. The need for digital transformation among SMEs and the innovation environment has been further intensified by the events and impacts of the COVID-19 pandemic. A high level of digital knowledge is required to ensure the stability of entrepreneurs and public administration in future crises, whether health crises or other.

**The main services of EDIH NEB:**

**I. Test Before Invest (WP2)**:
The Test Before Invest service incorporates unique services within the Czech Republic, the EU and the related cross-border area, as well as more common services in the field of digitisation. Most of the services offered by the consortium are identified as "unique": they are specifically unique within the primary catchment area of NUTS2 Northeast and within the Czech-Polish-German border territory. The uniqueness of the services is evidenced by the expertise of the consortium partners involved - key entities in the region and the Czech Republic in the field of research, development, and innovation in connection with the sphere of digitisation. The involvement of partners in a number of national and international research and innovation projects and activities also demonstrates their excellence (see Annex).

**Overview of the professional focus of EDIH NEB (more elaboration below):**
The partners which principally provide the relevant sphere of services are specified for each service. If multiple partners are listed in one area, each partner provides a service to a certain extent, in a certain specialisation, and with certain equipment. The service is then interconnected and exploits mutual synergies of approaches and skills to ensure the maximum satisfaction of EDIH NEB clients. Many of the services are **accompanied by the logic of developing the client's actual needs**. One example of this is the sequence of follow-up services Digital Audit - Cyber Security Audit -

Penetration Testing, in which the primary identification of needs by the Lead Partner leads the client on to other services. The whole process is then controlled and monitored step-by- step through CRM. The individual services of the EDIH NEB can find application in both the business and public sectors.

**In relation to AI:**

**Speech recognition and synthesis, natural language comprehension** (provided by TUL)

- **Consultation in the industrial application of AI-based voice recognition, image recognition, Tests and proof-of-concepts in the industrial application of AI-based voice recognition, image recognition**

The use of DeepLearning techniques in the comprehensive processing of spoken word and image. The unique service incorporates the use of open and customised libraries, the implementation of natural language processing, the automation of processes dependent on image or voice processing, the recognition of objects in a dynamically captured scene using YOLO, and verification of conceptual solutions within specific PoC.

**Machine learning and neural networks** (provided by VÚTS, UHK, TUL)

EDIH NEB will use machine vision in the design and manufacture of machines and equipment requiring of a visual inspection of dimensions, the presence of parts, shapes, colour, positions, reading text - OCR, Pattern Recognition, etc. Systems of inspection tasks (HW, SW) for the equipment made will be designed and fine-tuned in this area.

Techniques such as Machine Learning, Deep Learning, and many others will be used during development.

The development of machine learning, artificial intelligence and deep learning models is also provided. Related data analysis and searching for contexts, or looking for optimal paths. A wide range of equipment is available as far as infrastructure is concerned; for example optics - cameras and lighting (conventional industrial cameras, high-resolution cameras, high-speed cameras, line-scan cameras, thermal cameras, fast thermal cameras, sensing elements), the necessary SW and algorithms, computer stations (particularly in the areas of 3D, 2D with high resolution and frame rate, processing is undertaken on powerful industrial computers with processing on GPU - graphic processing accelerators).

**Cloud robotics, cybernetics, robotics, swarm robotics, collaborating robots** (provided by TUL): Services using industrial and collaborative robots with other accessories, computer vision, force-torque sensors. Consultation on the robotisation of workplaces. SWOT analysis and the implementation of proof-of-concept for the relevant solution.

**Virtual and augmented reality (3D printing/3D scanning, sensor technology, super-precision optics, access to Big-data, mathematical-physical modelling and simulation, digital twin)** (provided by VÚTS, TUL, UHK)

- **The creation of a virtual model, calculations (within the remit of VÚTS):**

Calculations and modelling of the behaviour of machines and equipment, simulations, particularly during the phase of designing and developing machines and equipment and testing them. The data obtained, the models created, etc. might be usable during other phases of the process of creating and implementing a digital twin. Competencies in the field of calculations and modelling, which might be implemented individually or comprehensively, facilitating the design and implementation of a virtual model (twin):

I. Computational mechanics of solids

A. EXTENDED FEM ANALYSIS (non-linear materials, problems with contacts, major deformations, shape of the welded joints of polymers, modal analysis)

B. MECHANISMS (dynamics of a multi-body system, analytical solutions, optimisation, the balancing of mechanisms)

C. OPTIMISATION (topology, parametric, sensitivity analysis, specific and internal codes)

D. EXPERIMENTAL VERIFICATION (deformation fields - reflectometers, 3D scanner, stress fields - 2D / 3D digital image correlation, strain gauges, temperature fields, velocities, acceleration, etc.

II. MATERIAL RESEARCH AND STRUCTURAL TESTS: Material models for non-linear FEM analysis based on mechanical tests (composites, reinforced plastics, etc.), static, dynamic and fatigue tests, isotropic, orthotropic and anisotropic mats, optical structure analysis (SEM), optical measurement of deflection and stress (2D and 3D), environmental chambers, structural tests.

Related test infrastructure: a wide range of SW resources (FLUENT-fluid dynamics, AnsysFLUENT 14.0-fluid dynamics, OpenFOAM-fluid dynamics, Msc. ADAMS-multibodydynamics, Msc. MARC-FEM, NX NASTRAN-FEM, NX IDEAS-FEM, MAPLE-math, SolidWorks, SolidEdge, Gambit-CAD / mesh) with the necessary HW equipment.

- **Digitisation (3D scan + reverse engineering) and 3D printing (within the remit of VÚTS, TUL):**

2D and 3D scanning is offered when designing new machines and equipment and when optimising and increasing the performance of existing machines.

2D scanning: Image acquisition (data collection) for inspection tasks, dimension inspections, machine reading.

3D scanning: Complex and more demanding tasks in creating 3D digital models, supported by the use of structured light

or LASER technology (e.g. dimension inspection, verification of used technology, reverse engineering, data acquisition for 3D printing, simulation and modelling, including use for the creation of a digital twin).
3D printing: The use of design CAD data in the creation of new equipment and data obtained by 3D scanning in the manufacture of parts according to templates from existing equipment. Processing scanned data for the needs of 3D printing. End-to-end support in the field of AM technologies: Optimisation of design and structure, topological optimisation, preparation / scanning of a 3D model, selection of optimum technology and suitable material - polymer resins, thermoplastics, solid composites, including metals, effective management of energy and heat consumption in industrial applications of AM technologies.
**A unique experimental and testing centre for machine vision is available for services at VÚTS,** what is known as I-Box for automatic 3D control, optimising inspection and evaluation - the use of artificial intelligence techniques - AI, artificial neural networks - ANN, machine learning - Deep Learning, Machine Learning, Data Mining, etc. This workplace (testbed) can be used for designs, simulation and debugging projects and the tasks of 2D and 3D inspections employing a wide range of equipment. For testing, verifying functionality, assessing the suitability of deployment in real operation, for example on a production line, verification of 2D and 3D technology, sensors, methodologies, remote control, remote processing, predictive diagnostics, and many other techniques. As for 3D printing, VÚTS has printers that make it possible to print using the following technologies: FDM, FFF, CFF, SLA and Jet Fusion.

- **The measurement and analysis of data for comparison of virtual / real product** (within the remit of VÚTS)**:**

Detection and measurement of parameters of machines and equipment. Verification of designed machines and equipment, i.e. that the real measured data either act as background-input data in calculations, or are used for a comparison of the behaviour of prototypes and machines with calculated parameters and simulation results (N.B. partially connected to the issue of digital twins).
Related services:

- Processing and assessing the parameters of machines and equipment (measuring physical quantities, data analysis, compiling proposals for improvement)
- Measurements for mathematical models (determination of material parameters, determination of boundary and initial conditions for subsequent calculations and simulations, for experimental measurements and tuning)
- Research in the field of measuring techniques (proposing special measuring methods, sensors, test equipment and evaluation software).

There are special SW laboratories and instrumentation available, such as a laboratory for measuring noise and vibration, means for measuring force, dynamic effects, pressure, temperatures, deformations, etc.

- **Consultation on data analysis, modelling, simulation, ML and AI processing, tests and proof-of-concepts analysis and data processing** (within the remit of TUL, UHK):

The use of advanced data analysis and artificial intelligence on client data to optimise and streamline processes and implement data-driven manufacturing to achieve greater automation of data evaluation. Combining data from several different sources, correlation structure of multidimensional data and statistical inference methods, regression analysis to reduce model parameters, machine learning methods (e.g. Support vector machine) for classification and regression, neural networks will be used for the modelling, control, and diagnostics of an engine (e.g. multilayer perceptron), other methods of data mining, derivation and prediction suitable for source data (link to the chapter on machine learning and neural networks).
The development of agent models and social simulations that can be used, for example, for testing hypotheses about customer behaviour. The development of real-time simulations (for example, a simulator of the functioning of the rescue and emergency services).

- **EMC tests of electronics, sensors, devices, analysis of electronic devices** (within the remit of TUL)

There is an electromagnetic compatibility (EMC) testing laboratory available, intended for pre-certification tests of products and equipment during development, meaning at the pre-production phase. The test lab is equipped with state-of-the-art equipment for most mandatory tests defined by product standards and is intended for pre-certification tests, significantly helping reduce development time and in doing so reducing the risk of failing expensive accredited measurements. It is able to validate equipment that is malfunctioning and thus contribute to dispute resolution in the supply and demand chain.
The test laboratory tests all products that contain electrical and electronic components.
The implementation of risk analyses and reliability predictions in the demanding fields of the nuclear and petrochemical industries. The necessary SW and HW equipment is available for calculations and processing.

- **Consultation and proof-of-concepts in the field of AR and MS Hololens, Tests and proof-of-concepts in the field of AR** (within the remit of TUL)

The identification of suitable use-cases for the use of MR / AR, the design of low-poly 3D scenes, the optimisation of geometry and materials, the use of LoD methods, baked lighting, UV mapping, etc. The development of interactive applications for the Hololens platform or cloud applications for remote collaboration.

**Autonomous vehicles, electromobility, Edge Computing** (provided by TUL)

- **Consultation in the field of electromobility, battery power supply, and alternative energy sources**

The service offers battery-pack specification and validation proposal. This also applies to the design of the entire propulsion chain, from battery to engine. Battery testers, emulators, power supply units, and loads are all available.

**The Industrial Internet of Things (IIoT), IoT, the use of AI and advanced analytics, data processing, 5G networks, bio-informatics** (provided by ARR, TUL, UHK)

**- IoT service**: As far as Industry 4.0 is concerned, EDIH NEB primarily offers services in the use of and efficient work with cloud storage sites, data centres, machine learning, and the use of artificial intelligence, the automatic reporting of problems during production, what are known as smart warehouses, etc. **As part of this EDIH NEB service, IoT / IIoT and smart technologies will be designed and tested** under the specific conditions in place at the company / public institution (ARR is mainly experienced in the sphere of sensor solutions, control units, flexible power supply, communication technologies, remote control, monitoring systems, etc.). Alongside its use in public administration, IoT is also used in manufacturing, construction, healthcare, agriculture and forestry, and the management of resources, energy, and buildings. IoT devices bring companies and public institutions savings, higher productivity, and optimisation.

TUL develops specific sensors and industrial IoT devices, including the corresponding equipment for HW and SW development. The service includes a complete life-cycle analysis, the design, development, and deployment of IIoT, including integration into the clients' OT / IT environment and ensuring communication from the edge layer to superordinated systems. There is a test campus with the latest-generation 5G industrial network, on which it is possible to verify modern wireless communication solutions with low latencies and specific security. UHK provides a service in the field of IoT / Smart solutions to various extents, assesses the suitability of the technology, tests functionalities and declared properties, designs SW and HW solutions, etc.

There are plans to acquire a TestBed for **Industry 4.0 and the Industrial Internet of Things (IIoT)** within the EDIH NEB budget - in the ARR area. The Testbed will be a unique workplace that focuses on dealing with the practical needs of EDIH NEB clients in the area of what is known as Industry 4.0 and the Industrial Internet of Things. It will create a framework for effective cooperation between industry and universities. It is therefore possible to verify investments in digital technologies before they are actually made, to test the mechatronics of production lines in order to increase production efficiency, to develop digitised applications and customised electronics, etc. TestBed technology will make it possible to improve production operations through better connectivity of individual production facilities, production management and monitoring. The technology will allow large amounts of data to be collected and shared in real time, facilitating an immediate response in the event of disruption to production. Connecting IIoT-compatible devices to the network will make it possible to manage them remotely, predictive maintenance included. The TestBed will be a demonstration and testing facility that will be made available to EDIH NEB clients according to their needs, and to all EDIH NEB partners.

**Digital audits, smart city, web systems and applications, economic consulting, etc.** (service provided by ARR, TUL, UHK)

**Digital audit** (within the remit of ARR) is carried out within the PlatInn program, which is a consultancy and innovation program for SMEs aimed at providing comprehensive support for the digital transformation of SMEs. The digital audit comprehensively assesses the situation which a company / public organisation finds itself in as regards the digitisation of processes and proposes the necessary measures as leading to the gradual digital transformation of the company.

**Smart Cities** (within the remit of the ARR) is directed at public entities. EDIH's work in this area supports the introduction of modern and intelligent technologies that make it possible to save energy, raise the living standards of the population, and save the environment. It is about cooperation between the public sector and the spheres of business and academia. The Smart City concept works with the use of ICT, through which it builds social and technological infrastructure and facilitates sustainable economic growth. EDIH NEB will work with towns and municipalities to prepare "smart" solutions in the field of building and developing public infrastructure in various areas of life (transport, technical infrastructure, tourism, environment, social areas, education, healthcare, etc.).

**Economic consulting** (within the remit of TUL) offers experience of compiling a methodology for the economic evaluation of innovation projects and calculations of the profitability of specific solutions for specific clients. EDIH NEB will therefore be able to provide a comprehensive service, including the preparation of business cases and ROI.

**Consultation on the development of web applications, mobile applications, applications in the field of computer graphics and data visualisation** and in the sphere of processing various volumes of structured or unstructured data, the establishment and management of data repositories (within the remit of UHK).

**Ethical principles in connection with AI** - all members of the consortium are fully aware of the need to address ethical issues that relate to potential hazards that could arise from the activities of EDIH NEB, including those linked to the use of

artificial intelligence (AI) during the various processes of their services. Individual members of the consortium therefore continuously monitor their own activities and any possible resultant risks and take appropriate measures, all in line with the applicable national and international legislation. If necessary, the Director of the EDIH also participates in the monitoring and addressing of potential risks relating to ethical issues, including those in the area of AI. For further explanation, see "Ethics Issues Table".

**In relation to cyber security:**

**Consultancy on cyber security** (within the remit of NCA and UHK): Includes a comprehensive range of sub-services, the aim being to identify weak points in the security of digitising elements of the client's infrastructure.

**Cyber-security audit**

This is primary identification of the client's needs in relation to cyber security. It is targeted at SMS and public administration. Analytical activities comprehensively assess the readiness or level of security of the client organisation / company from the perspective of the digital security of internal HW and SW, as well as processes and human capital. Based on a thorough analysis, a proposal will be created for possible interventions in order to minimise or successfully prevent digital security risks.

Cybersecurity and artificial intelligence (AI) as a security feature can be included in the unique areas of services provided. This portion of services draws on the use of AI within the traditional IT infrastructure to increase cyber security. The field of application is very broad indeed. Security measures and technological solutions are generally proposed based on a security analysis and the current level of IT. Unlike standard solutions, which are limited in terms of processing the huge amounts of data produced by security probes and monitoring systems, it is possible to use unique methods such as behavioural analyses, agent-based approaches, and machine learning and to infer intelligently from real-time data traffic or from stored data. Consulting in the field of cyber security will also be provided.

A smaller laboratory with the corresponding SW and HW **is currently available in the sphere of testing** equipment. However, the EDIH NEB budget plans to further expand this equipment to include more powerful technology for simulating cyber security tasks and methods of artificial intelligence, server systems, storage sites, security and network elements (the acquisition of what is known as a test polygon for cyber security, including simulation tools).

**Penetration testing** (within the remit of AEC):

Penetration tests using a hacker's attack simulation at network and application level test the ability of company systems to resist real cyber attacks coming from an external or internal environment. Penetration tests help reveal the deficiencies of the system design and its architecture and identify any undersized capacity of the system's components. They check the secured level of confidentiality, integrity, and the availability of data that are being processed by electronic systems. We carry out simulated cyber-attacks on systems, applications, and entire infrastructures. With Red Teaming exercises, you can prove your ability to detect an attack and ensure the correct response using your processes and security specialists. Another service is the simulation of phishing attacks using social engineering techniques. The aim is to detect threats and vulnerabilities that can compromise the confidentiality, integrity, or availability of systems and applications.

**Additional EDIH NEB services in the field of digitisation:**

**Digitisation of a service for public administration in the field of archaeological surveying and archiving with the use of geographic information systems, including the processing of 3D documentation** (within the remit of UHK): complementary services (for the public sector in particular) include services in the sphere of improving qualifications and digital skills in archiving and archaeology. As far as archiving is concerned, we are mainly talking about conversion from field documentation to digital format and its onward processing within the GIS environment. This is followed by further analyses of spatial data and the connection of additional information about archaeological objects or finds through connected databases. Other services include reconstructive computed tomography of items in a collection based on X-ray imaging, enabling a more detailed analysis of the internal structure of the scanned collection items.

**II. Training and skills development (WP3)**

One of the EDIH services is that of developing digital skills by organising suitable educational courses that focus on digitisation and artificial intelligence technologies (artificial intelligence and its use, machine vision and learning, digitisation – 3D printing and reverse engineering, cybersecurity, data analysis and visualisation, additive techniques, robotics and automation, etc.), awareness-raising events, and specific training in new technologies aimed at developing skills and improving the qualifications of employees of companies and public entities alike.

Another area of training is information and cyber security, at several specialised levels, from general security basics to specialised training for managers and architects of cybernetic and information security. Such training are designed in accordance with the requirements of the Act and Decree on Cyber Security and the requirements of the NIS2 directive.

The scope of training encompasses fully-integrated specialised training for IT specialists aimed at identifying and responding to cyber attacks. These are simulated in a unique laboratory environment.

Education is based on the current level of knowledge, the requirements of social life and the labour market, influenced by digital technologies and the information society. Thematically, training will be primarily linked to the areas listed in WP2.

The range of services on offer will mainly mimic the needs of the labour market, the companies in the local ecosystem, and the needs of the time, since the development of such technologies also comes with a shortage of competent workers who know how to work with these technologies.

Employers are gradually demanding more of their employees in terms of their level of digital knowledge, with new types of employment based on professional ICT knowledge now emerging. At the same time, digital transformation has a major impact on education. The shortcomings of the current level of digitisation were fully exposed during the COVID-19 pandemic.

EDIH thus responds to the specific needs of SMEs and of the public sector, which need to increase their expertise, skills, and competences in order to increase their competitiveness within the environment of fast-evolving companies. The aim is to provide clients with the maximum possible support using the knowledge and skills of the EDIH NEB partners that have these abilities.

The specialised services of Test Before Invest were described in detail above. These services increase the digital maturity of companies and public administration. However, the functionality of the entire system must be complemented by a skilled workforce that can work with the new digitised technologies and processes, and that is the objective of this activity.

EDIH supports the growth of SMEs and public organisations through specific professional training. As part of the DEP Advanced Digital Skills pillar – to provide clients with services based on a specific focus/expertise that supports the local and public sector - EDIH OR clients will be provided with short-term training courses in advanced digital skills and job-specific digital skills. Within the priorities of DEP, EDIH NEB will provide training on an open, transparent, and non-discriminatory basis and will make the relevant experimental equipment and equipment for the organisation of conferences, workshops, and seminars available to its clients.
Education will also take the form of internships (at companies, research organisations, etc.), which complement the necessary experience and skills of internship participants under specific operating conditions and with the use of practical examples. The envisaged number of courses / internships and the involvement of individual partners in this activity are presented in Chapter 4.2 Work Packages.
In order to support specialised education in the field of digitisation, a memorandum of cooperation was signed with the Secondary Industrial School in Česká Lípa, as part of which the Liberec Region is building the Junior Centre of Excellence for Cyber Security, which will serve the needs of education for schools, companies, and other entities in the region.
Moreover, a memorandum of cooperation in the field of specialised education was signed with IQLANDIA, an organisation that makes science and research accessible to the general public, is part of a global network of science centres, runs what is known as FabLab, offering modern technologies, participates in educating generations that will be competitive in the era of Industry 4.0, in smart technologies and artificial intelligence, and raises awareness of the results of science and research across society.

**III. Networking and access to innovation ecosystem (WP4)**

Through its activities, EDIH NEB develops a regional, national, and international innovation ecosystem, meaning that **it generates suitable conditions for the creation of a network** of **experts, researchers, innovative companies, representatives of regional politics, representatives of clusters, incubators, chambers of commerce, associations, the Enterprise Europe Network, etc.** Networking is used to generate contacts, bring together various market segments, create lasting ties, and create strategic partnerships that shape onward development synergies.

Thanks to knowledge and an analysis of the target groups, in particular the regional and specific focus, the EDIH will always provide community-building, partnership, and innovation ecosystem services to the relevant target groups in the field of SMEs and public administration.

The networking of all members of the innovation environment will take place through various thematic platforms and events aimed at dissemination, raising awareness, and sharing good practices, thoughts, and ideas in the field of new technologies and digitisation in line with the specific requirements of clients in order to support the implementation of advanced digital technologies into their processes, not only within local ecosystems, but also within the EDIH network. Using these platforms, seminars, workshops, open days, etc., the EDIH brings together entities with common interests, stimulates mutual cooperation and innovation, and seeks solutions in the field of digitisation, the transfer of good practice, and the sharing of experience and information aimed at providing EDIH clients with the maximum possible support using the EDIH NEB network.

**Networking also links supply with demand**, i.e. the demand of EDIH NEB clients in the field of digital transformation

with the supply of professional companies. EDIH NEB begins providing its services at the consultancy phase and moves through finding solutions and the demonstration stage on to the testing phase. The actual implementation of a solution is then directed toward the available market. These include B2B events, matchmaking activities, expert platforms that enable, for example bringing companies into contact with other companies of their value chain, and in seeking synergies with innovators and early adopters, brokering role between public administrations and companies providing e-government technologies.

**One important aspect of networking is international cooperation** between EDIH NEB within the EU and other EDIH, DIH, innovative entities, clusters, universities, etc. Cooperation is active in this regard, starting with the transfer of information, experience and skills, through joint research and development, to joint demonstration and testing activities in connection with meeting the needs of EDIH clients in the use of artificial intelligence, cyber security, and digitisation in general. For this activity, we will use both existing contacts mentioned in chapter 2.3 and new partnerships created in the process of networking (participation in foreign events, platforms, networking within the EDIH, EEN, etc.).

**EDIH NEB also establishes cooperation with other European innovation hubs as part of building and interconnecting ecosystems at local and foreign level**. At the international level, we envisage cooperation with the newly-emerging EDIH alliance from European countries**, the EDIH Manufacturing Network (EDIH4Manu).** EDIH4Manu is an informal inter-regional network of open cooperation among 25 candidates for EDIH from 15 countries that share intelligent specialisations in the field of production. EDIH NEB is expected to provide its facilities for testing, knowledge, and expertise to clients outside its own region. At the same time, it envisages reciprocal support with other EDIHs within a framework of cooperation and expertise offered by other EDIHs. This cooperation will mainly operate on the principle of exchanging information and the results of mapping, examples of good practice, the joint organisation of professional training and courses, informative and networking events, internships or other twinning activities, the aim being to support the use of digital capacities within the specific objectives of the Digital Europe programme (see the attached Memorandum of Cooperation for more). At the same time, it will employ tools such as the Digital Transformation Accelerator to share experiences, ideas, and methodologies in order to build the capacity for continuous improvement and more effective support for the green and digital transformation of SMEs. This will help them expand and penetrate international markets.

**One very important aspect of EDIH NEB activity is cooperation within the Czech-Polish-German border area** (what are known as Euroregion Nisa and Euroregion Glacensis). The pillars of mutual support and specific cooperation in the areas of support for innovation and the digital transformation of companies and organisations will be extended based on the close cooperation to date. EDIH NEB has established cooperation in this border region with a number of entities (primarily universities and innovation centres), 9 of them having documented letters of intent.

Further cooperation at national / international level will proceed using the pan-European **Enterprise Europe Network** (EEN). In this respect, it will be in our common interest to connect companies (supply / demand) and researchers to each other, to jointly organise events, to share experiences, etc. We have established closer cooperation with the representatives of EEN in Prague (within the CAS Technology Centre), see Annex.

Various networking events and activities to build an innovation ecosystem will be organised within the activities of EDIH NEB, an indicative list of which is provided in Chapter 4.2 Work Packages.

Another area of EDIH NEB activity is **analysis and mapping**. This primarily involves in-depth analysis of EDIH target groups in the Czech Republic and abroad. This is analytical material that will quantitatively and qualitatively verify the current needs of companies and identify potential new target groups - clients of EDIH NEB - according to specialisations, the size of companies and which sector they focus on, in connection with other synergetic projects, etc. The material will work with both quantitative and qualitative analysis. It aims to verify in more detail the specific needs of companies in the field of digitisation, compare existing EDIH NEB services, whether they meet these needs, broaden the portfolio of potential clients of EDIH NEB and at the same time to specify them in more detail for the purposes of onward marketing and sales activities. The evaluation of EDIH NEB activities and evaluation of the digital maturity of companies and public administration comes under the project management referred to in Chapter 4.2 Work Packages.

The planned networking activities are based on the specific knowledge and expertise of the partners and, in particular, the “strength” of the consortium of partners to EDIH NEB, and focus on supporting the private and public sectors in their digital and economic transformation, something which fully corresponds to the objectives and priorities of the Digital Europe programme. With its activities aimed at sharing best practices, by building an innovative ecosystem at local and European level, the EDIH acts as an access point to the European network of EDIH centres, while maintaining long-term relationships with the relevant local players, such as enterprises, research organisations, universities, public entities, politicians and various partners of EEN, technology brokers at ESA CR, representatives of CzechInvest and the Technology Agency of the Czech Republic, etc., again fulfilling the priorities of DEP.

**IV. Support to find investments (WP5)**

EDIH NEB offers optimal solutions to its clients to help them raise their level of digitisation. However, the actual implementation of the relevant product / service / process can be costly. For this reason, EDIH NEB activity also includes **support to find investments**.

There are many different sources of financing, such as subsidies, loans, investors, bonds, venture capital, putting companies on the stock exchange, etc.

To this end, individual managers for investments carry out regular screening of the relevant financial resources, investor days are organised for EDIH NEB clients, and advice is provided on other options for financing investments in the field of digitisation (see the description in Chapter 4.2 Work Packages). EDIH NEB assists its clients in identifying suitable grant/investment instruments according to their specific requirements and plans and facilitates their access to various types of funding through activities such as practical assistance in finding investors or assistance with the preparation of grant applications. All partners involved in WP5 are active in the area of grant resources and many of them have extensive experience of support in the search for investments. In addition, ARR has experience in closer cooperation with the banking sector, we regularly co-organise investor days (i.e. contact of companies requesting investment for development with major national/international companies) and we can facilitate access of companies to the stock exchange. With the help of what is known as the Subsidy Ambulance, local enterprises and public administration bodies have the opportunity to consult their own specific plans, and we then help them in their selection of an appropriate subsidy or other financial instrument.

At the same time, we monitor the development of the financial market and adapt new methods of financing. The consortium team and clients attend events that lead to finding suitable sources of financing for their plans in the field of digitisation and the preparation of documents.

EDIH NEB provides its services based on the expertise and specific focus of the partners in an open, transparent, and non-discriminatory way to all SMEs and public sector organisations, in doing so fulfilling the objectives and priorities of the Digital Europe programme.

In all activities and services mentioned above, EDIH NEB monitors and takes into account all ethical principles and takes appropriate measures - all members of the consortium are fully aware of the need to address these issues, including those related to personal data, which could potentially be threatened during the various processes of their services. Individual members of the consortium therefore continuously monitor their own activities and any possible resultant risks and take appropriate measures, all in line with the applicable national and international legislation. For further explanation see “Ethics Issues Table”.

The current activities carried out by consortium members in the field of AI do not conflict with ethical issues and partners have declared that they also have data sufficiently and properly secured.

**V. Communication and dissemination (WP6)**

The communication and dissemination of information about the activities of EDIH NEB is an essential part of activity at EDIH NEB. This increases the outward prestige of the region, increases demand for EDIH NEB activities, and increases awareness and knowledge, and indeed the importance of digitisation among the general public. The EDIH target group is at the same time inspired to move forward with digital transformation. To this end, a project communication plan will be compiled and a wide range of communication / marketing tools and activities will be used (see WP6).

Undoubtedly, this activity has a sovereign position within EDIH NEB services. The communication plan is designed so that both businesses and the public sector can properly understand and grasp the opportunity of digitisation to develop their businesses and services. This often means changing ingrained processes, people's attitudes and willingness to change. We frequently come across such attitudes. Moreover, the economic and energy crises are affecting these processes too. On the one hand, companies are often dealing with existential problems rather than investment in development and innovation, but on the other, they are looking for savings and efficiency of work. This goes hand in hand with innovation and digitisation. We need to break the ice by using appropriate marketing tools and showing effective ways forward.

Our task when employing this activity is to spread awareness of digitisation and its benefits among the target group and the general public, to show examples of good practice from the region and beyond, to provide information about the activities and services on offer when it comes to digitization, etc.

**Available facilities**

We have the equipment required to carry out all EDIH activities (Test Before Invest, Training, Networking, Communication, etc.). Here is a brief recap:

The equipment available for the provision of these services are described separately in more detail above for each relevant service. Example of available testing equipment:

- Technologies for Machine Learning and neural networks include a wide range of equipment, such as optic-cameras and lighting (including high resolution cameras, high-speed cameras, line-scan cameras, thermal cameras, fast thermal cameras), the necessary software and algorithms, computer stations, etc.

- Technologies for Machine Vision provide a unique experimental and testing workplace
- Technologies for the measurement and analysis of data for the comparison of virtual and real product include special SW laboratories and instrumentation.
- The unique SpeechLab for the development of algorithms for the machine processing of spoken word in different languages.
- Technologies for robotics and cybernetics: Robotics laboratory
- Virtual models are created using a wide range of specialised SW resources with the necessary HW equipment
- The EMC Test Chamber (with accessories) is available for EMC tests of electronics, sensors, devices, the analysis of electronic devices
- Electromobility laboratory
- Technologies for 3D printing and scanning, 3D microscopes
- Augmented reality laboratory
- Complete cloud environment for big data processing and analysis, machine learning included
- etc.

All this equipment is available and will be part of the EDIH NEB service. The acquisition of TestBed Industry 4.0 and the Industrial Internet of Things (IIoT) is completely new equipment that is part of the EDIH NEB budget. The need for this equipment stemmed from the current demand of clients. The Testbed will enable businesses to better penetrate and understand the world of Industry 4.0 through practical examples and demonstrations. It will make it possible to check the specific digitalisation/IIoT instruments proposed. The equipment will broaden the access of clients to the testing infrastructure, and in turn the services provided by EDIH NEB.

**Equipment for other EDIH services** (education, consultancy, networking, conferences, etc.) is available to an adequate extent. Individual consortium partners have conference rooms, briefing rooms, meeting rooms, and rooms for negotiations, the necessary technical infrastructure and presentation equipment included. There is also equipment for online broadcasting or streaming.

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**Price list EDIH NEB**

This price list is common to the consortium of EDIH NEB partners within the bounds of the calculation of the level of public support. Prices reflect the real costs of the project.

The price list of EDIH services includes items that are part of Test Before Invest and Skills and Training activities (as recommended by the EC, only relevant activities for the purposes of state aid registration). The rates take into account the total eligible expenses of the project, corrected for revenues. Transfer of the total amount of the grant to clients will be put on record during the project. However, only that part of the grant to come from national sources will be registered in the relevant register of public aid (e.g. de minimis) for SME / mid-cap clients (public organisations fall outside the scope of public aid). The EDIH services themselves are to a lesser extent subject to a charge, but for the most part free. Certain Test Before Invest services are subject to a fee (approximately 25-35% of the market price), while other project income comes from registration fees for educational events (in certain cases).

The price list contains only those elements of EDIH NEB services that will be registered as part of public aid for EDIH NEB clients. Test Before Invest services are segmented by nature into 4 basic groups so that the price corresponds to the specialised demands of the service and so that the price list is as clear as possible for clients. The other costs of the EDIH NEB project are included in the size of the hourly rate in the price list (for example, project management, marketing activities, networking, etc.). The price is determined by taking the normal hourly market rate and multiplying it by the expected number of man-hours.

**Price list for state aid purposes:**

| EDIH NEB Service | Number of Target group * number of hours (= total number | Price (EUR) per hour | Total (EUR) |
|---|---|---|---|

| | | | |
|---|---|---|---|
| | of hours for clients) | | |
| Test Before Invest - Initial advice on digital audit, IoT, IIoT, Smart technologies, economic consultancy | 4118 | € 63.24 | € 260,422.32 |
| Test Before Invest - Cybersecurity audits, penetration tests | 1160 | € 110.67 | € 128,377.20 |
| Test Before Invest - Speech recognition and synthesis, machine learning, robotics, virtual and augmented reality, autonomous vehicles, IIoT, analytics, data processing, digital audits, web systems, etc. | 8652 | € 90.91 | € 786,553.32 |
| Test Before Invest - Digital services for public organisations in the field of archaeology and collection pieces | 240 | € 118.58 | € 28,459.20 |
| Training courses, Internships | 396 | € 63.24 | € 25,043.04 |
| Total / Year | | | € 1,228,855.08 |
| Total / 3 Years | | | € 3,686,565.24 |

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## 1.2 Contribution to long-term policy objectives, policies and strategies — Synergies

**Contribution to long-term policy objectives, policies and strategies — Synergies**

*Describe how the project contributes to long-term policy objectives of the call's domain/area and to the relevant policies and strategies, and how it is based on a sound needs analysis in line with the activities at European and national level. What challenge does the project aim to address? The objectives should be specific, measurable, achievable, relevant and time-bound within the duration of the project.*

The need for EDIH services draws on both European (Digital Europe) and Czech strategies. Examples include: Digital Czechia (Pillar "Digital Economy and Society", objectives: "A more efficient system of direct and indirect support for research, development, and innovation", "The maturity and readiness of sectors of the economy for digital transformation", "Ensuring security and trust in the environment of the digital economy and society"); Innovation Strategy of the Czech Republic 2019-2030: "Czech Republic: The Country for the Future" (Pillar "Digital State, Production and Services"); National Artificial Intelligence Development Strategy in the Czech Republic 2019-2035; National RIS3 Strategy (Pillar 1, "Digital Agenda"); or the National Recovery Plan (Pillar 1, "Digital Transformation"). At a regional level, it draws on RIS for the Liberec Region (Key Area A: Competitive and Innovative Enterprises, specific objective "To develop digital transformation in the region in the corporate and public sectors"), Smarter Region for the Liberec Region, RIS for the Hradec Králové Region (Key Area "Improving the innovation performance of companies"), and the Hradec Králové Region Smart Region Concept.

**The role of EDIH NEB is to promote these policy objectives** and priorities through the activities described in individual WPs, and thus contribute to the digital transformation of Europe. Considering that the consortium of EDIH NEB partners includes dominant entities in the field of digitisation in the Liberec and Hradec Králové regions, the influence of this grouping in terms of promoting interests in the field of digital transformation is growing. Networking will primarily serve this purpose.

**Following on from the national and regional RIS3 strategy**, EDIH NEB helps develop intelligent specialisations and the innovation environment by giving SMEs in particular access to key knowledge, software, technology platforms, prototype solutions, and testing systems, thus improving the quality of their production and business processes and facilitating the manufacture of products with high added value. At the same time, it develops cooperation between companies, and the spheres of business and research, and supports the transfer of technologies and the results of research and development into practice through matchmaking and sharing best practices as part of the activities of WP4. Linking backbone sectors and key technologies in a targeted manner will support added value and help create new research, technological, and economic opportunities.

The access that companies have to digital technologies will improve the efficiency and sustainability of production processes, thus also supporting the European Commission's commitment to the **Green Deal ("Digital technologies are a critical enabler for attaining the sustainability goals of the Green Deal in many different sectors")**. EDIH NEB offers services relating to cyber security and comprehensive services relating to digital innovation, expertise, and access to technology and trends in digitisation, particularly in the field of AI, all in line with the **Digital Europe** programme. Within the national or regional strategic **domains of specialisation**, it focuses on the areas of speech recognition and synthesis, machine learning, robotics and cybernetics, 3D printing and 3D scanning, sensor technology and super-precision optics,

bio-informatics, and neural networks. The activity of the Digital Innovation Hub also complies with other European or national strategic documents, such as **National Policy for Research, Development and Innovation 2021+ or Innovation Strategy of the Czech Republic 2019–2030** (Czech Republic: The Country for the Future), supporting directed and applied research and innovation. The objectives of these strategic documents are in line with the objectives and activities of EDIH NEB - to make the Czech Republic a leader in innovation and technology through support for digitisation and the interconnection of individual industrial and academic sectors.

The promotion of cooperation between the spheres of research and application in the field of research, development, and innovation is a particular priority supported by EDIH NEB through its networking activities, where information and R & D & I topics flow between the spheres of research and application. Pre-investment testing services enable research organisations and universities to transfer the results of their work into practice, etc. Furthermore, EDIH NEB seeks to broaden and apply other sources of R & D & I funding in addition to public sources from home and abroad and private sources, by seeking suitable financial opportunities, by connecting investors with businesses, and by helping to prepare applications for subsidies abroad, thereby pursuing the other objectives of these policies.

Furthermore, EDIH NEB contributes to the fulfilment of the **National Strategy of Artificial Intelligence in the Czech Republic,** which aims to make the Czech Republic an innovative leader through artificial intelligence technologies that include smart programmes and machines ranging from robots in factories, through algorithms in banks, to self-driving cars on the streets. EDIH NEB contributes toward the implementation of this strategy with pre-investment testing services for SMEs and public administration and by transferring know-how to its clients through various educational and awareness-raising activities and by supporting them in finding appropriate funding.

EDIH NEB contributes to the goals of the digital decade. Its ambition is to ensure that **90% of small and medium-sized enterprises in its NUTS 2 region (Liberec, Hradec Králové) have at least a basic level of digital intensity** by 2030 and that approximately **75% of enterprises use advanced digital technologies**. To achieve this objective, it provides services in the field of Test Before Invest, encompassing an analysis of digital maturity and needs, designing tailor-made solutions and recommendations for implementation procedure and sources of financing, providing access to the latest expertise, technologies and trends in digitisation, arranging education in the implementation of digitisation processes in business, supporting innovation ecosystems through networking, finding suitable sources of financing, and finding new investors. At the same time, there is the need to promote awareness of the advantages and benefits of digital transformation, which we will support with suitably selected marketing tools and activities and events organised within the bounds of networking. All with the assistance of experienced and proven experts in digital technology and Industry 4.0. The objectives are defined in more detail in Chapter 1.1.

The data we have on digital public services do not yet show a significant improvement in eGovernment services. Here, EDIH NEB will contribute to the European Commission's goal of **putting 100% of key public services online**, which involves innovative solutions based on digital technologies and artificial intelligence, such as the Smart Cities concept, open data, etc., and development relating to cyber security. EDIH NEB is seeking to increase the number of experts working with data by providing the necessary education courses and training on the use of data services. At the same time, it provides services that range from data analysis and processing, through various cloud solutions and Data Warehouse, modelling and data visualisation, to creating a virtual model.

The EDIH NEB project and the way in which its services are set up are based on the long-term collection of information about the region in which the Hub operates. Great efforts are made to get to know the environment in detail, and this contributes toward the effective development of digitisation if competitive advantages, weaknesses, opportunities and threats are well defined. The project draws on a wide range of analytical documents about the region, the outcomes of which are detailed in Chapter 2.1 Maturity. The most important regional sources of data include an analysis for the development of digitisation, an analysis of technological and economic trends, a market analysis of services for the EDIH project, an analysis of absorption capacity and interest in services, an analysis of networks of collaboration in R&D and Innovation, etc.

#§COM-PLE-CP§#

## 1.4 Financial obstacles

**Financial obstacles:** *Describe to what extent the project can overcome financial obstacles such as the lack of market finance.* ⚠ *This*

*criterion might not be applicable to all topics — for details refer to the Call document.*

There are various kinds of financial obstacles that could affect the stakeholders or clients involved in the EDIH NEB project. There is, for example**, a lack of funding for investment in modern technologies** which could help European companies or institutions overcome non-European competition (e.g. China, USA).
It is difficult at this time for many European SMEs (those in Central and Eastern Europe included) to finance new digital technologies, and the training that relates to this, on account of the cost. The local availability of expert services is also fragmented, often making such services difficult to access. Such technology and knowledge, when offered by a centralised place of expertise such as EDIH NEB, contribute toward the development of local SMEs and to the modernisation and streamlining of public institutions, which also have an impact on the modern functioning of the European area. Important prerequisites for development include targeted territorial support, the exchange of experience, training, the use of modern technologies, and intensive reciprocal cooperation.
The EDIH NEB consortium brings together several important, interconnected, and experienced institutions that have their own experts and the necessary equipment, and that are therefore ready to assist SMEs and public institutions in improving their digital skills. They are able to design and test appropriate technical solutions to increase their efficiency, reduce running costs, and overcome the financial demands of introducing digital technologies. **Moreover, these services are provided free of charge or at a discounted rate. Reducing the costs of finding the best solution in relation to digitisation and the testing of digital technologies will make these services more accessible to companies and increase their motivation for digital transformation.** The demand of the target group for services has been verified, please see the section 2.1 Maturity.
In light of the fact that members of the consortium have a great **many established contacts and partnerships** throughout Europe, know their own territories inside-out, and are financially stable, through EDIH NEB they can offer their knowledge and skills to clients over a wide area (for example, NUTS II Northeast, CZ-PL-D Euroregions, within the whole of the Czech Republic and, of course, to other EDIHs or clients within Europe), please see the section 2.3. **Moreover, they are stronger when working as a consortium and can thus provide a comprehensive range of services.**
**The managed area also includes some economically weak areas that have been structurally damaged in the past.** EDIH NEB services can have a significant positive impact not only on the development of the entities themselves, but ultimately on the whole region.
The lack of financial resources among SMEs and public institutions for digital transformation can be further **minimised by monitoring financial resources** for the relevant solutions. Most companies and public institutions face a lack of funding for their activities, with digital transformation or investment in innovation and new technologies being an unattainable goa, particularly in the case of small businesses and start-ups. EDIH NEB offers them a helping hand in this respect and financial barriers are lowered as a result of the transfer of know-how through training or networking events and access to test infrastructure without the need to invest in testing when it comes to new technologies. The objective at EDIH NEB is to provide clients with the maximum possible support, using the knowledge and skills of the EDIH NEB partners that have these abilities. This is also linked to the issue of securing funding for their projects and their digital transformation. Most of the partners involved in the project have extensive experience of various sources of public funding, grants, of loans, of finding investors, or of other financial instruments.
Universities - UHK and TUL - provide further options as far as funding investments in the field of digitisation is concerned. These universities are **frequently involved in national or international projects** in which it is generally possible to engage public institutions or SMEs and the activities carried out in EDIH NEB could bring these entities and activities together. Partners VÚTS and NCA provide companies with a similar opportunity. In light of the interconnection of cluster association members at European level, NCA creates various opportunities for involving companies in international activities or partnerships too. The interconnection of the consortium members and their experience will significantly help in the development of investments in the field of digitising SMEs and public entities.
EDIH NEB provides its clients with financial opportunities that would be difficult for businesses to access themselves. Our contacts and experience of obtaining investments and funds mean that we can offer clients help in obtaining the grants spoken of above and in connecting enterprises with private investors. Many partners are experienced in bringing in venture capital investors that join young companies or start-ups in exchange for a stake in that given company. However, through activities such as investor days, we aim to connect these companies to other investors using our regional and national contacts, something which could bring these companies a significant competitive advantage, whether in terms of finance (VC funds) or expertise (Business Angels).

In terms of internal support and financial coverage of the activities of the EDIH NEB consortium, it is worth mentioning that the ARR, as the Lead Partner of the consortium, is financially assured by the Liberec Region and CIRI by the Hradec Králové Region. Both organisations, as well as both universities (TUL and UHK) are **financially strong entities**, financed from public budgets.

**The EDIH NEB PROJECT will therefore fundamentally open up services in digitisation and the use of AI** to SMEs,

mid-caps, and public administration in light of the affordability of services and the functioning system of partnership in place at the EDIH NEB consortium, which brings together and connects the services of major innovation partners in the field of digitisation and thus offers a wide range of services in the sphere of Test Before Invest and in the field of networking, education, and consultancy. The project will therefore significantly contribute toward overcoming the financial barriers in front of this target group, provide an offer of unique and comprehensive services, and increase the motivation of the target group to use those services.

**The sustainability of activities at EDIH NEB** is secured by subsidy sources, with 50% of total eligible costs coming from EC resources (from the Digital Europe programme) and the remaining 50% from national resources administered by the Ministry of Industry and Trade (National Recovery Plan). It is therefore possible to offer digitisation services at a lower cost and to increase the target group's motivation to use these services. The revenues generated by the project are another source of covering a portion of the CZV and possible ineligible expenses (EDIH NEB services are partially subject to a fee so that the price is still very motivating for clients, but at the same time we are able to maintain the stability of EDIH NEB).
The sustainability of the system is supported by advance financing for the project (subsidy resources from the EC and the Ministry of Industry and Trade).
**A system conceived in this way is sustainable in the long term.**
Moreover, the EDIH NEB partnership encompasses both public and private entities that considered the possible financial risks when planning the financial sustainability of the project and took appropriate measures accordingly in line with their capabilities (discussion of available financial resources from public budgets to cover possible ineligible costs, reserves at private companies). EDIH NEB partners are therefore sufficiently financially stable, and have the clear support of regional governments, to be able to withstand any individual ineligible costs.

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# 2. IMPLEMENTATION

## 2.1 Maturity

**Maturity**

*Explain the maturity of the project, i.e. the state of preparation and the readiness to start the implementation of the proposed activities.*

**Technological readiness**
The EDIH NEB project is built on the **high technological standard of consortium members**, who are able to cover the requirements of companies in relation to digital transformation. It is possible to draw both on the activity of research institutions within its territory and on a dynamic business environment. The **important research centres** of the Technical University of Liberec, the University of Hradec Králové, and VÚTS, which are the backbone of the concentration of science, research, innovation and specialised technologies in the region and the border area, are all engaged in the project. Another partner, AEC partner is involved in research into cyber security. **As the Lead Partner in the consortium, ARR**, 100-% owned by **the Liberec Region, ensures the key linking of research, development and business,** offers support to business within a business incubator, encourages innovation, and intervenes in the field of digitisation. It is the key development entity in the region. Another partner, the Centre for Investment, Development and Innovation (CIRI) in Hradec Králové, focuses on the advancement of research, development, and innovation, industrial zones, project management, and regional development. It also complements the activities of the University of Hradec Králové in the field of networking and marketing. Connecting EDIH NEB to cluster policy is ensured by the National Cluster Association, which brings together the clusters operating in the region, and in the Czech Republic. NCA therefore connects EDIH NEB services and enterprises, excels at networking, and connects EDIH NEB with other entities at national and international level. It also offers professional services in the field of cyber security.
The consortium's technological readiness (Test Before Invest) comes from its significant members with their know how and equipment. Six out of seven partners are involved in this activity. Readiness in other EDIH NEB activities (i.e. networking, marketing, skills, management and finding sources of funding) is also very well secured by those partners having long-term experience of such activities. A more detailed description of the partners and their skills is provided in Chapter 2.3.
The experience of the partners that are used in the EDIH NEB project is further taken from other major national and international innovation and research projects in which consortium partners have taken part. An overview of these is found in the annex to the application.

**Institutional and financial readiness**
The basic formal link between the EDIH NEB partners is the consortium agreement. In the agreement, the consortium members express their interest in jointly supporting digital transformation. The agreement defines, among other things,

common objectives, organisational structure and division of roles. The participation of the entities in the consortium is based on a long-standing mutual cooperation. The partners are entities with strong links to the region. The services provided by EDIH NEB respond to the needs and objectives of the region and are in line with the region's development RIS3 strategy.
Project staffing is detailed in Section 2.3 Capacity to carry out the proposed work - Project teams and staff. Part of the positions in the project team are currently filled (by experts) and partly will be defined at the beginning of the project. Professional staffing of the project is ensured. The organisational structure and related processes are described in particular in chapters 2.2 Implementation plan, Project management, 3.1 Consortium management and decision-making risk.
The project uses the knowledge, skills and technologies available within the partners and provides them to a hub for digital innovation. EDIH NEB offers a comprehensive service.
If the project is successful in the call, the operation of EDIH NEB will be ensured by public funding (1/2 from the EC, 2/2 from national sources). Success in the call is a key factor for the implementation of the project. In case of failure in the call, new sources of funding will be sought.
ARR, as the Lead Partner, is the natural centre of cooperation between partners, with links to regional policy and long-term experience in the field of project management. It therefore functions as the key element in the entire process of putting the project into practice.

**The readiness of the EDIH NEB consortium for cooperation within the project**:
When it comes to technical (infrastructure, knowledge and skills), institutional, and financial aspects, each of the consortium partners is ready to implement EDIH NEB services as soon as the project begins.
From the perspective of partnership within the consortium and mutual cooperation, we have already taken a number of steps at the zero, preparatory phase of the project to set up organisational structures and a system of cooperation. Already in progress:

1. Cooperation on addressing specific client needs, joint implementation of digitisation activities in the region (Test Before Invest, education, networking, consulting), dissemination of information about DIH NEB within the region and outside to a limited extent according to the available capacity of partners. See news on the website www.dih-northeast.cz.
2. Providing information about the activities of DIH NEB outwardly, in that we have launched a common website Home — DIH Northeast (dih-northeast.cz), where we inform potential clients about the DIH NEB services on offer and present our activities in the field of digitisation
3. Regular meetings of consortium members on EDIH NEB project planning
4. Setting up a communication and recording system for the EDIH NEB project solution (within the TEAMS tool)
5. Setting up the organisational structure of the project, sub teams for individual EDIH NEB activities, responsibilities and roles
6. Filling as-yet unoccupied positions before the start of project implementation (selection procedures for unoccupied positions approximately six months in advance)

In light of the activities spoken of above, we expect that this will minimise the time needed to get up and running in terms of all the necessary parameters and details of the project. It will be possible to carry out most activities immediately after the launch of the project, and we expect fully-functional cooperation within approximately 3 months of project implementation (acquisition of TestBed Industry 4.0, etc.).

**The region's readiness for digitisation**
The EDIH NEB project and the way in which its services are set up are based on the long-term collection of information about the region in which the Hub operates. Great efforts are made to get to know the environment in detail. Data about the readiness of the project and of the region come from the regional strategy of intelligent specialisation, an analysis for the development of digitisation, an analysis of technological and economic trends, cluster potential studies, a market analysis of services, mapping out the level of digitisation among companies, an analysis of absorption capacity and interest in services, etc. The following information is of greatest importance to the EDIH NEB project.
Digital technologies have long been defined in the **strategic documents of the region** as one of the main specialisations of research, development, and innovation. The EDIH NEB project has greatest relevance in the regional strategy for intelligent specialisation in terms of the specialisation of Electronics, Electrical Engineering, ICT, although these interweave all other specialisations. Research specialisation in Electronics, Electrical Engineering and ICT is currently the fastest-growing specialisation in the Liberec region, where companies increased their turnover by 155% between the reference periods. Although electronics and related fields are an important specialisation within the corporate sector in the region, a sufficiently large innovation and technological base has not been identified among companies. This can be seen as a great opportunity for EDIH NEB.
The **market analysis of services for the EDIH NEB project (2022)** defined target markets, customer segmentation, the

market situation, market scope, and an analysis of demand. **The potential market in the Liberec and Hradec Králové regions for DIH NEB numbers several thousand enterprises, depending on the technology.** 822 potential companies were identified in the field of AI, focusing on speech recognition and synthesis, and 8,587 potential companies were identified focusing on machine learning. Robotisation and automation are potentially of interest to 26,975 companies and augmented and virtual reality to 5,537. **The target markets corresponding to the focus of the EDIH are very broad, ranging from the manufacturing sector and trade to application in healthcare, education, and financial services.**

The NUTS II NE region provides a quality base for the development of digital technologies. **Market research shows that the region is able to generate sufficient demand for** digital transformation and at the same time offers sophisticated technological solutions. **The EDIH project will facilitate broader use of innovation potential and support the effective digitisation of processes at a large number of SMEs for which digital transformation would otherwise be too costly.** At the same time, it will also offer services to companies working with highly-advanced digital technologies.

**Mapping out the level of digitization among companies (2021)** revealed that only 12% of respondents can be classified as having a very high level of digitisation, with another 23% having a high level of digitisation. These data reveal considerable potential, and at the same time the need to improve the level of digitisation within the region. EDIH NEB services draw on the demand of the target groups.

**Mapping out the absorption capacity and interest in EDIH NEB services (2020)** identified interest in services and technologies among small and medium-sized enterprises and their research activities in the field of digital technologies. Respondents are most interested in the Test Before Invest service (33.5%). There was also interest in Skills and training (28.5%) and Innovation ecosystem and networking (28.5%). A total of 9.5% of respondents stated that the Support to find investment service is of interest to them. In terms of specific technologies, the highest number of respondents were interested in machine learning (40%) and robotics and cybernetics (32%). Beyond the list, respondents mentioned virtual reality, automation and the digitisation of production processes.

The NUTS 2 Northeast region (of which the Liberec and Hradec Králové regions are a part) has a business environment with significant cluster potential in the field of electronics and electrical engineering. In the **study of cluster potential** (2021), the localisation coefficient (comparison within the Czech Republic) takes on high values both in terms of the number of entities and in terms of the concentration of the number of employees.

The number of companies involved in high-tech and ICT is seeing highly-dynamic growth. **Mapping out the development of digitisation (2020)** revealed that over the last 10 years, the number of high-tech companies in the Liberec Region has increased by 93% and the number of ICT companies by 97%, which is the highest increase of any region of the Czech Republic. Those companies are mainly SMEs and are ideal potential customers for using EDIH services.

The EDIH NEB project responds to global technological and economic trends, in which it draws on a detailed **analysis of economic and technological trends (2021)** that describes future developments and their impact on the region. **The main global trends in the region are: Nanotechnology, advanced materials, advanced manufacturing technology, automation and digitisation (collectively Industry 4.0), as well as the circular economy and related environmental technologies.**

In terms of digital technologies, the **most dynamic development can be expected** in forthcoming years in the youngest industry, meaning **augmented and virtual reality, and in the field of artificial intelligence**, particularly in the use of machine learning. Digitisation is the technological trend that companies are moving towards most frequently mentioned by those enterprises in the region at issue, across the spectrum of industry and including the need for cyber security solutions.

The survey of companies conducted as part of the **analysis of economic and technological trends (2021)** divided respondents (companies) according to their approach to technological trends. There are companies that notice trends, but do not work with them, companies that use trends to streamline their internal processes, and companies that reflect trends in their products.

Only a limited number of companies are able to work with "cutting-edge" technologies and most focus on standard and now commonly-available technologies within technological trends. The vast majority of local companies involved in mapping view new technological trends as a challenge and an opportunity rather than as an explicit threat.

In the case of digitisation, the companies asked often work with a remote approach to monitoring production or data collection. Automation is important for companies that build their competitiveness on productivity. The lower salary level in the region indicates the fact that a large number of local companies still base their competitive advantage, although not exclusively, on maintaining low production costs. **All of these facts create the potential for the application of EDIH NEB services, the targeting of which corresponds to the demand of the target group.**

For most of the companies surveyed, digitisation is a tool to be used in streamlining internal operations. One very common example is technology for the continuous monitoring of production, remote management and communication, or an effort to implement the "paperless" company model in as many processes as possible. In most cases, companies buy these digital technologies, only developing their own in a small number of cases. Companies carry out their own development

when standard systems do not suffice or cannot be adapted to suit their needs.

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## 2.2 Implementation plan and efficient use of resources

**Implementation plan**

*Show that the implementation work plan is sound by explaining the rationale behind the proposed work packages and how they contribute to achieve the objectives of the project.*

*Explain the coherence between the objectives, activities, planned resources and project management processes.*

*Show how the project integrates, builds on and follows up on any pre-existing work or EU funded projects. Provide details (including architecture and deliverables) about pre-existing technical solutions.*

The EDIH NEB project is divided into six work packages (WP), each of which has its own responsible manager and its own characteristics. The EDIH NEB director acts as the organisational umbrella of all activities. The proposed work packages are as follows:

- **WP 1**: Management and coordination
- **WP 2**: Test Before Invest
- **WP 3**: Training and skills development
- **WP 4**: Networking / building the innovation ecosystem
- **WP 5**: Support to find investments
- **WP 6**: Communication and dissemination (marketing)

WP 2, 3, 4, and 5 involve direct work with the project target group; they complement each other and thus create a digital innovation ecosystem based on the range of services that the EDIH network has to offer clients, as defined in the call. WP 6 indirectly affects target groups and the general public using a wide range of marketing tools and is an indispensable part of the whole digital transformation system. WP1, as mandatory activity, focuses on project implementation management; it plays a supporting role. An organisational structure was created in order to achieve functioning coordination. This specifies the main positions of responsibility of the individual WP managers, in that a constituent responsible position is invariably determined for each partner (see the chapters that follow).

In order to **distribute allocation among individual WPs**, it was first necessary to appoint the leaders of those individual WPs within the consortium of partners. This was done based on experience in the field, available capacities, level of involvement, and other related aspects.

The distribution of allocation between WPs was further determined by the quantity and cost of services that EDIH NEB partners are able to provide. The determining factor here is the number of positions in the project. Each of the partners expressed their staffing demands in relation to outputs (number of clients served, events organised, training, etc.). External costs will include costs which cannot be borne by EDIH NEB from its own resources. Also included here are the costs of external services provided by instructors, venue hire for organising events, marketing services, and other publicity.

The level of allocation assigned to **WP1,** associated with project management, corresponds to the administrative burden. From the organisational chart, we see that the lead partner has the main role in the management of the project. Partners have sufficient technological and knowledge capacity to provide their services, but before EDIH NEB was established there was no overarching structure to bring the partners together as a single functioning entity and to make such a comprehensive and voluminous range of services available to SMEs and public administration. It is therefore necessary to allocate a sufficient portion of the resources to the management of EDIH NEB. The WP1 allocation setting will sufficiently cover project management needs. Each partner has an allocation within WP1 which corresponds to its share in project management.

The allocation to **WP2** is based on the expected number of clients and the demanding nature of the service provided. The partners determined the staffing requirements for individual services. The allocation to WP2 is also based on personnel capacity costs.

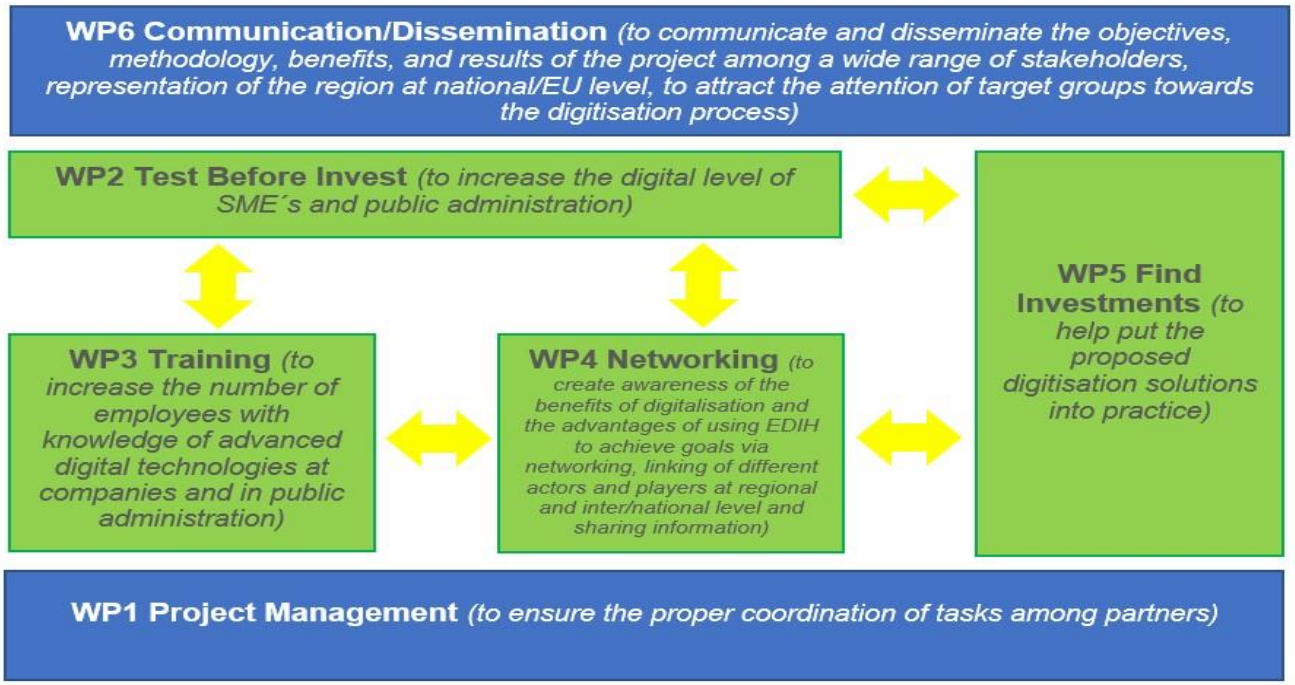
The allocation to **WP3** is based on the cost of short-term teaching courses, educational courses, and training. Forms of education include internships at companies, research organisations, etc. The allocation is determined to take into account the demanding nature of preparation and the specificity of the operation, the instructors required, and the specialisation of the topic.

NCA has been established as the main guarantor of **WP4**, NCA providing the largest share of services that come under

networking and building an innovative ecosystem. By its very nature, NCA has the most experience of networking and in the field of internationalisation. As with previous WPs, the allocation is determined based on the demanding nature of activities and services.

Finding subsidy opportunities and organising, and co-organising, investor days is part of **WP5**, where the allocation was determined based on the number of supported clients and the demanding nature of preparing activities.

The allocation to **WP6** covers marketing and publicity activities (information campaigns, advertising/publications in the press, online marketing, visual identity, website activities and content marketing, etc.). Costs draw on personnel costs and market prices.




The aim of **WP1** is to ensure the proper coordination of tasks among partners in order to achieve the overall objectives of the project within constraints of time, quality, and budget based on ongoing monitoring and evaluation. It also ensures fundamental communication with the EC in relation to reporting. WP1 is the responsibility of the chief financial manager (ARR), who coordinates the project through financial management and reporting together with partners.

**WP2** contains activities that connect the essential services of the individual partners. **Each EDIH NEB partner is a contact point for clients. However, the system of cooperation in place will guide the client through all services (partners) that might be relevant to it.**

Firstly, the relevant partner verifies the digital maturity of the client and its needs in the field of digitisation (using a structured questionnaire and interview). At the same time, the client and its demand are registered in the internal communication system (CRM, shared data) - link to the administration and processes handled in WP1. The chief manager for Test Before Invest (TBI) is the main responsible person here (WP2 manager, ARR) and will coordinate work with clients and interconnect services across EDIH NEB partners. He/she works closely with the chief financial manager (WP1) in keeping records of work with clients.

A detailed overview of individual WP2 services is provided in Chapter 1.1. Services primarily focus on artificial intelligence, digitisation in general, and in turn cyber security. In many cases, the client can use follow-up / interconnected services that comprehensively deal with their digital transformation or can focus only on an individual need in the field of digitisation. Test Before Invest services are a key part of the project, contributing most to the main objective of the project.

**WP3** aims to increase the number of employees having knowledge of advanced digital technologies at companies and in public administration by providing them with professional training and educational courses or plans and internships according to their skill profile, focusing on digitisation and the technologies of artificial intelligence (artificial intelligence and its use, machine vision and learning, digitisation – 3D printing and reverse engineering, cybersecurity, data analysis and visualisation, etc.). The aim of this activity is to improve the qualifications of employees or to strengthen their professional competences in the field of digitisation, machine learning, and AI. The supply of services will mainly follow the needs of the labour market given that the development of digital technologies also results in a shortage of competent workers able to work with these technologies. Responsibility for WPs lies with the individual partners who provide the training or course, all under the supervision of the Chief Manager for Training and Skills (ARR), as each partner has its own technical or

educational equipment and many of them also have the facilities and technical equipment required to organise conferences, workshops, and seminars. Emphasis will be placed during educational and awareness-raising activities on expertise and the need for a particular educational event according to the preferences of clients. Individual partners provide the training or courses, under the supervision of the chief manager for training and skills. WP3 thus builds on Test Before Invest services, with the aim of preparing human resources so that they can effectively use new digitised processes and technologies, while the activities therein will simultaneously be used to create ties between individual actors.

**The aim of WP4** is to create networks, connect different entities and stakeholders at regional, national, and international level, and share information. The tasks described in this work package will result in a variety of activities, such as expert platforms, round tables, conferences, B2B events, bilateral meetings, establishing collaboration outside the region and the Czech Republic, etc. All partners will work together on this work package, and devote attention to building an innovation ecosystem, with the key role played by the NCA partner as the leader of this WP (where appropriate, chief networking manager). To recapitulate, WP4 is divided into three basic branches:

- matchmaking / networking / B2B events at regional, national, and EU level;
- cooperation within the eDIH network and with other organisations at national and EU level;
- analysis / mapping.

By bringing together all stakeholders, whether clients of services, service providers, or other support and innovation organisations (or broad involvement of stakeholders from all spheres, the so-called "triple / quadruple helix"), we will initiate new solutions and innovation, motivate the target group to digitise, and raise awareness of this topic. We will create a suitable environment for new partnerships, collaboration (including cross-border), or the development of business.
**WP 5 aims to present proposed solutions in the field of digitisation into practice.** This involves the screening of subsidy resources in the field of digitisation, collaboration on securing financial resources for specific solutions (grants, loans, exchanges, venture capital, etc.), and collaboration on preparing applications for a specific financial resource. Investor days will also be organised, during which suitable investors will be sought for the projects in question. ARR is responsible for this work package, with the chief manager for investments (ARR) taking the lead. The manager will collaborate with the responsible persons at relevant partner level.
**WP6** is an overarching activity that will be addressed on an ongoing basis. The aim of WP 6 will run parallel to other packages throughout the duration of the project, focusing on disseminating and communicating project objectives and results. Its main goal is to widely and effectively communicate and disseminate the objectives, methodology, benefits, and results of the project among a wide range of stakeholders. One integral part of this work package is to create an appropriate communication plan and coordinate communication between consortium members and the public at the project website, on social networks, and in other media using videos, specialised articles, interviews, examples of good practice, podcasts, and content marketing. Another of the objectives of WP 6 is to contribute to the dissemination of the project by creating printed materials, attendance folders, roll-ups, various promotional items, information events, establishing long-term cooperation with representatives of various media, etc. The aim of these activities is to use specific examples, good practice, results achieved, etc., to motivate the target group to embark on the process of digitisation and to present the region and its potential outwardly. Main responsibility for this package lies with the chief marketing manager (ARR).

As well as having expert personnel for individual WPs, EDIH NEB already has in place certain equipment, laboratories, testing and demonstration infrastructure, and related facilities for working with clients. We also plan to carry out the necessary retrofitting. Such equipment and facilities will be made available to the target group according to their requirements.

**Project management, quality assurance and monitoring and evaluation strategy**

*Describe the measures planned to ensure that the project implementation is of high quality and completed in time. Describe the methods to ensure good quality of monitoring, planning and control activities.Describe the evaluation methods and indicators (quantitative and qualitative) to monitor and verify the outreach and coverage of the activities and results. The indicators proposed to measure progress should be specific, measurable, achievable, relevant and time-bound.*

EDIH is staffed by a team of professionals that ensures the provision of services, the fulfilment of indicators, the achievement of milestones, the coordination of partners, financial management, networking, the promotion of activities, work with clients, and so on. An organisational structure and planning and control mechanisms have been put in place for this.
**A basic project schedule will be compiled for detailed project planning** (or activities within individual WP) based on

key project parameters (planned outcomes and indicators), the launch of individual services, linking to how we envisage the budget will be drawn, monitoring indicators, etc. The basic schedule will be prepared by the general project manager, approved by the director of eDIH NEB, and subsequently submitted for approval to the steering committee. This schedule will become the basis for the development of constituent detailed schedules for individual WP. These will be drawn up by individual chief managers for their own WP and approved by the general project manager.
A "**check list**" (provided by the chief project manager) will follow on from the schedule to ensure that project management is checked. This will contain individual activities, tasks, frequencies, responsibilities, outcomes, etc. Such activities include holding meetings and taking minutes, records of clients and descriptions of the services provided, records of public aid, compiling monitoring reports, etc. The basic premise is invariably clear determination of the task, the responsible person, and the deadline.
Individual activities in the relevant WP will therefore be set in terms of time so that they are interconnected, logically follow on from each other, and have the broadest possible impact on the region (for example, timing activities in WP4 Networking, WP6 Marketing, etc.). Moreover, in some cases the schedule of activities will ensue from a grant agreement (e.g. compiling monitoring reports under WP1, etc.). Activities in WP2 will be ongoing, according to the needs of the clients, in that equipment for a new TestBed for Industry 4.0 will also be acquired during the first phase of the project. Activity in WP5 will also be addressed on an ongoing basis.
The progress of work will be checked at **regular meetings** (see Consortium Management) and as part of communication and invariably reported to a higher level of project management. **The fulfilment of project outcomes will primarily be monitored at two levels:**

1. A regular report of simple structure will be provided to the general project manager within a period of 3 months at individual WP level, with possible indication of changes or recommendations for further action. In the event of major deviations which threaten collision with the basic schedule, the director of eDIH NEB will be informed so as to be able to decide on how to proceed. Risk management is an integral part of project management. Risks (named below) will be continuously monitored within the project, evaluated by the general project manager, and reported to the director of eDIH NEB every 6 months. New risks will also be identified on an ongoing basis within the bounds of project management. The general project manager will prepare the structure of such reporting.
2. A report on the progress of the project, the implementation of activities and the schedule will be prepared within a period of six months and submitted to the steering committee. The general project manager will prepare the structure of reporting. The content of reporting will be compiled in cooperation with individual WP leaders.

**We have set the writing of an ongoing evaluation report (the compilation of an evaluation report is part of the execution of KA1) for project implementation period 1 - 18 months as a milestone for checking fulfilment of the schedule, the quality of outcomes, and indicators (for all key activities in the project).** In this regard, we remind you that the project will be continuously monitored on a quarterly basis within individual WP and on a half-yearly basis across WP, as mentioned above, meaning that we will have the fulfilment of project outputs available to us on an ongoing basis, in real time. Moreover, the evaluation report will take into account in greater detail the number and scope of services provided to EDIH NEB clients, evaluation of the implementation of measures in the sphere of digitisation (investments), the number of networking events and feedback from participants, the effects of marketing tools on EDIH NEB activities, etc. The project manager will prepare the structure of the report in cooperation with the director of EDIH NEB and will ensure its compilation with individual WP leaders.
The evaluation report is an important tool in checking the implementation of the project and will verify our objective, in that we want to achieve a minimum of 30 % of the planned outcomes and indicators for the period 1 - 18 months. If the milestone set out above is not reached, the reasons for this will be examined in more detail and such measures will be put in place to ensure that the project achieves 100% of the planned outcomes and indicators at the final stage. These measures will be closely monitored in the next quarterly / half-yearly outcome reports. The first period will be characterised by an increasing number of services and clients, and for this reason the value for the first half of the project is proposed at 30%.
EDIH NEB will use a number of SW tools for management; for example, when sharing information about clients among partners, it will use an appropriate information system in relation to this, which will make activity between partners and clients clearer and facilitate the real-time monitoring of objectives.
Moreover, we will continuously monitor and evaluate the digital maturity of EDIH NEB clients using questionnaires prepared by the EC (see information below). Such monitoring also has an impact on the supplementary project indicator "Increase in the digital maturity of organisations ...".
The initial level of entities will be mapped out using ex-ante evaluation, and this information will then be used to set EDIH NEB services for a specific entity (we will adopt the EC methodology). Data regarding the initial level will make it possible to monitor the development of an entity's digital maturity in relation to the services drawn. Evaluation of the entity's digital maturity must be repeated. Ex-post evaluation is used to assess all the effects of services and to compare the results

achieved so far with the objectives. Other factors, such as costs incurred or market opportunities having arisen, may be included in the evaluation.
To make it possible to compare data within the European Union, we will therefore use a uniform template for the questionnaire (Digital Maturity Assessment Questionnaire for EDIH Customers) and evaluation will draw on a uniform methodology. Completion of the questionnaire will be handled by the relevant experts within WP2. Fulfilment is checked by the head of WP2 and the general project manager submits documents for the evaluation report. The head of WP1 also works with the documents (reporting to the EC, etc.).
The level of digital maturity of an EDIH NEB client will be measured at three different times. The wording of the questionnaire changes slightly depending on the time at which it is used, so as to compare the present and the past (T1 vs. T0, T2 vs T1).
Time T0 comes before the first EDIH NEB intervention in the process of digital business transformation. Time T1 comes 1 year after time T0. If an intervention is still ongoing, it is necessary to wait until it has been completed before measuring the level of digital maturity. However, measurement should take place not later than 3 months after the end of the intervention. The final time observed is T2, which comes 2 years after T1. Measurement should be carried out between 18 months and 24 months after the EDIH intervention.
The impacts of EDIH interventions on clients from public administration will be monitored using a system that is similar to the one we use to monitor the level of digitisation among corporate clients. The level of digitisation will be measured at times T0-T2 and will focus on monitoring the impacts of intervention on the effectiveness of an organisation's own operation and the effectiveness, and improvement in quality, of services for people and entrepreneurs.

**Moreover, EDIH NEB will work with the Innovation Radar platform to share information about digital innovations developed with EU funding and about the innovators who develop them. The Innovation Radar intermediates the connection between investors and investment opportunities in the form of new results of research, development, and innovation and acts as a business intelligence tool.**

**Cost effectiveness and financial management** *(n/a for prefixed Lump Sum Grants)*

*Describe the measures adopted to ensure that the proposed results and objectives will be achieved in the most cost-effective way.*

*Indicate the arrangements adopted for the financial management of the project and, in particular, how the financial resources will be allocated and managed within the consortium. ⚠ Do NOT compare and justify the costs of each work package, but summarize briefly why your budget is cost effective.*

The services and activities in the EDIH NEB project were drawn up by individual partners based on their many years of experience and their abilities. A partial overview of EDIH NEB services gradually came into being, as did an overview of the number of expected EDIH NEB clients, the average number of envisaged hours of work with individual clients, and the workload (full-time/part-time) tied to this, the personnel costs and other associated costs. The level of personnel costs is normal for the place and time and corresponds to the wage policy of the relevant partner. Other costs (travel expenses, external supplies) are set as required for the due provision of services and activities in the EDIH NEB project. The level of these is determined according to standard prices at the place and time based on the experience of the partners or market research (market research was carried out, for example, in the case of the acquisition of a TestBed for Industry 4.0, etc.). The specification of external costs is part of the WP and, in particular, of separate tables under the overview of WPs.

We dealt with the economic efficiency of the budget throughout the project preparation stage, employing close cooperation among partners and the in-house elaboration of the budget in greater detail. Each cost was carefully discussed.
The set scope of EDIH NEB services and the associated work duties and external services were established in connection with the complexity of the services provided. In general, the EDIH NEB services under consideration are not commonly available on the market and their demands on time are highly individual. This is influenced by the client itself. One type of service might have differing demands on time, since every client has different input conditions, readiness, equipment, different production processes or services, etc. These aspects were progressively resolved with individual partners.
The workload and cost settings were monitored in detail for individual partners in all activities of EDIH NEB. The scope of services therefore corresponds to the set budget. The Lead Partner assumed the leading role in this respect.
The Lead Partner has planned the position of chief financial manager in its team, this person ensuring communication with other financial managers, who will be available on a part-time basis at all partners to the project.
Financial managers will be responsible for the proper and economical drawing of funds from the budget, market research, and tenders in their organisations. They will monitor the eligibility of the costs of the project and make the necessary changes to the budget. They will communicate to each other in this regard, provide them with the necessary information, and delegate tasks. All under the partial leadership of the chief financial manager. He/she will also be responsible for processing applications for payment and will check supporting documents from other partners. He/she will monitor the drawing of costs for the project as a whole, and for individual partners.

The project envisages that 50 % of funding for total eligible costs will come from the EC and 50 % from the Ministry of Industry and Trade (National Recovery Plan). Subsidy programmes allow for advance payments of 50% of the subsidy. Project revenues will provide another source of covering project costs, including ineligible costs.
The method of financing the costs of the project was discussed within the consortium before obtaining a grant, as was the payment of any ineligible costs.
These aspects of the project were dealt with separately for each involved partner, in all cases an organisation that has been functioning over the long-term, with stable cash flow and sufficient volumes of funding to finance the costs of the project. As far as the Lead Partner and CIRI are concerned, joint funding is handled together with their owners, meaning the Liberec Region and the Hradec Králové Region.
The funding of the project is therefore secured.

The financial manager will prepare supporting documents for the proper redirection of the relevant portion of the subsidy to individual partners based on their sub-budgets and the billing of costs. An advance payment will be transferred from the Lead Partner's account to individual partners proportionately in line with their budgets. Other sums will stem from the level of billed costs at individual financial stages of the project (according to an approved list of costs).

The financial flows between partners will be regulated in a Partnership Contract.

## 2.3 Capacity to carry out the proposed work

**Consortium cooperation and division of roles (if applicable)**

*Describe the participants (Beneficiaries, Affiliated Entities and Associated Partners, if any) and explain how they will work together to implement the project. How will they bring together the necessary expertise? How will they complement each other?*

*In what way does each of the participants contribute to the project? Show that each has a valid role and adequate resources to fulfil that role.*

***Note:** When building your consortium you should think of organisations that can help you reach objectives and solve problems.*

The fundamental framework **of reciprocal cooperation among EDIH NEB project partners** is laid down in a **consortium agreement**. Inter alia, this agreement addresses the main subject-matter of cooperation, the objectives of the consortium, and its basic structure.
Representatives of all partners are found on the steering committee, which is responsible for taking decisions regarding the consortium management strategy, membership, cooperation with third parties, shared management, etc. Principal responsibility for the project lies with the position of EDIH NEB director, which is organisationally tied to the position of the authorised representative of the Lead Partner. He/she manages the project as a whole and communicates regularly with the leaders of individual activities and, if necessary, with other team members. He/she represents EDIH NEB outwardly.
Project management and decision-making competences are mentioned in more detail in chapter 2.2 Project management and in the chapter "Consortium management and decision-making risk" below.

**A total of 7 partners are involved in the EDIH NEB consortium. Here we provide a more detailed description:**

**ARR - Agentura regionálního rozvoje, spol. s r.o. – ARR** (Agency for Regional Development), Lead Partner in EDIH NEB, www.dih-northeast.cz/en
ARR provides technical and expert assistance in the preparation and implementation of projects and activities for the benefit of the region, its inhabitants, economic entities, and institutions. It implements the Smarter Region strategy for the Liberec Region, which addresses the use of digital technologies in the public sector. It designs and tests smart solutions, and cooperates with other entities in the region to this end. ARR is the umbrella organisation of a regional digitisation platform that brings together major players in the field of digital technologies.
ARR runs the **Liberec Business Incubator - Lipo.ink**, which supports the establishment and development of innovation companies in the Liberec Region, particularly in the sphere of digital technologies. Lipo.ink is also a member of the PlatInn network, through which it provides expert advice to SMEs, advice relating to digitisation included. We also help resolve the practical needs of companies in the areas of what are known as **Industry 4.0 and the Industrial Internet of Things.** There are plans to acquire a new TestBed to this end (see project description).
ARR operates the **Smart Accelerator of the Liberec Region**, which focuses on advancing the environment of research, development, and innovation based on what is known as the RIS3 strategy. We also operate the regional innovation brand 1012 +. There is a network of smart accelerators throughout the Czech Republic, meaning that we have ties to research and innovation organisations throughout the country, and to SMEs. We are part of the S3 European technology platform for the future of the textile and clothing industry (**RegioTex**) and a technology platform that focuses on the efficient use of water resources (**Water Smart Territories**).

ARR has long-standing and strong ties with regional stakeholders (regional political representatives), chambers of commerce, business associations, educational facilities, and members of the Science, Research and Innovation Council, which numbers 20 major delegated innovation entities in the region. It is part of the nationwide **professional** https://www.ynovate.cz/en/ **network known as Ynovate, which supports innovation and takes in 8 professional innovation centres in the Czech Republic.**

**ARR cooperates with clusters** in the Liberec region, with the **NANOPROGRESS** cluster, which focuses on research into and the development of nanofibre structures, and with the **CLUTEX** cluster, which focuses on textile and clothing companies, and has memoranda of cooperation in place to this end.

ARR has also worked for many years with **Euroregion Nisa**, which is an organisation based in Liberec that is active in what is known as Trojzemí, meaning the border area between the Federal Republic of Germany, the Czech Republic, and the Republic of Poland. This association seeks to create common and diverse space for cross-border cooperation within its territory.

ARR is also involved in a partnership with the **NOVUM European Grouping for Territorial Cooperation**, based in Jelenia Góra in the Lower Silesian Voivodeship of the Polish border area. The group fortifies, facilitates, and broadens Polish-Czech cross-border cooperation, the aim being to strengthen the economic and social cohesion of this border region. **Further cross-border cooperation** is most common with entities in the German-Polish border area; for example Zentrum für Innovation und Technologietransfer, Hochschule Zittau/Görlitz, Karkonoska Agencja Rozwoju Regionalnego S.A, Jelenia Góra, Poland, Leibnitz Institute of Ecological Urban and Regional Development, Dresden, and manufacturing enterprises from the border region; for example in Jelenia Góra, Szklarska Poręba etc.

ARR representatives are also members of a number of professional working parties or platforms, such as national innovation platforms, platforms relating to education, regional standing conferences for science and research, etc.

**The Lead Partner - ARR - is involved in all WP projects in EDIH NEB and is responsible for the main coordination of the project.**

**Technická univerzita v Liberci - TUL** (Technical University of Liberec): (https://www.tul.cz/en/home-page/)

**TUL is the only university in the Liberec region, with 7 faculties and one specialised institute.** The university teaches certain unique specialisations, including those on the very boundary of **computer technology and robotics, at its Faculty of Mechatronics, Informatics and Interdisciplinary Studies**. There are experts here in mechatronics, electronics and electrical engineering, robotics, cybernetics, measurement and control, speech and image processing, mathematical modelling and computer simulations, safety and reliability, the application of nanomaterials, and remediation technologies.

**The Institute for Nanomaterials, Advanced Technologies and Innovation is also a part of TUL** (CXI: https://www.tul.cz/en/university/cxi/). The CxI institute at TUL was established in Liberec (CZ) in 2009. Its mission is to collaborate with industry at a regional, national, and international level. CxI has three main research direction:

(1) Nanomaterials in natural sciences studies applications of advanced materials and nanomaterials mostly in the field of environmental protection and life sciences, such as the preparation of nanoparticle and nanofiber sensors and diagnostic systems, antibacterial and algicidal surfaces, biotechnology and membrane technologies.

(2) A strong emphasis is placed on the opportunities advanced manufacturing technologies offer for “green industry”, including iplastic processes (please note: TUL has the oldest plastic technology chair in Europe), additive manufacturing; application of natural materials (renewable and environmentally friendly products).

(3) Digital techniques in production covers the use of IT tools to support system and data integration, robotics (including the use of collaborative and sensitive robots), design and development of appropriate control software.

Scientific, research and creative activity are all among the pillars of TUL's very existence. TUL has a long tradition in material, mechanical, and textile engineering and has more recently moved forward in the modern fields of nanomaterials, nanotechnologies, robotics, automation, and biotechnology. TUL is the world cradle of industrial nanofibre production.

TUL has long-term partnerships in place in the region, and within the European Union. Among the most important is its partnership with the Fraunhofer Institute in Germany, with which a memorandum of cooperation was signed in 2018. Moreover, TUL works with major enterprises in the Czech Republic, such as Škoda Auto, Trask, Good Mask and others, either as part of project activities or contracted research. TUL is also a member of Nanoprogress, a major cluster.

As part of its research activities, TUL is involved in several research teams within international projects. One of the most important of these is its role of coordinator in the Twinning and Life project. Many teams also have several years of experience in applied research and development in R&D projects for national providers, such as Technology Agency of the Czech Republic, Ministry of Industry and Trade, Czech Science Foundation, Ministry of Education, Youth and Sport, and others. **TUL is involved in all WP projects in EDIH NEB.**

**VÚTS a.s.:** https://www.vuts.cz/a-little-about-us.html

**VÚTS, a.s., concentrates on research, development, and the manufacture of machines and equipment for the**

**manufacturing industry, particularly in the field of machining, textiles, printing, food, packaging, and medical technology**. It is also involved in automation, the development, design, and construction of special-purpose machines, handling equipment, conveyors, and testing equipment, primarily for suppliers to the automotive industry. The work of VÚTS, a.s., is characterised by its provision of a comprehensive set of services, ranging from research, development, and design to the execution of a complete technological whole. VÚTS has its own production capacities to deal with the prototype and small-series production of machine parts, machines, and equipment.
**The important position which the organisation occupies and the scope of its cooperation with academia and industrial enterprises** are evidenced by the National Centre of Competence Engineering (NCCE) project - TN01000015, carried out as part of the Technology Agency of the Czech Republic's National Centre of Competence programme. VÚTS, as the main researcher and coordinator, ensures the cooperation of a further 8 research organisations and 19 industrial partners.
**VÚTS is a member of the Confederation of Industry of the Czech Republic, AVO (Association of Research Organisations), the CLUTEX cluster (a cluster focusing on technical textiles), and the Nanoprogress cluster (a cluster focusing on R&D and applications in the field of nanomaterials).** Furthermore, VÚTS is a **member of ČTPT (Czech Technology Platform for Textiles) and of ČTPS (Czech Technology Platform for Engineering).**
The organisation is also involved in the work of the "**MANUFUTURE**" platform and the "**European Textile Platform**" through these national platforms. VÚTS had the opportunity to monitor the possibilities and challenges of the EUREKA CLUSTER SMART Advanced Manufacturing cluster initiative and to identify opportunities for potential cooperation at project level.
Moreover, VÚTS, through its representatives, is a member of the **Federation for the Promotion of Mechanism and Machine Science and ASPT Proton - European Technology Transfer Association**.
**The development of international cooperation** is primarily ongoing with the Fraunhofer Institutes of Chemnitz, Dresden, and Zittau, RWTH Aachen University, TITV Greiz - Textilforschungsinstitut Thüringen-Vogtland e.V., ITV - Institut für Textil und Verfahrenstechnik Denkendorf, and Linz Center of Mechatronics in Austria.
**VÚTS is involved in all WP projects in EDIH NEB.**

**Národní klastrová asociace – NCA** (National Cluster Association): (https://www.nca.cz/en/)
NCA brings together entities with the aim of ensuring the coordinated and **sustainable development of cluster initiatives and the development of cluster policy in the Czech Republic based on the concentration of knowledge, experience, and expertise, the aim being to strengthen the competitiveness of the Czech Republic**. It brings together hundreds of companies within member cluster organisations.
It provides advice and education, primarily to SMEs, reinforces the function of clusters in innovation processes, offers consultation on the development of international cooperation, and provides assistance to Czech innovation companies on selected foreign markets or in relation to the preparation and management of projects financed by domestic and international sources.
It builds **long-term relationships with the relevant representatives of regional and national government, national institutions, and other relevant entities that support innovation activities in the region and the process of digitisation**.
The NCA **is part of the European Clusters Alliance** (ECA), which, with the approval of the ECCP, creates updated profiles for cluster organisations, including updates on the portfolio of services offered by cluster organisations across the EU. This work means that the whole of the EU cluster network system will become even more closely connected. The NCA is also a key member of the methodological section of the EUCLES organisation, which is responsible for the methodology and certification for the award of international cluster labels of excellence - gold, silver, and bronze. The NCA jointly coordinates 2 core areas of the WG - Communication and Recognition of Labels.
It is also active in the sphere of cyber security.
**NCA is involved in all WP projects in EDIH NEB apart from WP3 Training and skills development. It plays a primary role in WP4 Networking / building the Innovation ecosystem within the region, the Czech Republic, and the EU.**

**AEC, a.s.** (https://www.aec.cz/en/Pages/default.aspx)
AEC has been a **leading provider of cybersecurity services** since its establishment in 1991. Our experience enables us to integrate technical, process, and human resources to achieve an efficient security solution. Our unique expertise combines ethical hackers, technology engineers, consultants, and auditors. **The quality of our services is based on many years of experience in information security and on verified standards (including EU legislation).**
AEC has in place an information security management system (ISMS) in accordance with ISO / IEC 27001 to demonstrate its professional approach. **The company has also been screened by the National Security Authority to be able to work with classified information as far as "Confidential" security level and is ISO 9001: 2008 certified in the area of "Software delivery including related services.** Providing IT security consulting services". AEC holds a number of

prestigious awards, including, for example, its rankings in the "Czech Top 100" and "Cyber Security Awards: Most Innovative Cyber Security Provider" surveys.
Since 2019, AEC has been part of Aricoma Group, the largest ICT holding in the Czechoslovak region. We provide comprehensive ICT services for the corporate sector. Aricoma Group is part of the KKCG investment group.
**AEC is involved in WP1 and WP2.**

**Univerzita Hradec Králové - UHK** (University of Hradec Králové): (https://www.uhk.cz/en)
**UHK is a major university with a strong regional base and international ambitions**. UHK provides a wide range of educational opportunities at all levels of study and develops and engages in a wide range of scientific research projects and topics, often having a fundamental social impact. **UHK has a modern science and research infrastructure** in place, supports interdisciplinarity in research, and purposefully develops teams of excellence in specific scientific fields and as part of international cooperation, in which it achieves significant results worldwide. **UHK carries out research in selected areas of physics, biology, mathematics, chemistry, and computer science. It promotes and ensures the transfer of knowledge and technology through its intensive cooperation with the corporate sector and public institutions.** University-wide topics: Healthy ageing and quality of life, Security and sustainable development in digital society, and New challenges in education. UHK devotes attention to Industry 4.0, cyber security, high-performance computing, IoT, smart solutions, and advanced IT solutions in electronics, biomedicine, management and economics, etc.
UHK also develops significant **international cooperation**, carried out within the framework of bilateral agreements and EU programmes. It purposefully networks in the relevant organisations, e.g. ASTP Proton, IPI Singapore, Enterprise Europe Network, Transfera.cz, CzechInvest, and others. UHK is involved in significant cooperation in the sphere of application with Technologické centrum Hradec Králové (Technology Centre in Hradec Králové), working on the creation and transfer of innovations and their commercialisation. UHK and the University Hospital in HK are also involved in a number of significant projects together, and UHK builds cooperation within the European University Alliance together with 10 other universities, etc.
**UHK is involved in all WP projects in EDIH NEB apart from WP 4 Networking and WP 6 Communication and dissemination. These two activities are covered on behalf of UHK by CIRI (primarily in the Hradec Králové region).**

**Centrum investic, rozvoje a inovací - CIRI** (Centre for Investment, Development and Innovation): (https://www.cirihk.cz/ciri.html?lang=2)
CIRI is a regional investment and development agency in the Hradec Králové region. It devotes its time to project management and strategic planning, it prepares regional strategic documents, including the RIS3 strategy, it monitors and evaluates, initiates new R & D & I activities, jointly manages the Regional Innovation Fund of the Hradec Králové Region, runs the Research, Development and Innovation Council of the Hradec Králové Region, is an executive component in the implementation of RIS3, and seeks to encourage cooperation and awareness among key stakeholders in the region, for example as the initiator of the Investment, Development and Innovation Platform of the Hradec Králové Region, the operator of the Regional Centre of Support for Social Entrepreneurship, a member of the Employment Pact of the Hradec Králové Region, and the coordinator of the creation and management of the Regional Innovation Brand. CIRI runs the Smart Accelerator of the Hradec Králové Region, which focuses on developing the environment of research, development, and innovation. CIRI is part of the European S3 platform for textiles. CIRI has long-standing and strong links to regional stakeholders (representatives of regional politics), chambers of commerce, business associations, educational facilities, members of the Council for Science, Research and Innovation, etc. CIRI representatives are also members of a number **of professional working parties or platforms**, such as national innovation platforms, platforms relating to education, regional standing conferences for science and research, etc.
**CIRI is involved in all WP in EDIH NEB project apart from WP 2 Test Before Invest. It complements the activities of UHK in the Hradec Králové region in the sphere of networking, communication, and dissemination of information. It organises conferences and business meetings, connects companies together to each other and to research organisations, undertakes networking, etc.**

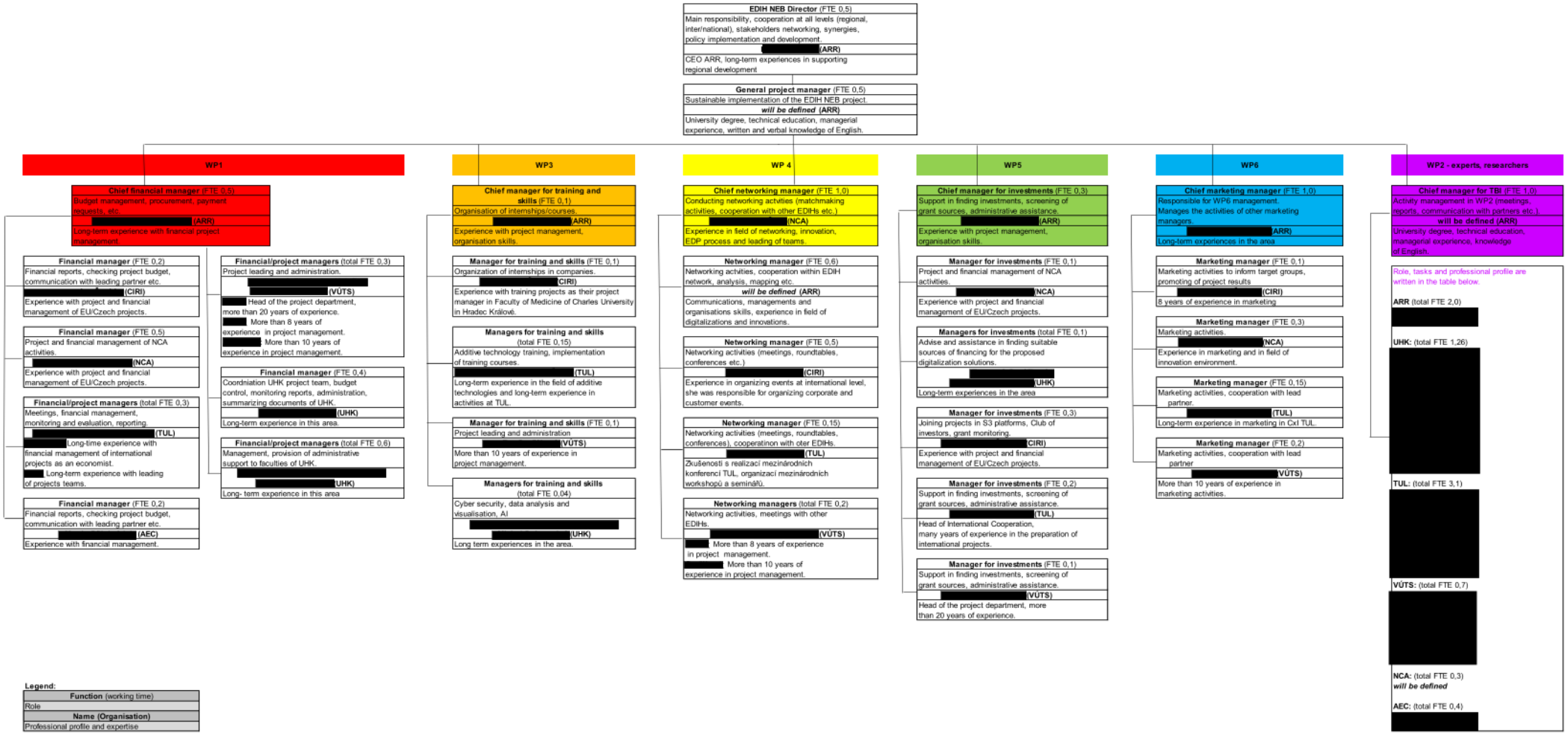
**Alongside the engagement of individual partners in cooperation with a number of entities and organisations within the region, the Czech Republic, and the EU, the members of the consortium also act as a team in cross-border cooperation:**

- EDIH Manufacturing Network (EDIH4Manu), more detailed description provided in Chapter 1.1, see enclosure
- EDIH Saxony, see letter of intent: We plan this cooperation: Mutually providing the EDIHs´ infrastructure for joint use of the EDIHs or their partners, common events and mutual support, especially in the areas smart city/smart region, health, smart administration and smart production, engagement in the international network of EDIHs and active participation in the corresponding events, help in engaging with additional organisations within the regional network of partners of EDIH Northern and Eastern Bohemia and EDIH Saxony, especially regional SMEs, with the aim of building new value chains across Europe, mutual exchange of best practices, enhancing the cross-border cooperation between Germany and the Czech Republic with focus on digital applications.

- Wroclaw Technology Park, see letter of intent
- Technical University in Chemnitz, see letter of intent
- The Fraunhofer Group for Production IWU, Chemnitz/ Dresden, see letter of intent
- Business Development in the Erzgebirge of Saxony, Chemnitz, see letter of intent
- Hochschule Zittau/Goerlitz (University of Applied Sciences Zittau/Goerlitz), see letter of intent
- Universities in Opole, see letter of intent
- Technology Transfer Centre, Wroclaw, see letter of intent
- Centre of Excellence Chemnitz, see letter of intent (all in enclosure)

EDIH NEB has also established cooperation with the **Enterprise Europe Network**, **see Memorandum of Cooperation.** Cooperation involves the joint organisation of events, sharing information, B2B events, etc. (Information is also provided in Chapter 1.1 and in the Annex).

This organisation diagram describes the whole project teams and shows how they will work together. In order to save space, the last column shows only names of the researchers/experts, their more detailed description is in the table below.



**Project teams and staff** - additional information in the WP2 column (see organisational chart above, last column), information concerning other members of the project team is part of the organisation diagram.

*Describe the project teams and how they will work together to implement the project. List the staff included in the project budget (budget category A) by function/profile (e.g. project manager, senior expert/advisor/researcher, junior expert/advisor/researcher, trainers/teachers, technical personnel, administrative personnel etc. and describe briefly their tasks.*

| Name and function | Organisation | Role/tasks/professional profile and expertise |
|---|---|---|
| Senior expert: [redacted]<br>Senior expert: [redacted] | ARR<br>*(total FTE 2,0)* | Digital audits, consulting, testing. FTE 1,0. Experience with digital audits, business development<br>IoT, IIoT Smart, consulting, testing. FTE 1,0. Long-term experience with IoT, IIoT, sensors, automatization. |
| TBI expert - Security Audit - will be defined | NCA<br>*(FTE 0,3)* | Security audit. Experience in IT security services and specifically security audit services. FTE 0,3 |
| Senior experts/researchers:<br>[redacted] | UHK<br>*(total FTE 1,26)* | These persons are responsible for and have long-term experience in the field of:<br>a comprehensive solution of research activities in the offered field of archaeology and specific solution of the problem.<br>services, training and research activities in the area of cybersecurity, smart solutions and IoT.<br>services, training and research activities in the area of agent simulations.<br>data analyses and visualizations, implementation of desktop and web systems, mobile application development, data processing, cloud solutions etc.<br>services, training and research activities in the area of artificial intelligence and its practical use.<br>consultation, design, implementation of IoT and smart systems<br>data analysis. |
| Senior researchers:<br>[redacted]<br>Senior/junior researcher,will be defined<br>Senior researcher - will be defined<br>Junior researcher - will be defined | TUL<br>*(total FTE 3,1)* | These persons are responsible for and have long-term experience in the field of:<br>big data processing and analysis and AI based image recognition. Analysis, solution design, testing, validation.<br>IIoT and augmented reality, analysis, solution design, testing, validation.<br>sensitive robotics, analysis, solution design, testing, validation.<br>additive technologies, analysis, solution design, testing, verification.<br>design and testing of electronic systems. Analyses, tests, tests, measurements.<br>battery management, electromobility. Analyses, solution design, testing, verification.<br>voice recognition and speaker identification. Analysis, design of solutions, testing, verification.<br>economic consulting. Evaluation of financial profitability and other basic financial indicators, cost-benefit analysis, business case preparation.<br>proof-of-concepts, test implementation and development, documentation. risk and reliability analysis with application experience.<br>Conducting risk and reliability analysis studies and calculations.<br>electromobility and battery systems. Solution concept design, solution development, testing and verification within PoC. |

| | | |
|---|---|---|
| Senior expert - [redacted]<br>Senior expert - [redacted]<br>Senior expert - [redacted]<br>Researcher - [redacted]<br>Researcher - [redacted]<br>Researcher - [redacted] | VÚTS<br><br>*(total FTE 0,7)* | Virtual model creation, calculations. Head of department with 20 years of experience in calculation and modelling. FTE 0,145<br>Digitalisation (3D scan + reverse engineering). Head of department with 20 years of experience in digitalization. FTE 0,095<br>Measurement and data analysis to compare virtual and real product. 10 years of experience in measuring. Total FTE 0,16<br>Virtual model creation, calculations. More than 10 years of experience in calculation and modeling. FTE 0,145<br>Digitalisation (3D scan + reverse engineering). 10 years of experience in digitalization. FTE 0,095<br>Machine vision and learning. 5 years of experience in machine learning. FTE 0,05 |
| Senior security expert – [redacted]<br><br>Senior expert – [redacted] | AEC<br><br>*(total FTE 0,4)* | Penetration testing of web applications, thick clients, and integration services. Experience in internal and external infrastructure penetration tests, ATM penetration testing and auditing, security audits of OS Windows, IIS, MSSQL, as well as in reverse engineering and malware and forensic analysis.<br>Implementation of organization security measures and security processes. Head of Risk & Compliance Division, experience in security management of large organisations. |

**Outside resources (subcontracting, seconded staff, etc)**

*If you do not have all skills/resources in-house, describe how you intend to get them (contributions of members, partner organisations, subcontracting, etc.) and for which role/tasks/professional profile/expertise. If there is subcontracting, please also complete the table in section 4.*

All EDIH NEB services in the area of Test Before Invest will be addressed using its own human resources, a result of the expertise of the partners involved (see Chapter 2.3). In some cases, an outside expert is included in costs, but only for a constituent part of the service and to the required extent (external services). Other activities in EDIH NEB will also be carried out using its own personnel capacities, with the exception of mapping:
Networking activity, mapping / analysis section: In-depth analysis of EDIH target groups in the Czech Republic and abroad, as defined in Chapter 1, networking section.

The proposed in-depth analysis covers a wider area of investigation. This is a time-consuming activity that will be more effective to leave to an experienced company that specialises in analytical work and that has the necessary methodology, data sources, and equipment in place.

**Consortium management and decision-making (if applicable)**

*Explain the management structures and decision-making mechanisms within the consortium. Describe how decisions will be taken and how regular and effective communication will be ensured. Describe methods to ensure planning and control. **Note:** The concept (including organisational structure and decision-making mechanisms) must be adapted to the complexity and scale of the project.*

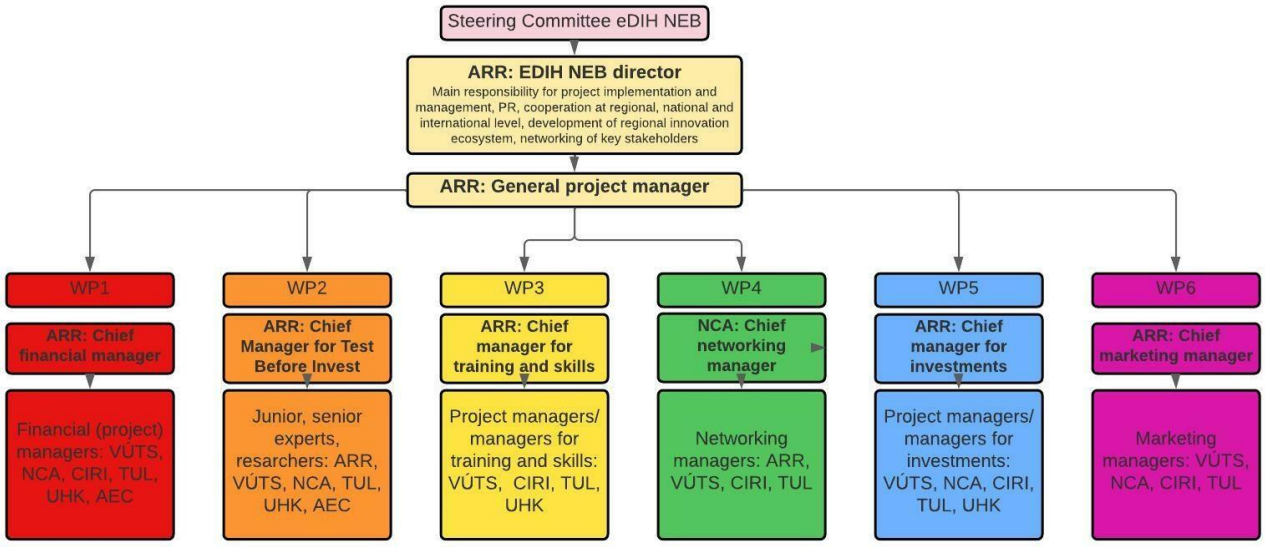
**Management structure and decision-making mechanisms within the consortium**

The fundamental organisational set-up of cooperation between EDIH NEB partners is based on a consortium agreement. The umbrella body of EDIH NEB is the "**steering committee**", in which all partners are represented. This supervises the activities of the consortium as a whole and takes key decisions (e.g. accepting another partner, etc.), is acquainted with the progress of the project and takes key decisions in areas of fundamental change and to ensure the onward direction of activities in the field of support for digitisation. The Lead Partner - ARR - is responsible for the overall coordination of the entire EDIH NEB project.
Main responsibility lies with the **Director of eDIH NEB** (ARR). His main role includes outward communication, finding synergies in the digital and innovation environment, creating relationships and interconnections with other eDIH or other entities and politicians throughout the Czech Republic and the EU, managing project activities, and fulfilling project objectives. The steering committee provides information about the progress of the project and offers proposals for development and the onward direction of services. It decides on the basic parameters and ways of handling activities within the project. Where a solution is required for any risks associated with ethics issues, including those in the area of AI, he will contribute to their monitoring and resolution. A code of ethics will be elaborated as a supporting tool for the elimination/treatment of the risk. For further explanation, see “Ethics Issues Table”.
The **General Project Manager** (ARR) reports directly to the Director of eDIH NEB. He/she is responsible for the coordination of all activities, for coordinating individual WP managers, and for communication with the EC / MIT together with the financial manager. His/her role is to compile reports on activities, to coordinate procedures in achieving objectives

and indicators, and to evaluate and plan the development of services. All information about the progress of the project reaches him/her and he/she is responsible for coordinating the fulfilment of goals and fulfilling the tasks of the entire project. He/she decides on the processes and coordination tasks when dealing with project activities so as to be able to fulfil his/her responsibility. For more information on the process of planning and control, see "Project Management" above.
Individual WP managers are answerable to the General Project Manager and provide him/her with detailed information on the course of individual activities within their own WP and on the fulfilment of tasks and objectives. Each of these managers coordinates the activity of the other partners in a specific matter, decides on constituent detailed steps, and is responsible for achieving objectives and fulfilling tasks within them (see organogram below):

- WP1: **Chief Financial Manager** (ARR)
o Competencies: financial / project management of the entire project according to EC rules - checks the drawing of the budget, changes in the project, the fulfilment of indicators, the schedule, compiling monitoring reports, etc.
- WP2: **Chief Manager for Test Before Invest** (ARR)
o Competencies: coordination of activities, detailed orientation in the expert services provided in WP2 by all partners, key for the interconnection of partner services and, as the case may be, the partner network of other eDIH, the development of services according to client requirements.
- WP3: **Chief Manager for Training and Skills** (ARR)
- WP4: **Chief Networking Manager** (NCA)
- WP5: **Chief Manager for Investments** (ARR)
- WP6: **Chief Marketing Manager** (ARR)

As far as WP3 - WP6 are concerned, invariably the main competencies in the relevant thematic area, the coordination of activities across partners, and designing services according to project development and client requirements. Each of these WP managers has a set schedule of activities and check points after 3 months in order to achieve the set project outcomes.
At individual partner level, duties (full-time, part-time) are determined for the actual execution of individual activities in each WP (i.e. **financial managers, networking managers, project managers**, etc.), through which they ensure the operation of the project at the level of their own organisation - they are responsible for the actual performance and management of activities, their evaluation, etc. within their own WP. Competent managers are only appointed in such WP where the partner has a designated role, because not all partners are involved in all WP (e.g. due to its role in the project, AEC is only involved in WP1 and WP2).




**Communication**
Communication among the partners for the purpose of planning, coordinating, managing, and directing the project is set very closely among them at working level:
- The steering committee meets at least once every 6 months, or as needed.
- Meetings attended by the director of eDIH NEB, general project manager, and WP chief managers are held once a week, or as needed.
- Meetings of individual WP chief managers and project managers at partner level within each WP are also held once a

week, or as needed.
- Meetings of all involved employees of all partners are held once every 6 months (online).
- Ad hoc meetings across WP and the organisational structure are naturally also held according to the needs of the project. Online format preferred.

Regular communication will proceed with the use of common tools, such as online or physical meetings, e-mails, and telephone communication. Shared repositories for project data management will be available, segmented according to the nature of the project. Minutes from meetings are always taken, specifying responsibilities and deadlines for the fulfilment of individual tasks for subsequent control, and evaluation of the fulfilment of those tasks.

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# 3. IMPACT

## 3.1 Expected outcomes and deliverables — Dissemination and communication

**Expected outcomes and deliverables**

*Define and explain the extent to which the project will achieve the expected impacts listed in Call document.*

The project defined its main objective and sub-objectives and its target group in Chapter 1.1. Individual work packages (project activities) have been compiled in order to achieve the project objectives, whilst taking account of the character of the target group.
Individual work packages incorporate therein specific activities and outcomes. The number of outcomes is limited here by recommendation; in our case, the total number of outcomes in each WP is 12 (see description of WP). However, the number of project outcomes will be higher, depending on the nature of the WP in question. Example of outcomes over and above those listed in the description of WP:

- WP1 Management and coordination: Minutes from meetings, communication within CRM, project evaluation, certificate of training for the implementation team, etc.
- WP2: Test Before Invest: Digital audits, penetration tests, prototypes, SW solutions, data analysis, web systems, SW applications, etc.
- WP3: Number of courses and internships completed
- WP4: Number of events organised, partnerships created, new ideas for digitisation, cross-border cooperation, entering into commercial contracts, etc.
- WP5: Number of events, number of documents compiled in relation to financial resources, etc.
- WP6: Videos, podcasts, leaflets, articles in the press / on social media, presentation materials, media campaigns, number of marketing events, etc.

More information on the potential of the main catchment area of EDIH NEB (Liberec / Hradec Králové region = main catchment area, consequently NUTSII NE, the second geographical dimension is the territory of the Czech Republic, the third the Czech-Polish-German border territory, and the fourth the EU) and the associated scope of potential EDIH NEB clients is provided in previous chapters. The target group of the project was also defined in more detail in Chapter 1.1. Here we add the expected number of EDIH NEB clients and provided services.

KPIs were determined during the preparatory stage of the project, carefully and in as much detail as possible in cooperation with individual partners, their capacity (degree of involvement in the project), expertise, and the time needed (expressed in hours) for individual services. At the same time, we identified synergies between services.

First, the individual services of the partners and the average time needed for individual services were defined. To this end, the expected number of services provided and the number of participants involved were set, within the capacity of the partners. Individual KPIs were subsequently set for the expected capacity of individual partners and the time required to work with clients.

Similar steps were taken for EDIH NEB activities other than the Test Before Invest service.

As for educational and networking activities, the expected number of participants was determined, on the one hand, according to the number of planned activities (according to the capacity of the partners, i.e., the degree of their involvement in the project) and with regard to the optimum capacity of those activities (in relation to the effectiveness of the activity) and the realistic interest of clients achievable.

The same applies to consultancy services to concern the Support to Find Investments service. Here we draw on the real proportion of clients who will use this advice based on the experience of the consortium partners to date.

**I. Number of businesses and public sector entities, which have used EDIH NEB services:**

The value of the indicator is calculated from the clients of activities included under WP2 Test Before Invest, WP3 Training and skills development, WP4 Networking / building the innovation ecosystem, and WP5 Support to Find investments.
WP1 is irrelevant to the involvement of target group. Furthermore, WP6 Communication and Dissemination is about indirectly influencing the target group and the general public, and so is not included in the value of indicators.

**For practical reasons, we have simplified and clarified the overview of indicators as much as possible.** Compared to the previous application, we have now focused attention on the number of services provided (which is more meaningful than the number of people previously monitored). This is merely a different view of the quantification of indicators. At the same time, we will pursue a more detailed view of the entities to which the services were provided (whether an SME, a mid-cap, or a public organisation).

**Activity in WP2 Test Before Invest**: With this activity, we will monitor the **number of services provided** to the target group (SMEs, mid-caps, and public administration). **We are talking about approximately 450 services provided over 3 years** (of which we assume about 390 SMEs, 10 mid-caps, and 50 public organisations).

The thematic overview of the envisaged EDIH NEB services is summarised in this table to provide a better insight into the more detailed specification of services.

- Advice on the digitisation of a company/public administration
- Digital audit
- Testing the selected solution according to the result of the digital audit
- Consulting on IoT, solution proposals
- Testing of selected IoT solution(s)
- Advice on smart solutions, solution proposals
- Testing a selected SMART solution
- Advice on IIoT and advanced sensors
- Tests and proof-of-concepts of selected IIoT solutions
- Security aspects of the deployment of IIoT and wireless networks, including 5G
- Consultation in the sphere of cybersecurity
- The creation and revision of methodologies in the field of smart solutions, IoT, cybersecurity
- Consultation in the sphere of Security Audit
- Penetration tests
- Advice on robotics and sensitive/collaborative robots
- Tests and proof-of-concepts for robotics and sensitive/collaborative robots
- Consultation regarding data analysis, modelling, simulation, ML and AI processing
- Data processing tests and proof-of-concepts
- The processing of a large volume of structured or unstructured data from internal and external systems, cloud solutions, Data Lakes, Data Warehouse, ETL processes, modelling, data visualisation, data analysis using statistical methods and artificial intelligence
- The measurement and analysis of data for a comparison of virtual and real product
- The creation of a virtual model
- Consultation in the industrial application of AI-based voice and image recognition
- Tests and proof-of-concepts in the industrial application of AI-based voice and image recognition
- Consultation regarding the application of artificial intelligence (neural networks, machine learning, expert systems and the like, the use of neural networks for image analysis)
- Machine vision and learning
- Design, analysis, and consultation in the implementation of desktop and web systems based on modern technologies and trends, the development of mobile applications focusing on communication with sensors and other devices, including data visualisation
- Interactive data visualisation and the application of computer graphics methods using GPU designed for desktop and mobile applications, and for the sphere of virtual reality
- The application of agent simulations running in real time, usable for training purposes
- Economic advice (in relation to e-commerce and e-business)
- The analysis of electronic devices, risk analyses and reliability predictions
- Consultation in the field of electromobility, battery power supply, and alternative energy sources
- EMC tests of electronics, sensors, devices
- Consultation and proof-of-concepts in the field of AR and MS Hololens
- Tests and proof-of-concepts in the field of AR

- Consultation in the field of 3D printing, materials, the optimisation of model construction, product properties
- Digitisation (3D scanning + reverse engineering)
- The identification of subsurface relics of archaeological objects using magnetometric measurement
- The digitisation of archaeological research documentation in the environment of geographical information systems, including the processing of 3D documentation
- Taking X-rays of collection items over an area of up to 1000 x 400 mm
- Reconstructive computed tomography of collection items to a maximum diameter of 350 mm and a length of 1,000 mm

In the case of activity in **WP3 Skills and Training**, we will monitor both the **total number of participants in activities** (education, internships, etc.) and **the number of activities carried out**.

The estimated number of participants in WP3 activity is **around 660 people over 3 years** (of which about 380 SMEs/mid-caps and 280 public organisations). We expect that in some cases, more than one person from a single organisation may take part in the relevant activity.

We expect around **75** educational activities **over 3 years**.

As far as **WP4 Innovation ecosystem and Networking** is concerned, we will monitor the **number of participants in networking activities** (conferences, round tables, meetings, etc.) and will also record the type and **number of these activities (activities such** as conferences, meetings, round tables, matchmaking activities, etc.).

The estimated number of participants in these **activities is 900 over 3 years** (of which approximately 700 SMEs and mid-caps and around 200 public organizations).

We expected **480 activities over 3 years**.

For **WP5 Support to find Investments**, we will monitor the **number of serviced clients** that were provided with advice on sources of funding in the field of digitisation or that participated in events such as investor days, etc. We expect the number of clients to be approximately **240 entities** over 3 years (of this figure, clients from SMEs and mid-caps approximately 215, from public entities approximately 25).

**Aggregate indicator:**

W**e** have **indicate**d **the estimated number of entities involved (SMEs, mid-caps**, **or public organi**s**ations** in relation to **the above-mentioned activities** at **EDIH NEB (Test Before Invest, Skills and Training, Innovation** E**cosystem and Networking**, **and Support to** F**ind Investments). Due to the fact that these entities** might appear more than once across **activities,** and indeed **within activities (in most cases we expect comprehensive client care), we** have stated **the expected number of** "**unique entities**" **below. This means that each entity (according to its** Company N**umber) is included in this indicator only once, regardless of how many activities or services it has used** as part of **the EDIH project. We quantified this value** at **approximately 600 over 3 years. We determined th**is **value** based on the expert **assessment of individual partners after a more detailed analysis of individual indicators**. In this regard, it is also necessary to take note of the different demands on time and expertise in relation to individual EDIH NEB services, which ultimately influences the number of unique clients.

We see the impacts of the activities of WP6 - Communication and Dissemination - as a value of the indicator that cannot be quantified in more detail. These activities have a significant impact on the target group of the project in relation to the process of digitisation and will undoubtedly contribute to that process, although not always with the direct use of EDIH NEB services.

The second indicator:

II. **For access to finance: amount of additional investments successfully triggered (e.g. through venture capital, bank loan, etc.):**

This indicator is more closely related (primarily) to the activities of the Test Before Invest project, when it addresses how many proposed measures in the field of digitisation / artificial intelligence / cybersecurity will be implemented within a particular client's environment (SMEs, mid-caps, public organisations). As part of the activities involved in "Support to Find Investments", we will support the identification of possible sources of investment coverage associated with the solutions proposed in the sphere of digitisation. **In this regard, we assume an investment in digitisation of approximately 3.5**

**million EUR.**

The third indicator:

**III. Number of collaborations foreseen with other EDIHs and stakeholders outside the region at EU level, and description of jointly shared infrastructures / joint investments with other EDIH:**

This indicator is linked to cooperation outside the main catchment area - the Hradec Králové and Liberec regions - i.e. with other members of the EDIH network or stakeholders. We have established cooperation with many entities in the catchment area and at national and international level (see Chapter 1.1) within the bounds of the EDIH NEB project.

**This indicator incorporates the different level of collaboration with entities outside the main catchment area (NUTS2):**

- sharing information, examples of good practice, expertise, methods, and the use of testing facilities to support digitisation
- participation in events organised by other entities in the field of digitisation, joint organisation of events, internships
- participation in or joint organisation of events such as matchmaking, B2B, connecting companies and public entities across the EU
- cooperation on the dissemination of information relating to digitisation
- cooperation within the scope of Test Before Invest services

**We envisage cooperation with around 40 entities in connection with these activities. As far as jointly shared infrastructures / joint investments with other EDIH are concerned, we expect cooperation with 1 entity.**

**A set of additional impact indicators will be collected and analysed with the support of the Digital Transformation Accelerator (DTA):**

- Increase in the digital maturity of organisations that have used the services of the EDIH network. Digital maturity will be defined on the basis of a questionnaire assessing the categories of digital strategy and readiness, intelligence and automation, data and connectedness, green and human-centric digitisation. The category of green digitisation will focus on the use of digital technologies to improve environmental sustainability and the inclusion of circularity in the value chain.
- Market maturity and market creation potential of innovations, as defined in the JRC Innovation Radar methodology

These impact indicators will be monitored and evaluated on the basis of a questionnaire prepared by the DTA.

**Dissemination and communication of the project and its results**

*If relevant, describe the communication and dissemination activities, activities (target groups, main messages, tools, and channels ) which are planned in order to promote the activities/results and maximise the impact. The aim is to inform and reach out to society and show the activities performed, and the use and the benefits the project will have for citizens. Clarify how you will reach the target groups, relevant stakeholders, policymakers and the general public and explain the choice of the dissemination channels. Describe how the visibility of EU funding will be ensured.* ⚠ *In case your proposal is selected for funding, you will have to provide a more detailed plan for these activities (dissemination and communication plan), within 6 months after grant signature. This plan will have to be periodically updated; in line with the project progress.*

The task of dissemination and communication activities is generally to convince enterprises and public administration about the benefits of and the need to increase the level of digitisation in those given organizations. This is a difficult long-term activity, one in which it is necessary to properly plan and understand the tools of communication and information. Our task is to attract the attention of the target groups and to generate potential EDIH NEB clients from them.

One part of this activity is dedicated to that target group that is able to define its need for digitisation, while the other part focuses on the group that does not know its needs and must come to realise the potential of digitisation. The aim here is to increase the number in that target group which know its needs in the sphere of digitisation and to keep working with them.

In this way, we want to gradually build a base of EDIH NEB contacts that we can work with thereafter (potential/new/returning clients), to build a strong brand and to increase awareness of this brand within the region, outside the region, and outside the Czech Republic, to gain credibility among the target group, and to build the reputation of our region.

See WP 6 for the objectives of the communication and dissemination activities. Communication and dissemination activities are dealt with in EDIH NEB using three basic channels: EARNED, OWNED, & PAID media. They will target two types of audiences:

1 / potential clients, i.e. small and medium-sized companies, mid-caps and public administration entities (in order to offer services and raise awareness of digitisation in the region);
2 / the general public in the region and outside the region at national and international level (primarily to raise awareness of digitisation).
3 / policy a decision makers
4 / investors

Primary communication will be specified in **the Communication Plan**. This will be based on the idea of digitisation as key to maintaining and increasing the efficiency and competitiveness of companies, and, more broadly, maintaining and increasing the living standards of the people living in the region (and more broadly the European Union as a whole). Furthermore, as key to maintaining the quality of public administration services - we not only see this as being important for the people living in the region, but for other objectives too, such as the proper functioning of talent management in the region (functioning communication with public institutions is important in retaining professionals from abroad). The message will be modified according to the target group, according to whether we primarily want to gain clients or whether we want to spread awareness. Another important element is the visual side of communication - logo, colours, font, etc., and emphasis on quality content marketing (production of content that is relevant to the above target groups).

**Mandatory publicity will be included**. It will appear in visual form on all EDIH NEB materials, and we will also work with the verbal form (e.g. in videos, podcasts or during events).
**EARNED MEDIA**: the media that EDIH NEB acquires through honest communication on the topic of digitisation. This supposes building relationships with journalists at regional and national level and, in relation this, presenting journalists with valid material. Social media is another tool to be used - sharing content with fans of the EDIH NEB profile, branding the EDIH NEB profile, etc.
**OWNED MEDIA**: media owned and managed by EDIH NEB. These include websites (the Lead Partner's site and the sites of individual consortium partners), profiles on LinkedIn and Facebook, a newsletter channel, etc. Events organised for the purpose of gaining clients, networking or raising awareness of the topic of digitisation can also be mentioned here.
**PAID MEDIA**: third party media that publicise EDIH NEB in the form of paid publicity. For example, remarketing on the Google Adwords network, paid support for posts, and other forms of paid support on social networks (with the aim of gaining fans or to drive website traffic) or, for example, sticking up posters before events.

There is a wide range of marketing and communication tools. The entire consortium of partners will be available for the use of these to varying extents according to their capabilities, established partnerships, and available channels of communication. Daily communication and cooperation is essential with a number of organisations within or outside the region (bilateral meetings, the organisation of events, participation in events organised by third parties, participation in thematic working parties, etc.).

Dissemination and communication activities are directed at regional, national and EU level. Both existing clients of the consortium and future clients are being addressed. The marketing activities mentioned above will be used to actively disseminate the results of the project, the services being offered, examples of good practice, practical information, and experience, acting as inspiration to other organisations that are interested in digitising their processes. From a cross-border perspective, we see the internet, social networks, information sharing within cooperating partners across borders, our participation in events abroad, etc. as important tools. A more detailed description of dissemination and communication activities will be included in the Communication Plan, which will be compiled by the sixth month and subsequently updated annually. Proposed activities in the field of dissemination and communication are also part of WP6, as is an indicative budget. The Chief Marketing Manager (ARR) will have the coordinating role in this area of activity, in that he/she will further cooperate with other marketing staff at individual partner level.

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## 3.2 Competitiveness and benefits for society

**Competitiveness and benefits for the society**

*Describe the extent to which the project will strengthen competitiveness and bring important benefits for society*

The situation surrounding the COVID-19 pandemic has shown us that successful business in the future depends on the transition of companies to the digital environment, because only companies that introduce new technologies and artificial intelligence to business or production processes will be competitive. Whilst the Hradec Králové and Liberec regions do show strong innovation potential, they have at the same time relatively low levels of innovation activity. Investing in digital

skills and infrastructure will bring them competitive advantages that are built on a strong industrial base and a rapidly-developing environment, one in which start-ups thrive and which, together with newly-digitised industrial processes and a skilled workforce, may stimulate the Czech economy to grow in the near future. It is important for businesses to take advantage of the opportunities offered by digitisation in order to remain competitive: to use cloud computing to achieve growth, technical solutions for big data, robotics, etc., since the use of such digital technologies **increases the productivity of enterprises** and helps **preserve jobs** that would otherwise be relocated to areas where labour is cheaper. Digitisation helps start-ups with growth potential **create innovations** and **new jobs** and allows traditional industries to create new products through **more efficient use of resources**. At the same time, it enables public administration to provide **better, faster, and cheaper services** with greater accuracy and efficiency and creates **new cross-border opportunities**.

Given the breakneck speed of technological change, it is becoming clear that companies that do not adapt to technological transformation will fall behind in their results. The rapid development of new information and communication technologies, robotics, and cybernetics is bringing revolutionary changes to the field of production. The use of smart algorithms **significantly reduces the time and costs** required to plan production, in turn leading to more efficient production. The digitisation of companies also leads **to improved performance** via process automation, increased data quality, and overall cost savings. EDIH NEB can make business easier for companies by saving them time; they will then be able to provide better services to customers.

The most dynamic development can be expected in the youngest industry - augmented and virtual reality - and in the field of artificial intelligence, particularly in the use of machine learning. Artificial intelligence can be of great benefit to our society and will be of far-reaching importance to **future economic growth** and **increasing productivity**. For example, the use of artificial intelligence for various technological solutions can lead to smarter use of resources and increase the competitiveness of the manufacturing industry. The rapidly-expanding opportunities for working with large volumes of data make machine learning a key tool in various applications, such as banking, financial services and insurance (BFSI), healthcare, etc. Robotisation and automation are widely used in production and can be employed in processes throughout the production cycle. It is assumed that robots will gradually replace all activities involving routine manual assembly. Secondly, robotisation will have an inevitable effect on the structure of the labour market and the necessary (re)qualification of workers. At the same time, the work of humans and robots is interconnected as a result of what are known as collaborative robots, which can be more easily integrated into existing production lines that make greater use of human labour. One of the very latest technologies, a combination of various interactive digital elements using sensory projections integrated into the real environment, is augmented and virtual reality. This technology is used in the automotive industry and in the entertainment industry alike. To sum up, we might say that the short-term motivating factor in using EDIH NEB services is the **saving that can be made in costs**, at least as far as in-house savings are concerned. **Time can be saved** by using automated systems that undertake routine activities, while their introduction will **eliminate errors** in activities that can be replaced by smart systems. In the medium-term, the introduction of technologies brings a **higher return**. The use of IoT elements, in production for example, will **reduce wear to machines** and tools, as these systems constantly monitor their condition and report any changes. However, most of the impacts that the project will have on companies, public administration, and society in general can be considered long-term. In the long run we will see **increased productivity, new jobs, better, cheaper, and faster services and long-term economic growth in the region in general.**

The EDIH NEB project will play an important role in the introduction of digital technologies at companies and public administrations. One of the advantages is that these services are made available to a greater number of operators thanks to subsidised services. Another benefit is easier access to state-of-the-art testing infrastructure (including the new Test Bed for Industry 4.0). Equally important is the very "strength" of the consortium of partners, which are important players in the field of digitisation, both within and outside the Liberec and Hradec Králové regions, and which can thus jointly exert pressure on the region to accelerate the process of digital transformation. As a result of the project, companies and public entities will gain access to a consortium of partners and will be able to deal with their needs together with a wider team of experts and find sophisticated solutions to digitising their processes. Moreover, through networking, communication, and the dissemination of information EDIH NEB will contribute to the situation in which SMEs and public administration are more motivated and have greater interest in addressing the digitisation process. By carrying out comprehensive activities and building the region's innovation ecosystem in the area of digitisation, the EDIH NEB project will help move the region as a whole towards a higher degree of digital maturity. The Digital Maturity Assessment methodology provided by JRC Innovation Radar will also be used to monitor the digital maturity of the region.

## 3.3 Environmental sustainability and contribution to European Green Deal goals

**Environmental sustainability and contribution to European Green Deal goals**

*Describe the extent to which the project will contribute to environmental sustainability and in particular to European Green Deal goals*

⚠ *This might not be applicable to all topics — for details refer to the Call document.*

**Sustainability and environmental protection are important points of which the stakeholders in EDIH NEB are fully aware. The future lies in connecting digitisation and sustainability. Cooperation among entities is crucial to the digital and green transformation of enterprises and the public sector in terms of fulfilling "green objectives", whether it be cooperation in the sphere of investment or introducing the results of research and development into real life.** All these activities contribute to reducing dependence on fossil fuels, reducing greenhouse gas emissions, and reducing the carbon footprint. Attempts to bring these topics together have so far been unsystematic and inefficient.

**The activities, experience, available equipment, and targeting of EDIH NEB are able to address the needs specified above.** At the same time, these activities are closely ideologically linked to the objectives of the European Green Deal and to the Strategy for Adaptation to Climate Change in the Czech Republic for the period 2021-2030, which complies with the EU Adaptation Strategy. EDIH NEB activities thus help meet the criteria of reducing carbon dioxide production by 55% by the year 2030, to which the Czech Republic has committed. As far as these issues are concerned, then, EDIH NEB systematically brings the public and private sectors together with the experts, schools, universities, and research organisations tied to it. In doing so it helps clients establish cooperation and transfer experience and skills in a targeted way. With their help, ways are sought with clients to make significant savings on energy and materials, to develop new and environmentally-friendly prototypes, products, and equipment, to streamline and develop digital communication, and to develop modern digitised services that are undemanding on energy. Everything can then emerge faster and more efficiently in terms of energy and material than if the original know-how and resources had been used.

**EDIH NEB, with its extensive network of experts and consultants, its specific and targeted services** (described in detail in the chapters of the application relating to the description of services), **and its technological equipment and experience, helps clients integrate digital innovation and sustainable technological solutions, leading to a real solution to the issue described above.**

**Important areas of experience that can move EDIH clients forward include,** for example, the experience of experts at the Technical University of Liberec, which focuses its research activities, inter alia, on the field **of research into materials, in particular considerate new materials, and modern engineering**, with the emphasis on the usability of results in practice. Among the important areas addressed, for example, at the **Department of Environmental Technologies are specific technologies for environmental improvement, where it will be possible, inter alia, to draw on the experience of the IDm2 or LIFEPOPWAT projects; it is also possible to draw on experience of the development of autonomous electric utility vehicles, battery power sources, and alternative energy sources**; TUL also has a wealth of experience in the **use of artificial intelligence and other related fields**. The **field of nanotechnology** is also developing progressively (the development of production equipment and nanomaterials, the modification thereof, and composites that can be used as specific applications in industry, medicine, and other fields, **for cleaning water, air, and liquids and for other remediation procedures put in place to ensure environmental protection and the saving of resources; these materials, however, can also be applied as surface treatments of materials,** for example, in engineering, where energy use and the wear of machines and products is subsequently reduced. Another member of the consortium, VÚTS, helps clients with its knowledge in the **field of reducing energy consumption, for example, in increasing performance and production parameters, in extending the service life of equipment, and in reducing innovation cycles, which significantly help reduce the environmental burden** in the production of machinery and equipment, and in subsequent production – **significant savings are therefore made on energy and material resources.** ARR is also very active in digitization and green topics, continuously conveying information to clients, sometimes in the form of awareness-raising activities, when it can deploy the experience and knowledge of the **Platform for Digitisation of the Liberec Region, which addresses, inter alia, topics** relating to the **circular economy, electromobility, cooperative systems, cyber security, smart cities, and other digitisation topics** that serve **to accelerate processes and in turn significantly save resources and energy. Support is also provided within these activities to raising awareness of modern and environmentally-friendly production technologies (e.g. 3D printing, etc.).** All other members of the EDIH NEB consortium take **Green Deal objectives into account** in their activities and everything is passed on through them to the clients, who **can in turn make significant savings on natural resources. Further** details on the activities carried out by the members of the consortium that relate to issues connected to the objectives of the Green Deal are provided **in the annex to the application.**

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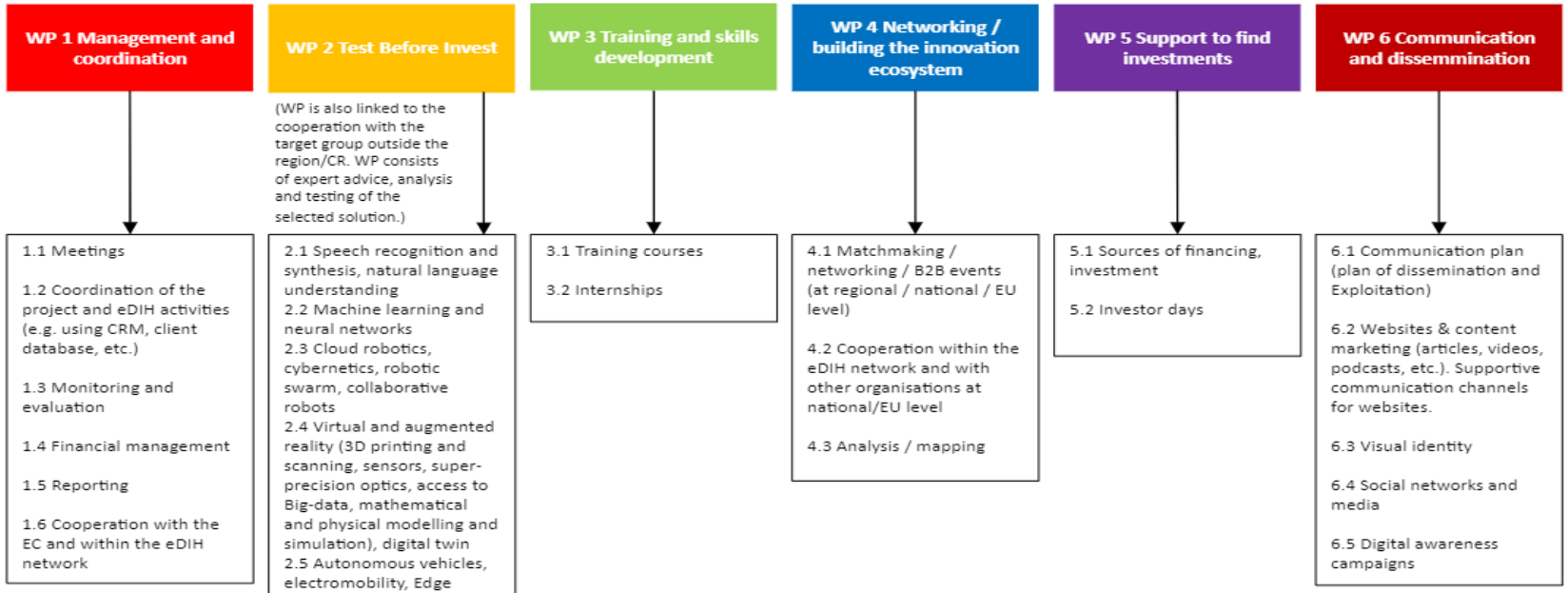
# 4. WORK PLAN, WORK PACKAGES, ACTIVITIES, RESOURCES AND TIMING

## 4.1 Work plan

**Work plan:** *Provide a brief description of the overall structure of the work plan (list of work packages or graphical presentation (Pert chart or similar)).*



## 4.2 Work packages, activities, resources and timing

**WORK PACKAGES**

**Work packages:** *This section concerns a detailed description of the project activities. Group your activities into work packages.* ***A work package means a major sub-division of the project****. For each work package, enter an objective (expected outcome) and list the activities, milestones and deliverables that belong to it. The grouping should be logical and guided by identifiable outputs.*
*Projects should normally have a minimum of 2 work packages. WP1 should cover the management and coordination activities (meetings, coordination, project monitoring and evaluation, financial management, progress reports, etc) and all the activities which are cross-cutting and therefore difficult to assign to another specific work package (do not try splitting these activities across different work packages). WP2 and further WPs should be used for the other project activities. You can create as many work packages as needed by copying WP1.*
*For very simple projects, it is possible to use a single work package for the entire project (WP1 with the project acronym as WP name).*
*Work packages covering financial support to third parties (⚠ only allowed if authorised in the Call document) must describe the conditions for implementing the support (for grants: max amounts per third party; criteria for calculating the exact amounts, types of activity that qualify (closed list), persons/categories of persons to be supported and criteria and procedures for giving support; for prizes: eligibility and award criteria, amount of the prize and payment arrangements).* ⚠ *Enter each activity/milestone/output/outcome/deliverable only once (under one work package).*
⚠ *Ensure consistency with the detailed budget table/calculator (if applicable).* *(n/a for prefixed Lump Sum Grants)*

**Objectives:** *List the specific objectives to which the work package aims to achieve.*

**Activities and division of work (WP description)**
*Provide a concise overview of the work (planned tasks). Be specific and give a short name and number for each task.*
*Show who is participating in each task: Coordinator (COO), Beneficiaries (BEN), Affiliated Entities (AE), Associated Partners (AP), indicating* ***in bold*** *the task leader.*
*Add information on other participants' involvement in the project e.g. subcontractors, in-kind contributions.*
***Note:***
*In-kind contributions: In-kind contributions for free are cost-neutral, i.e. cannot be declared as cost. Please indicate the in-kind contributions that are provided in the context of the work package.*
*The Coordinator remains fully responsible for the coordination tasks, even if they are delegated to someone else. Coordinator tasks cannot be subcontracted.*
*If there is subcontracting, please also complete the table below.*

**Milestones and deliverables (outputs/outcomes)**
***Milestones*** *are control points in the project that help to chart progress (e.g. completion of a key deliverable allowing the next phase of the work to begin). Use them only for major outputs in complex projects, otherwise leave the section empty. Please limit the number of milestones by work package.*
*Means of verification are how you intend to prove that a milestone has been reached. If appropriate, you can also refer to indicators.*
***Deliverables*** *are project outputs which are submitted to show project progress (any format). Refer only to major outputs. Do not include minor sub-items, internal working papers, meeting minutes, etc. Limit the number of deliverables to max 10-15 for the entire project. You may be asked to further reduce the number during grant preparation.*
*For deliverables such as meetings, events, seminars, trainings, workshops, webinars, conferences, etc., enter each deliverable separately and provide the following in the 'Description' field: invitation, agenda, signed presence list, target group, number of estimated participants, duration of the event, report of the event, training material package, presentations, evaluation report, feedback questionnaire.*
*For deliverables such as manuals, toolkits, guides, reports, leaflets, brochures, training materials etc., add in the 'Description' field: format (electronic or printed), language(s), approximate number of pages and estimated number of copies of publications (if any).*
*For each deliverable you will have to indicate a due month by when you commit to upload it in the Portal. The due month of the deliverable cannot be outside the duration of the work package and must be in line with the timeline provided below. Month 1 marks the start of the project and all deadlines should be related to this starting date.*
*The labels used mean:*

- *Public — fully open (⚠ automatically posted online on the Project Results platforms)*
- *Sensitive — limited under the conditions of the Grant Agreement*
- *EU classified — RESTREINT-UE/EU-RESTRICTED, CONFIDENTIEL-UE/EU-CONFIDENTIAL, SECRET-UE/EU-SECRET under Decision 2015/444. For items classified under other rules (e.g. national or international organisation), please select the equivalent EU classification level.*

| **Work Package 1: Project management and coordination** | | | |
|---|---|---|---|
| **Duration:** | M1 - M36 | **Lead Beneficiary:** | 1-ARR |

**Objectives**

- Successfully achieve the goals, indicators, outputs and other attributes of the project
- Effectively manage the people involved in the project
- Manage and monitor the processes in the project
- Set up effective communication in the project and with the EC
- Properly process implementation reports and payment requests
- Educate the implementation team

**Activities and division of work (WP description)**

| Task No (continuous numbering linked to WP) | Task Name | Description | Participants | | In-kind Contributions and Subcontracting (Yes/No and which) |
|---|---|---|---|---|---|
| | | | Name | Role (COO, BEN, AE, AP, OTHER) | |
| T1.1 | Meetings (eDIH team meetings, meetings with EC representatives, etc.) | Meetings within the project team, with representatives of the EC or the eDIH network for the purposes of project management. ARR will manage activity and work closely with all partners. Regular meetings of representatives of consortium partners a minimum of once a month. | ARR<br>TUL, UHK, VÚTS, NCA, CIRI, AEC | COO<br>BEN | No |
| T1.2 | Coordination of the project and eDIH activities (e.g. using CRM, client database, etc.) | Coordination of work and activities within the eDIH implementation team, i.e. cooperation between the individual partners of the consortium. Use of CRM tools, client database, shared tools, etc. | ARR<br>TUL, UHK, VÚTS, NCA, CIRI, AEC | COO<br>BEN | No |
| T1.3 | Monitoring and evaluation (evaluation plan) | Monitoring the implementation of EDIH NEB services, feedback from clients. Monitoring the digital maturity of the target group (primarily within the Test Before Invest activity), evaluation of the results of individual project activities. Use of EC tool for evaluation of the digital maturity of target groups. Each partner evaluates the digital maturity of EDIH clients. The Lead Partner processes information in a comprehensive manner. | ARR<br>TUL, UHK, VÚTS, NCA, CIRI, AEC | COO<br>BEN | No |
| T1.4 | Financial management | Monitoring how the budget is drawn, changes in the budget, eligibility of expenditures, etc. Processing payment requests. | ARR<br>TUL, UHK, VÚTS, NCA, CIRI, AEC | COO<br>BEN | No |
| T1.5 | Reporting (implementation reports) | Compiling implementation reports, monitoring the achievement of project activities, indicators, schedule, outputs, etc. | ARR<br>TUL, UHK, VÚTS, NCA, CIRI, AEC | COO<br>BEN | No |
| T1.6 | Cooperation with the | Cooperation within the eDIH network and with the EC during project management, | ARR | COO | No |

| | | | | | |
|---|---|---|---|---|---|
| | EC (DTA) and eDIH network (training of eDIH staff, working with the EC information system, etc.) | reciprocal exchange of information, experience, training the EDIH team and involvement in other activities of The Digital Transformation Accelerator. Cooperation of all members of the consortium within the eDIH network and with EC as required. Training provided to the implementation team on an ongoing basis (approximately 15 per year).<br>This task addresses the liaison and co-operation activities with Digital Transformation Accelerator (DTA).<br>The EDIH will:<br>-provide to the DTA the necessary data/information on the overall Key Performance Indicators on an annual basis or on request by the DTA; -participate actively in the relevant support activities of the DTA, such as matchmaking, training and capacity building events;<br><br>-participate actively in the “Train the trainer” programme organised by the DTA, to acquire the needed knowledge on how to use the digital capacities supported by Digital Europe programme, with the objective to help the EDIH stakeholders to make use of them.<br><br>This task only covers the specific activities for collaboration with DTA. The periodic reporting will include a description of the activities performed in collaboration with the DTA. | TUL, UHK, VÚTS, NCA, CIRI, AEC | BEN | |

**Estimated budget — Resources** *(n/a for prefixed Lump Sum Grants)*

| Participant | Costs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A. Personnel | | B. Subcontracting | C.1 Travel and subsistence | C.2 Equipment | C.3 Other goods, works and services | D.1 Financial support to third parties | | D.2 Internally invoiced | D.3 PAC procurement | E. Indirect costs | Total costs |
| ARR | 90 | € 336 694,86 | € 0,00 | € 8 000,00 | € 0,00 | € 5 928,85 | 0 | 0 | 0 | 0 | € 24 543,66 | € 375 167,38 |
| VÚTS | 10,8 | € 26 680,00 | € 0,00 | € 6 000,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 2 287,60 | € 34 967,60 |
| NCA | 18 | € 64 031,62 | € 0,00 | € 3 600,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 4 734,21 | € 72 365,83 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CIRI | 7,2 | € 9 960,00 | € 0,00 | € 3 556,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 946,12 | € 14 462,12 |
| TUL | 10,8 | € 34 862,00 | € 0,00 | € 5 000,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 2 790,34 | € 42 652,34 |
| UHK | 36 | € 104 617,00 | € 0,00 | € 8 000,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 7 883,19 | € 120 500,19 |
| AEC | 7,2 | € 35 573,12 | € 0,00 | € 2 000,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 2 630,12 | € 40 203,24 |
| Total | **180** | **€ 612 418,60** | **€ 0,00** | **€ 36 156,00** | **€ 0,00** | **€ 5 928,85** | **0** | **0** | **0** | **0** | **€ 45 815,24** | **€ 700 318,70** |

**Work Package 2: Test Before Invest (WP is also linked to the cooperation with the target group outside the region/Czech Republic. WP consists of expert advice, analysis and testing of the selected solution.)**

| **Duration:** | M1 – M36 | **Lead Beneficiary:** | 1-ARR |
|---|---|---|---|

**Objectives**

- To increase the digital maturity of the target group of the EDIH NEB project
- To increase the competitiveness of enterprises on global markets and increase their productivity
- To provide SMEs with the necessary institutional and technological support for the deployment of digital technologies
- To make digital transformation services more accessible to SMEs
- To promote digital innovation
- To develop a sustainable economic business model

Therein, the activity incorporates services in the area of Test Before Invest and evaluation of the digital maturity of clients in cooperation with DTA, as well as possible cooperation with EDIH within the Czech Republic and outside the Czech Republic, if the scope of EDIH NEB professional services is insufficient.

- Costs relating to budget item C2 Equipment: TUL: Provision and continuous updating of equipment for testbed 5G industrial networks - acceleration of transmission speed, the possibility of connecting more devices, gradual increase of edge computing capacity for testbed IIoT and local storage for saving and analysing measured data, specific components for testbed of the test production robotic line (PLC, communication interface). ARR: Industrial Internet of Things (IIoT), IoT Test and Demonstration Equipment; for more see Chapter 1.1 and annex to the application. VÚTS: SW NX and its modules, HW (computer equipment), which will be used for the creation of virtual twins and calculations and modelling. Moreover, software for 3D scanning and digitisation. UHK: Hardware and software for virtual reality, PCs / notebooks, AnyLogic licences, powerful workstations for simulating cyber security tasks and artificial intelligence methods, server systems, storage sites, security and network elements

**Activities and division of work (WP description)**

| Task No (continuous numbering linked to WP) | Task Name | Description | Participants | | In-kind Contributions and Subcontracting (Yes/No and which) |
|---|---|---|---|---|---|
| | | | Name | Role (COO, BEN, AE, AP, OTHER) | |

| | | | | | |
|---|---|---|---|---|---|
| T2.1 | Speech recognition and synthesis, natural language understanding | See chapter 1.1 for a more detailed description of services. Expected number of clients of services: 3 per year. Expected number of hours of work with clients: approximately 500 hours per year. Workload approximately 0.3. From cost category C3: we envisage the use of, for example, cloud storage sites, renting computing capacity for training models on computer GPU clusters, etc. | TUL | BEN | No |
| T2.2 | Machine learning and neural networks | See chapter 1.1 for a more detailed description of services.<br>Expected number of clients of services: 4 per year<br>Expected number of hours of work with clients: approximately 400 Workload approximately 0.2. From cost category C3: the required material for work, e.g. graphic cards for calculations, data storage sites, cameras. | TUL, VÚTS, UHK | BEN | No |
| T2.3 | Cloud robotics, cybernetics, robotic swarm, collaborative robots | See chapter 1.1 for a more detailed description of services.<br>Expected number of clients of services: 5 per year.<br>Expected number of hours of work with clients: approximately 750. Workload approximately 0.4.<br>From cost category C3: we envisage the purchase of specific services in the development and testing of effectors or the design and manufacture of equipment for handling products with the help of a robot. | TUL | BEN | No |
| T2.4 | Virtual and augmented reality (3D printing/3D scanning, sensors, super-precision optics, access to Big-data, mathematical and physical modelling and simulation), digital twin | See chapter 1.1 for a more detailed description of services.<br>Expected number of clients of services: 42 per year.<br>Expected number of hours of work with clients: approximately 3,950. Workload approximately 2.2.<br>From cost category C3: the required material, for example computer software, PC, material for 3D printing, the use of cloud storage sites, tests according to standards (e.g. for radio transmission resistance, emissions), the preparation of HDRi maps, etc. | VÚTS, TUL, UHK | BEN | No |
| T2.5 | Autonomous vehicles, electromobility, Edge Computing | See chapter 1.1 for a more detailed description of services.<br>Expected number of clients of services: 2 per year.<br>Expected number of hours of work with clients: approximately 160. Workload approximately 0.2. | TUL | BEN | No |
| T2.6 | Industrial Internet of Things (IIoT), use of AI and advanced analytics, data processing, IoT, bioinformatics | See chapter 1.1 for a more detailed description of services.<br>Expected number of clients of services: 43 per year.<br>Expected number of hours of work with clients: approximately 2,900. Workload approximately 1.6.<br>From cost category C3: external production of customised components for PCB boards and electronics of specific IIoT sensors, external calibration and certification services for sensors, external certification services for IIoT equipment for operation in wireless bands LoRa, SigFox, external expert consultancy. | ARR<br>TUL, UHK | COO<br>BEN | No |
| T2.7 | Digital audits, smart city, | See chapter 1.1 for a more detailed description of services. | ARR | COO | No |

| | | | | | |
|---|---|---|---|---|---|
| | web systems and applications, etc. | Expected number of clients of services: 60 per year.<br>Expected number of hours of work with clients: approximately 3,000.<br>Workload approximately 1.9.<br>From cost category C3: expert within the Platinn network, external expert consultancy, consumables for Test before Invest. | TUL, UHK | BEN | |
| T2.8 | Penetration tests | See chapter 1.1 for a more detailed description of services.<br>Expected number of clients of services: 4 per year<br>Expected number of hours of work with clients: approximately 680.<br>Workload approximately 0.4 | AEC | BEN | NO |
| T2.9 | Cybersecurity audits, advice | See chapter 1.1 for a more detailed description of services.<br>Expected number of clients of services: 6 per year.<br>Expected number of hours of work with clients: approximately 300.<br>Workload approximately 0.4 | UHK, NCA | BEN | No |
| T2.10 | Other digitisation services | See chapter 1.1 for a more detailed description of services.<br>Expected number of clients of services: 6 per year.<br>Expected number of hours of work with clients: approximately 240.<br>Workload approximately 0.15 | UHK | BEN | No |

**Estimated budget — Resources** *(n/a for prefixed Lump Sum Grants)*

| Participant | Costs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A. Personnel | | B. Subcontracting | C.1 Travel and subsistence | C.2 Equipment | C.3 Other goods, works and services | D.1 Financial support to third parties | | D.2 Internally invoiced | D.3 PAC procurement | E. Indirect costs | Total costs |
| ARR | 72 | € 247 873,52 | € 0,00 | € 5 000,00 | € 95 000,00 | € 96 208,70 | 0 | 0 | 0 | 0 | € 31 085,75 | € 475 167,97 |
| VÚTS | 25,2 | € 58 355,00 | € 0,00 | € 3 000,00 | € 23 715,00 | € 3 000,00 | 0 | 0 | 0 | 0 | € 6 164,90 | € 94 234,90 |
| NCA | 10,8 | € 44 466,40 | € 0,00 | € 1 700,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 3 231,65 | € 49 398,05 |
| TUL | 111,6 | € 359 753,00 | € 0,00 | € 14 400,00 | € 26 000,00 | € 94 862,00 | 0 | 0 | 0 | 0 | € 34 651,05 | € 529 666,05 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UHK | 45,36 | € 310 170,00 | € 0,00 | € 8 000,00 | € 47 430,00 | 0 | 0 | 0 | 0 | 0 | € 25 592,00 | € 391 192,00 |
| AEC | 14,4 | € 59 288,54 | € 0,00 | € 3 000,00 | € 0,00 | € 4 743,08 | 0 | 0 | 0 | 0 | € 4 692,21 | € 71 723,83 |
| Total | **279,36** | **€ 1 079 906,46** | **€ 0,00** | **€ 35 100,00** | **€ 192 145,00** | **€ 198 813,78** | **0** | **0** | **0** | **0** | **€ 105 417,56** | **€ 1 611 382,80** |

**Work Package 3: Training and skills development**

| **Duration:** | M1 - M36 | **Lead Beneficiary:** | 1-ARR |
|---|---|---|---|

**Objectives**

- To increase employees' knowledge in the field of digitisation (artificial intelligence, cybersecurity) in connection with the current needs of the labour market
- To offer different levels of digital education
- To accompany digital education with demonstrations in practice
- To use modern technologies in digital education

**Activities and division of work (WP description)**

| Task No (continuous numbering linked to WP) | Task Name | Description | Participants | | In-kind Contributions and Subcontracting (Yes/No and which) |
|---|---|---|---|---|---|
| | | | Name | Role (COO, BEN, AE, AP, OTHER) | |
| T3.1 | Training courses | Specialised courses for SMEs / public administration. Examples of course targeting (a specific topic will be chosen according to current client demand): Cyber security, Data analysis and visualisation, AI and its use, AM technologies, etc.<br>We envisage 22 courses a year, we expect about 215 participants a year. In budget item C3: Refreshments, rental, technology, instructors, course materials, etc. | ARR<br>TUL, UHK, VÚTS | COO<br>BEN | No |
| T3.2 | Internships: | Internships for the target group of the project in order to gain experience of innovative technologies, digitisation, artificial intelligence, cyber security. Sharing good practice within enterprises, research organisations, public bodies, etc.<br>We envisage 3 internships a year. We expect 5 participants a year. In budget item C3: Mentoring during internships, documents for internships, etc. | ARR<br>CIRI | COO<br>BEN | No |

| **Estimated budget — Resources** *(n/a for prefixed Lump Sum Grants)* | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Participant | Costs | | | | | | | | | | | |
| | A. Personnel | | B. Subcontracting | C.1 Travel and subsistence | C.2 Equipment | C.3 Other goods, works and services | D.1 Financial support to third parties | | D.2 Internally invoiced | D.3 PAC procurement costs | E. Indirect costs | Total costs |
| ARR | 3,60 | € 10 328,06 | € 0,00 | € 3 000,00 | € 0,00 | € 14 229,25 | 0 | 0 | 0 | 0 | € 1 929,01 | € 29 486,32 |
| VÚTS | 3,60 | € 8 893,00 | € 0,00 | € 0,00 | € 0,00 | € 7 115,00 | 0 | 0 | 0 | 0 | € 1 120,56 | € 17 128,56 |
| CIRI | 7,20 | € 8 538,00 | € 0,00 | € 1 778,00 | € 0,00 | € 17 075,00 | 0 | 0 | 0 | 0 | € 1 917,37 | € 29 308,37 |
| TUL | 5,40 | € 17 430,00 | € 0,00 | € 2 000,00 | € 0,00 | € 4 743,00 | 0 | 0 | 0 | 0 | € 1 692,11 | € 25 865,11 |
| UHK | 1,44 | € 9 883,00 | € 0,00 | € 4 000,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 971,81 | € 14 854,81 |
| Total | **21,24** | **€ 55 072,06** | **€ 0,00** | **€ 10 778,00** | **€ 0,00** | **€ 43 162,25** | **0** | **0** | **0** | **0** | **€ 7 630,86** | **€ 116 643,17** |

| **Work Package 4: Networking / building the innovation ecosystem** | | | |
|---|---|---|---|
| **Duration:** | M1 - M36 | **Lead Beneficiary:** | 3-NCA |

**Objectives**

- To create links between enterprises, public administration, and other entities, such as clusters, innovation entities, incubators, associations, chambers of commerce, regional stakeholders, etc.
- To actively communicate and share information within the European EDIH network, jointly organise events, find solutions for EDIH clients in the field of digitisation together with other EDIHs in the EU in the event that the competency of EDIH NEB cannot satisfy the need in question
- To search for new clients of EDIH NEB
- To link demand for digital solutions with supply
- To motivate companies and public organisations to proceed with digital transformation
- To map out the environment of the region in the field of digitisation

**Activities and division of work (WP description)**

| Task No (continuous numbering linked to WP) | Task Name | Description | Participants | | In-kind Contributions and Subcontracting |
|---|---|---|---|---|---|
| | | | Name | Role (COO, BEN, AE, | |

| | | | | AP, OTHER) | (Yes/No and which) |
|---|---|---|---|---|---|
| T4.1 | Matchmaking/networking/B2B events (at regional/national/EU level) | - Connecting representatives of public administrations, companies and other organisations forming the innovation ecosystem in the region, at national level, in the EU: Organisation of roundtable conferences, platforms, business meetings, etc.<br>- Cooperation with regional stakeholders, clusters, incubators, EEN, chambers of commerce, associations, innovation actors: exchange of offers and requests from the target group, search for new innovative solutions, cooperation on events (outside WP3 actions). We expect around 400 participants in these activities a year<br>We envisage the organisation of a digitisation platform 2 times a year, 3 conferences a year (1 in the Liberec region, 1 in the Hradec Králové region, 1 outside the region), approximately 7 business meetings a year, 4 round tables a year (e.g. for representatives of public administration), bilateral meetings with representatives of the target group. Costs in budget item C3: Refreshments, rental, technology, instructors / experts, event website, event materials, interpreting, presentation, etc. | ARR<br>TUL, CIRI, NCA, VÚTS | COO<br>BEN | No |
| T4.2 | Cooperation within the eDIH network and with other organisations at national/EU level | - Sharing experiences<br>- Cooperation in events beyond the activities listed in WP Training and skills development (cooperation in events of other eDIH/other organisations)<br>- Cooperation in addressing the needs of the target group in the field of digitisation and related activities outside the eDIH NEB activities<br>We envisage cooperation with around 50 organisations at national / European level. | ARR<br>TUL, CIRI, NCA, VÚTS | COO<br>BEN | No |
| T4.3 | Analysis / mapping | In-depth analysis of target groups in the Czech Republic and abroad. Identification and diversification of target groups for individual EDIH NEB services. An important base for the activities of the group marketing team. Another objective is to specify the best way of addressing sub-target groups in follow-up marketing activities. The segmentation of target groups will be determined according to their endogenous and exogenous potential, interest in sub-areas of digitisation services, and what entities in the consortium have to offer, as well as the condition for further synergies. | NCA | BEN | Yes (tender for a contractor) |

**Estimated budget — Resources** *(n/a for prefixed Lump Sum Grants)*

| Participant | Costs | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | A. Personnel | | B. Subcontracting | C.1 Travel and subsistence | C.2 Equipment | C.3 Other goods, works and services | D.1 Financial support to third parties | | D.2 Internally invoiced | D.3 PAC procurement | E. Indirect costs | Total costs |
| ARR | 21,60 | € 74 359,68 | € 0,00 | € 6 000,00 | € 0,00 | € 11 857,71 | 0 | 0 | 0 | 0 | € 6 455,22 | € 98 672,61 |
| VÚTS | 7,20 | € 17 787,00 | € 0,00 | € 6 000,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 1 665,06 | € 25 451,62 |
| NCA | 36,00 | € 166 007,91 | € 55 731,23 | € 8 900,00 | € 0,00 | € 37 944,66 | 0 | 0 | 0 | 0 | € 18 800,87 | € 287 384,66 |
| CIRI | 18,00 | € 42 688,00 | € 0,00 | € 4 980,00 | € 0,00 | € 21 937,00 | 0 | 0 | 0 | 0 | € 4 872,32 | € 74 476,95 |
| TUL | 5,40 | € 17 430,00 | € 0,00 | € 2 000,00 | € 0,00 | € 5 929,00 | 0 | 0 | 0 | 0 | € 1 775,18 | € 27 134,86 |
| Total | **88,20** | **€ 318 272,59** | **€ 55 731,23** | **€ 27 880,00** | **€ 0,00** | **€ 77 668,37** | **0** | **0** | **0** | **0** | **€ 33 568,64** | **€ 513 120,70** |

**Work Package 5: Support to find investments**

| **Duration:** | M1 - M36 | **Lead Beneficiary:** | 1-ARR |
|---|---|---|---|

**Objectives**

- To make it easier for EDIH NEB clients to finance proposed solutions in the field of digitisation, artificial intelligence, cyber security
- To monitor potential sources of funding
- To offer practical assistance in finding financial resources and using them

**Activities and division of work (WP description)**

| Task No (continuous numbering linked to WP) | Task Name | Description | Participants | | In-kind Contributions and Subcontracting (Yes/No and which) |
|---|---|---|---|---|---|
| | | | Name | Role (COO, BEN, AE, AP, OTHER) | |
| T5.1 | Sources of financing, investment | Screening grant sources in the field of digitalisation, cooperation in securing financial resources for specific solutions (grants, loans, exchanges, venture capital, etc.) and cooperation in preparing applications for the given financial source | ARR<br>TUL, UHK, VÚTS, CIRI, NCA | COO<br>BEN | No |
| T5.2 | Investor days | The organisation or joint organisation of investor days for EDIH NEB clients, | ARR | COO | No |

| | | | | | |
|---|---|---|---|---|---|
| | | cooperation with EDIH NEB clients in preparing investor days. Support for the involvement of EDIH NEB clients in investor days. Approximately 2 events a year.<br>C3 costs include refreshments, rental, expert for cooperation, etc. | CIRI | BEN | |

| **Estimated budget — Resources** *(n/a for prefixed Lump Sum Grants)* | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Participant | Costs | | | | | | | | | | | |
| | A. Personnel | | B. Subcontracting | C.1 Travel and subsistence | C.2 Equipment | C.3 Other goods, works and services | D.1 Financial support to third parties | | D.2 Internally invoiced | D.3 PAC procurement costs | E. Indirect costs | Total costs |
| ARR | 10,80 | € 30 984,19 | € 0,00 | € 2 000,00 | € 0,00 | € 5 928,85 | 0 | 0 | 0 | 0 | € 2 723,91 | € 41 636,96 |
| VÚTS | 3,60 | € 8 893,00 | € 0,00 | € 0,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 622,51 | € 9 515,51 |
| NCA | 3,60 | € 11 857,71 | € 0,00 | € 1 750,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 952,54 | € 14 560,25 |
| CIRI | 10,80 | € 25 612,00 | € 0,00 | € 1 778,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 1 917,30 | € 29 307,30 |
| TUL | 7,20 | € 23 241,00 | € 0,00 | € 1 300,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 1 717,87 | € 26 258,87 |
| UHK | 3,60 | € 19 892,00 | € 0,00 | € 3 100,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 1 609,44 | € 24 601,44 |
| Total | **39,60** | **€ 120 479,90** | **€ 0,00** | **€ 9 928,00** | **€ 0,00** | **€ 5 928,85** | **0** | **0** | **0** | **0** | **€ 9 543,57** | **€ 145 880,32** |

| **Work Package 6: Communication and dissemination** | | | |
|---|---|---|---|
| **Duration:** | M1 - M36 | **Lead Beneficiary:** | 1-ARR |
| **Objectives** | | | |
| 1 / To attract the attention of target groups and generate potential customers among them. One part of the activity is dedicated to the target group that is able to define its need for digitisation and the other part to the group that does not know its needs and must come to realise the potential of digitisation. The aim here is to increase the number of entities in | | | |

the target group that know their needs in the field of digitisation and to continue to work with them.
2 / To build a base of EDIH NEB contacts with which it is possible to work into the future (potential / new / returning customers).
3 / To build brand awareness
a / among the target group and to gain credibility
b / outside the target group in order to build the repute of the region

- N.B. Budget costs which come under C3, Other goods, works and services, include items which relate to the activities specified below (websites of the Lead Partner and of other partners to EDIH NEB and their administration, dissemination of information using social networks and media, creating podcasts, graphic works, printed materials and other promotional tools, the organisation of awareness-raising events or the publicity of EDIH NEB at events organised by other entities, the use of expert consultancy for the creation of a communication plan, etc.) with the proviso that items will be fine-tuned in the communication plan and its regular updates.

**Activities and division of work (WP description)**

| Task No (continuous numbering linked to WP) | Task Name | Description | Participants | | In-kind Contributions and Subcontracting (Yes/No and which) |
|---|---|---|---|---|---|
| | | | Name | Role (COO, BEN, AE, AP, OTHER) | |
| T6.1 | Communication plan (plan of dissemination and Exploitation) | The communication plan defines EDIH's vision and mission and its impact on the ecosystem of the region. It elaborates the process for fulfilling this vision and mission in relation to the target groups of the project. It defines content, communication channels, campaigns, budget. The plan is updated twice a year. The first plan will be created no later than 6 months after the commencement of the project.<br>Chief marketing manager: Creates the communication plan, is responsible for its implementation. Consortium members: comment on the plan, jointly responsible for implementation. | ARR<br>CIRI, TUL, VÚTS, NCA | COO<br>BEN | No |
| T6.2 | Websites & content marketing (articles, videos, podcasts, etc.). Supportive communication channels for websites. | The website is part of the Lead Partner's website and is a key carrier of relevant and valuable content: articles, videos, podcasts / information on digital technologies and trends, advice shops (how to ...), positive references. It is administered based on a content plan (content mkt). This also takes in management of the websites of individual partners to EDIH NEB.<br>Chief marketing manager: process management and coordination, content distribution, consortium members: creation of content. Activities include:<br>- management of the ARR website of ARR and the websites of partners to EDIH NEB<br>- the creation of articles, videos, podcasts.<br>The use of channels to ascertain web traffic:<br>1 / SEO - search engine optimisation - compiling an analysis of keywords<br>2 / Remarketing - a campaign targeting visitors to the website in the form of PPC Google Adwords<br>3 / Newsletter - news sent out to a database of contacts | ARR<br>CIRI, TUL, VÚTS, NCA | COO<br>BEN | No |

| | | | | | |
|---|---|---|---|---|---|
| | | 4 / Social networks and media (see below)<br>Chief marketing manager: management of support channels | | | |
| T6.3 | Visual identity | Includes: Logo, font, icons, graphic manual, photographs. We will continuously apply everything to websites, social networks and other online channels, publicity materials, letterheads, business cards, etc.<br>Chief marketing manager: management and coordination of work with visual identity<br>Consortium members: work with visual identity<br>This activity also involves the production / printing of publicity materials (leaflets, roll-ups, brochures, billboards, items, etc.). | ARR<br>CIRI, TUL, VÚTS, NCA | COO<br>BEN | No |
| T6.4 | Social networks & media | Serves as an amplifier of EDIH NEB content of (primarily located on the website). As for social networks, we will target LinkedIn / Facebook (sorted by relevance). Setting up profiles, organic and paid distribution of articles, paid publicity of websites (publicity continuously distributed throughout project implementation).<br>As for Media Relations: Building relationships with journalists. Regular advertising / publications about EDIH in the press (approximately monthly). Targeted online marketing.<br>Both the Lead Partner and the individual partners will participate in carrying out the activity, individual partners following the lead of the Lead Partner. Other activities in this area: Information campaign on national television in educational programmes (TUL), | ARR<br>CIRI, TUL, VÚTS, NCA | COO<br>BEN | No |
| T6.5 | Digital awareness campaigns | Educational events in support of spreading awareness of the need for the region (or target groups) to digitise. Networking at events, relationships with customers and potential EDIH partners are created and cultivated (approximately 4 events a year).<br>Sub-campaigns regarding selected awareness-raising topics will be ongoing at the same time, online, on the following axis: communication content-websites-social networks, media, remarketing.<br>Spreading awareness at events organised by other entities, distribution of EDIH NEB publicity materials, presentation of EDIH NEB at trade fairs, etc. (approximately 6 times a year). Roles: Chief marketing manager - campaign management Consortium members: campaign executive | ARR<br>CIRI, TUL, VÚTS, NCA | COO<br>BEN | No |

| Deliverable No (continuous numbering linked to WP) | Deliverable Name | Work Package No | Lead Beneficiary | Type | Dissemination Level | Due Date (month number) | Description (including format and language) |
|---|---|---|---|---|---|---|---|
| D6.1 | Dissemination and Exploitation | 6 | ARR | R | PU | 6 | compilation of the dissemination and exploitation plan within 6 months |

| **Estimated budget — Resources** *(n/a for prefixed Lump Sum Grants)* | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Participant | Costs | | | | | | | | | | | |
| | A. Personnel | | B. Subcontracting | C.1 Travel and subsistence | C.2 Equipment | C.3 Other goods, works and services | D.1 Financial support to third parties | | D.2 Internally invoiced | D.3 PAC procurement costs | E. Indirect costs | Total costs |
| ARR | 36,00 | € 113 608,70 | € 0,00 | € 4 000,00 | € 0,00 | € 47 430,83 | 0 | 0 | 0 | 0 | € 11 552,77 | € 176 592,29 |
| VÚTS | 7,20 | € 17 787,00 | € 0,00 | € 0,00 | € 0,00 | € 29 644,00 | 0 | 0 | 0 | 0 | € 3 320,17 | € 50 751,17 |
| NCA | 10,80 | € 33 201,58 | € 0,00 | € 1 750,00 | € 0,00 | € 0,00 | 0 | 0 | 0 | 0 | € 2 446,61 | € 37 398,19 |
| CIRI | 3,60 | € 4 980,00 | € 0,00 | € 1 778,00 | € 0,00 | € 5 929,00 | 0 | 0 | 0 | 0 | € 888,09 | € 13 575,09 |
| TUL | 5,40 | € 17 430,00 | € 0,00 | € 1 300,00 | € 0,00 | € 18 972,00 | 0 | 0 | 0 | 0 | € 2 639,14 | € 40 341,14 |
| Total | **63,00** | **€ 187 007,28** | **€ 0,00** | **€ 8 828,00** | **€ 0,00** | **€ 101 975,83** | **0** | **0** | **0** | **0** | **€ 20 846,78** | **€ 318 657,88** |

*Subcontracting (n/a for prefixed Lump Sum Grants)*

**Subcontracting**
*Give details on subcontracted project tasks (if any) and explain the reasons why (as opposed to direct implementation by the Beneficiaries/Affiliated Entities).*
*Subcontracting — Subcontracting means the implementation of 'action tasks', i.e. specific tasks which are part of the EU grant and are described in Annex 1 of the Grant Agreement.*
***Note:** Subcontracting concerns the outsourcing of a part of the project to a party outside the consortium. It is not simply about purchasing goods or services. We normally expect that the participants have sufficient operational capacity to implement the project activities themselves. Subcontracting should therefore be exceptional.*
*Include only subcontracts that comply with the rules (i.e. best value for money and no conflict of interest; no subcontracting of coordinator tasks).*

| Work Package No | Subcontract No (continuous numbering linked to WP) | Subcontract Name (subcontracted action tasks) | Description (including task number and BEN/AE to which it is linked) | Estimated Costs (EUR) | Justification (Why is subcontracting necessary?) | Best-Value-for-Money (How do you intend to ensure it?) |
|---|---|---|---|---|---|---|
| 4 | S4.1 | In-depth analysis | In-depth analysis of EDIH target groups in the Czech Republic and abroad, task 4.3, partner: NCA | 55730 | The analysis is carried out by a specialised company that creates analytical documents and that has the necessary tools, methods, databases, etc. at its disposal. It is time-consuming | Using transparent selection procedure |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | task. | |
| Other issues:<br>*If subcontracting for the entire project goes beyond 30% of the total eligible costs, give specific reasons.* | | | Not relevant | | | |

*Purchases and equipment*

| **Purchase costs (travel and subsistence, equipment and other goods works and services)**<br>*Details for major cost items (needed if costs declared under 'purchase costs' are higher than 15% of the claimed personnel costs).*<br>*Start with the most expensive cost items, down to the 15% threshold.* | | | | |
|---|---|---|---|---|
| Participant 1: | ARR | | | |
| Cost item name | Category | WP(s) | Explanations | Costs (EUR) |
| Travel and Subsistence | *[*Travel and Subsistence*]* | WP1 - WP6 | Travel expenses within the bounds of execution of the EDIH NEB project's routine business according to the focus of the activity (meeting the target group of the project to provide services, meeting entities of the innovation environment to establish cooperation, meeting partners and clients outside the region and outside the Czech Republic, meeting within the EDIH network, etc. The item includes travel expenses, accommodation, per diem in the Czech Republic and abroad, and other related expenses. ARR is the coordinator of the project, and we consequently expect a higher level of involvement in the meetings of the EDIH network and representation in many EDIH NEB activities within the region and outside the region. | € 28 000,00 |
| Equipment for Test Bed Industry 4.0, equipment for working with clients | *[*Equipment*]* | WP2 - WP5 | Equipment for Test Bed Industry 4.0 will be acquired, see info in chapter 1.1, in Test Before Invest, IoT/IIoT service.<br>Additional equipment will be acquired to work with the target group in fulfilling the agenda associated with consultation on digital audits, IoT, smart technologies, other activities such as consulting, networking, etc. (notebooks, office equipment). | € 95 000,00 |
| External services relating to the execution of activities | *[*Other goods and services*]* | WP1 - WP6 | WP1: Costs relating to the EDIH team meeting (venue, refreshments, etc., database for data administration, training the implementation team, etc.)<br>WP2: Experts for specific solutions in the field of Smart, IoT technologies, material for the operation of TestBed, external service for digital audits<br>WP3: Rental of premises, technology, the costs of outside instructors, refreshments, materials for events<br>WP4: Rental of premises, technology, the costs of outside instructors, refreshments, materials for events<br>WP5: Costs associated with the joint organisation of, e.g., investor days - rental of premises, | WP1: € 5928<br>WP2: € 96209<br>WP3: € 14 229<br>WP4: € 11858<br>WP5: € 5929<br>WP6: € 47 431<br>Total: €181 584 |

| | | | | |
|---|---|---|---|---|
| | | | refreshments, etc.<br>WP6: Costs associated with the communication and dissemination of information (costs of the website, social media, media, printed materials, information events, campaigns, etc.) | |
| | | | Total | € 304 584 |
| Participant 2: | VÚTS | | | |
| Cost item name | Category | WP(s) | Explanations | Costs (EUR) |
| Travel and Subsistence | *[*Travel and Subsistence*]* | WP1, WP2, WP4 | Travel expenses within the bounds of routine business in the EDIH NEB project relating to Test Before Invest services, Networking, and meetings with the EDIH team, the EDIH network, or other relevant organisations within the region, outside the region, and outside the Czech Republic. The item includes travel expenses, accommodation, per diem in the Czech Republic and abroad, and other related expenses. | € 15 000,00 |
| Equipment for Test Before Invest | *[*Equipment*]* | WP2 | NX SW and its modules, HW (computer equipment), which will be used for the creation of virtual twins and calculations and modelling. Moreover, software for 3D scanning and digitisation. | € 23 715,00 |
| External services relating to the execution of activities | *[*Other goods and services*]* | WP2<br>WP3<br>WP6 | WP2: Material required for the execution of services – e.g., computer software, computers, material for 3D printing, or other small consumables. Print material for 3D printing, consumables for the preparations necessary for the measurement and validation of data when comparing virtual and real machines and equipment.<br>WP3: External costs of courses (rental, refreshments, instructors, etc.)<br>WP6: Articles and presentations in the press, printing leaflets and publicity materials, publicity in the media and on social networks (paid campaigns), billboards, editing websites (e.g., the creation of section which focuses on EDIH), presenting the EDIH network at trade fairs, etc. | WP2: €3000<br>WP3: €7115<br>WP6: €29 644 |
| | | | Total | €78 474 |
| Participant 3: | NCA | | | |
| Cost item name | Category | WP(s) | Explanations | Costs (EUR) |
| Travel and Subsistence | *[*Travel and Subsistence*]* | WP1, WP3, WP4, WP5,- WP6 | Travel expenses within the bounds of execution of the EDIH NEB project's business according to the focus of the activity (meeting the target group of the project to provide services, meeting entities of the innovation environment to establish cooperation, meeting partners and clients outside the region and outside the Czech Republic, meeting within the EDIH network, etc. The item includes travel expenses, accommodation, per diem in the Czech Republic and abroad, and other related expenses. | € 17 700,00 |
| External services relating to the execution of activities | *[*Other goods and services*]* | WP4 | WP4: Hiring venues for conferences, etc. events, technology, the costs of outside instructors, refreshments, materials for events | WP4: € 37 945 |

| | | | | |
|---|---|---|---|---|
| | | | Total | € 55 644,00 |
| Participant 4: | CIRI | | | |
| Cost item name | Category | WP(s) | Explanations | Costs (EUR) |
| Travel and Subsistence | *[*Travel and Subsistence*]* | WP1, WP3, WP4, WP5, WP6 | Travel expenses within the bounds of execution of the EDIH NEB project's routine business according to the focus of the activity (meeting entities of the innovation environment to establish cooperation, meeting partners and clients outside the region and outside the Czech Republic, networking, meeting within the EDIH network, etc. The item includes travel expenses, accommodation, per diem in the Czech Republic and abroad, and other related expenses. | € 13 870,00 |
| External services relating to the execution of activities | *[*Other goods and services*]* | WP3, WP4, WP6 | WP3: Rental of premises, technology, the costs of outside instructors, refreshments, materials for events<br>WP4: Rental of premises, technology, the costs of outside instructors, refreshments, materials for events<br>WP6: Costs associated with the communication and dissemination of information (cooperation on publishing information on the website, info on social media and in the media, campaigns to disseminate information about digitisation, etc.) | WP3: € 17 075<br>WP4: € 21 937<br>WP6: € 5 929<br>Total: €44 941 |
| | | | Total | € 58 811 |
| Participant 5: | TUL | | | |
| Cost item name | Category | WP(s) | Explanations | Costs (EUR) |
| Travel and Subsistence | *[*Travel and Subsistence*]* | WP1 - WP3 | Travel expenses within the bounds of execution of the EDIH NEB project's routine business associated with the execution of individual EDIH NEB activities, meeting clients, meeting within the EDIH team, meeting within the EDIH network, or meeting other relevant organisations in the region, outside the region, and outside the Czech Republic. The item includes travel expenses, accommodation, per diem in the Czech Republic and abroad, and other related expenses. | € 26 000,00 |
| Equipment for Test Before Invest | *[*Equipment*]* | WP2 | Provision and continual updating of equipment for TestBed 5G industrial networks - acceleration of transmission speed, the possibility of connecting more devices, gradual increase of edge computing capacity for TestBed IIoT and local storage for saving and analysing measured data, specific components for TestBed of the test production robotic line (PLC, communication interface). | € 26 000,00 |
| External services relating to the execution of activities | *[*Other goods and services*]* | WP2<br>WP3<br>WP4<br>WP6 | WP2: computer software, renting cloud computer capacity within the scope of e-infrastructure, sensors, microcomputers, material for robotic sets and preparations for measuring and collecting data, material for 3D printing, and any other minor consumables<br>WP3: External costs of courses (rental, refreshments, instructors, etc.)<br>WP4: Rental of premises, technology, the costs of outside instructors, refreshments, materials for events | WP2: €94 862<br>WP3: €4 743<br>WP4: €5929<br>WP6: €18 972<br>Total: €124 506 |

| | | | | |
|---|---|---|---|---|
| | | | WP6: Communication and dissemination of information: cooperation on publishing information on the website, info on social media and in the media, campaigns to disseminate information about digitisation, etc. | |
| | | | Total | € 176 506 |
| Participant 6: | UHK | | | |
| Cost item name | Category | WP(s) | Explanations | Costs (EUR) |
| Travel and Subsistence | *[*Travel and Subsistence*]* | WP1, WP2, WP3, WP5 | Travel expenses within the bounds of routine business in the EDIH NEB project relating to Test Before Invest services, education, meetings within the EDIH team, the EDIH network, or other relevant organisations within the region, outside the region, and outside the Czech Republic. The item includes travel expenses, accommodation, per diem in the Czech Republic and abroad, and other related expenses. | € 23 100,00 |
| Equipment for Test Before Invest | *[*Equipment*]* | WP2 | Hardware and software for virtual reality, PCs / notebooks, AnyLogic licences, powerful workstations for simulating cyber security tasks and artificial intelligence methods, server systems, storage sites, security and network elements | € 47 430,00 |
| | | | Total | €70 530 |
| Participant 7: | AEC | | | |
| Cost item name | Category | WP(s) | Explanations | Costs (EUR) |
| Travel and Subsistence | *[*Travel and Subsistence*]* | WP1, WP2 | Travel expenses within the bounds of routine business in the EDIH NEB project relating to Test Before Invest services, meetings within the EDIH team, the EDIH network, or other relevant organisations within the region, outside the region, and outside the Czech Republic. The item includes travel expenses, accommodation, per diem in the Czech Republic and abroad, and other related expenses. | € 5 000,00 |
| External services relating to the execution of activities | *[*Other goods and services*]* | WP2 | WP2: External supplies and services when clients have specific needs to concern cybersecurity and testing the relevant solution. | € 4 743,00 |
| | | | Total | €9 743 |
| | | | Total purchase costs > 15% (all participants) | € 398 318 |
| | | | Remaining purchase costs < 15% (all participants) | € 355 974 |
| | | | Total purchase costs (all participants) | € 754 292 |

**Equipment with full-cost option**

*For calls where full-capitalised costs are exceptionally eligible for listed equipment (see Call document), indicate below the equipment items for which you request the full-cost option, and justify your request. Ensure consistency with the budget details provided in the previous table.*

| Equipment Name | Description (including WP, task number and BEN/AE to which it is linked) | Estimated Costs (EUR) | Justification (why is reimbursement at full-cost needed?) | Best-Value-for-Money (how do you intend to ensure it?) |
|---|---|---|---|---|
| Test Bed for Industry 4.0 | WP2, TestBed technology, will make it possible to improve production operations through better connectivity of individual production equipment, production management and monitoring. The technology will allow large amounts of data to be collected and shared in real time, facilitating an immediate response in the event of disruption to production. Connecting IIoT-compatible devices to the network will make it possible to manage them remotely, predictive maintenance included. IIoT will also enable communication with suppliers by providing them with operational information for remote automation and process optimisation. | € 90 000 | Test Bed equipment will be fully available for testing purposes to the EDIH NEB target group, namely SMEs, mid-caps, and public administration. This unique equipment is not yet available in the region. | We will announce a tender for the contractor in order to obtain multiple offers and thus compare prices on the market. |
| Additional sub-equipment listed for individual consortium partners | sub-equipment is described in the table above | € 88 845 | The newly-acquired equipment will adequately complement the testing equipment already available at individual EDIH NEB partners. | Individual parts of the equipment will be purchased over time according to the needs of clients, by addressing multiple suppliers to determine the best price. |

*Other cost categories*

**Other cost categories (financial support to third parties, internally invoiced goods and services, etc)**

*Complete the table below for each participant that would like to declare costs under other costs categories (e.g. financial support and internally invoiced goods and services), irrespective of the percentage of personnel costs.*

| | |
|---|---|
| | *financial support and internally invoiced goods and services are not relevant for the project* |

*Timetable*

**Timetable (projects of more than 2 years):** *Fill in cells in beige to show the duration of activities. Repeat lines/columns as necessary.* ***Note:*** *Use actual, calendar years and quarters. In the timeline you should indicate the timing of each activity per WP. You may add additional columns if your project is longer than 6 years.*

| ACTIVITY | YEAR 1 | | | | YEAR 2 | | | | YEAR 3 | | | | YEAR 4 | | | | YEAR 5 | | | | YEAR 6 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q 1 | Q 2 | Q 3 | Q 4 | Q 1 | Q 2 | Q 3 | Q 4 | Q 1 | Q 2 | Q 3 | Q 4 | Q 1 | Q 2 | Q 3 | Q 4 | Q 1 | Q 2 | Q 3 | Q 4 | Q 1 | Q 2 | Q 3 | Q 4 |
| Task 1.1 - 1.6 | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 2.1 - 2.10 | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 3.1 - 3.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 4.1 - 4.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 4.3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 5.1 - 5.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 6.1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 6.2 - 6.4 | | | | | | | | | | | | | | | | | | | | | | | | |

#§WRK-PLA-WP§#

#@ETH-ICS-EI@#

# 5. OTHER

## 5.1 Ethics

| **Ethics**<br>*If the Call document contains a section on ethics, the ethics issues and measures you intend to take to solve/avoid them must be described in Part A.* |
|---|
| See Application Form Part A. |

#§ETH-ICS-EI§# #@SEC-URI-SU@#

## 5.2 Security

| **Security**<br>*The security issues and the measures you intend to take to solve/avoid them must be described in Part A.*<br>***Note:** Beneficiaries must ensure that their projects are not subject to national/third country security requirements that could affect the implementation or put into question the award of the grant (e.g. technology restrictions, national security classification, etc).* |
|---|
| See Application Form Part A. |

#§SEC-URI-SU§# #@DEC-LAR-DL@#

# 6. DECLARATIONS

| **Double funding** | |
|---|---|
| **Information concerning other EU grants**<br>⚠ *Please note that there is a strict prohibition of double funding from the EU budget (except under EU Synergies actions).* | **YES/NO** |
| We confirm that to our best knowledge none of the projects under the action plan as a whole or in parts have benefitted from any other EU grant *(including EU funding managed by authorities in EU Member States or other funding bodies, e.g. EU Regional Funds, EU Agricultural Funds, etc)*. If NO, explain and provide details. | YES |
| We confirm that to our best knowledge none of the projects under the action plan as a whole or in parts are (nor will be) submitted for any other EU grant *(including EU funding managed by authorities in EU Member States or other funding bodies, e.g. EU Regional Funds, EU Agricultural Funds, etc)*. If NO, explain and provide details. | YES |

| **Financial support to third parties (if applicable)**<br>*If in your project the maximum amount per third party will be more than the threshold amount set in the Call document, justify and explain why the higher amount is necessary in order to fulfil your project's objectives.* |
|---|
| Not relevant |

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