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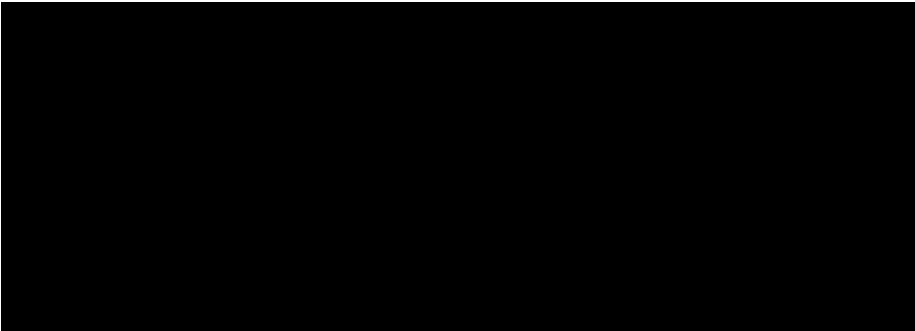
## Participant Information

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## Participant Information

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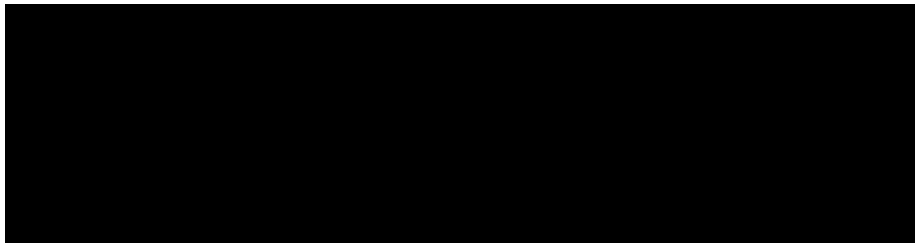
### Primary Contact Details



### Organisation Information

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Albitech Biotechnological Ltd.



## Overview

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**Project Acronym**

AMASING

**Project Title**

NAatural Microalgae-bAseed productS for plant protection agaINst drouGht

**Start Date**

01/10/2024

**End Date**

30/06/2027

**Duration in Months**

32

**Number of Person Months**

167.5

**Personnel Costs**

€389,921.00

**Overheads**

€81,152.90

**Travel**

€10,275.00

**Materials**

€80,852.00

**Other**

€1,504.00

**Subcontracting**

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€36,891.00

**Overall Budget (€)**

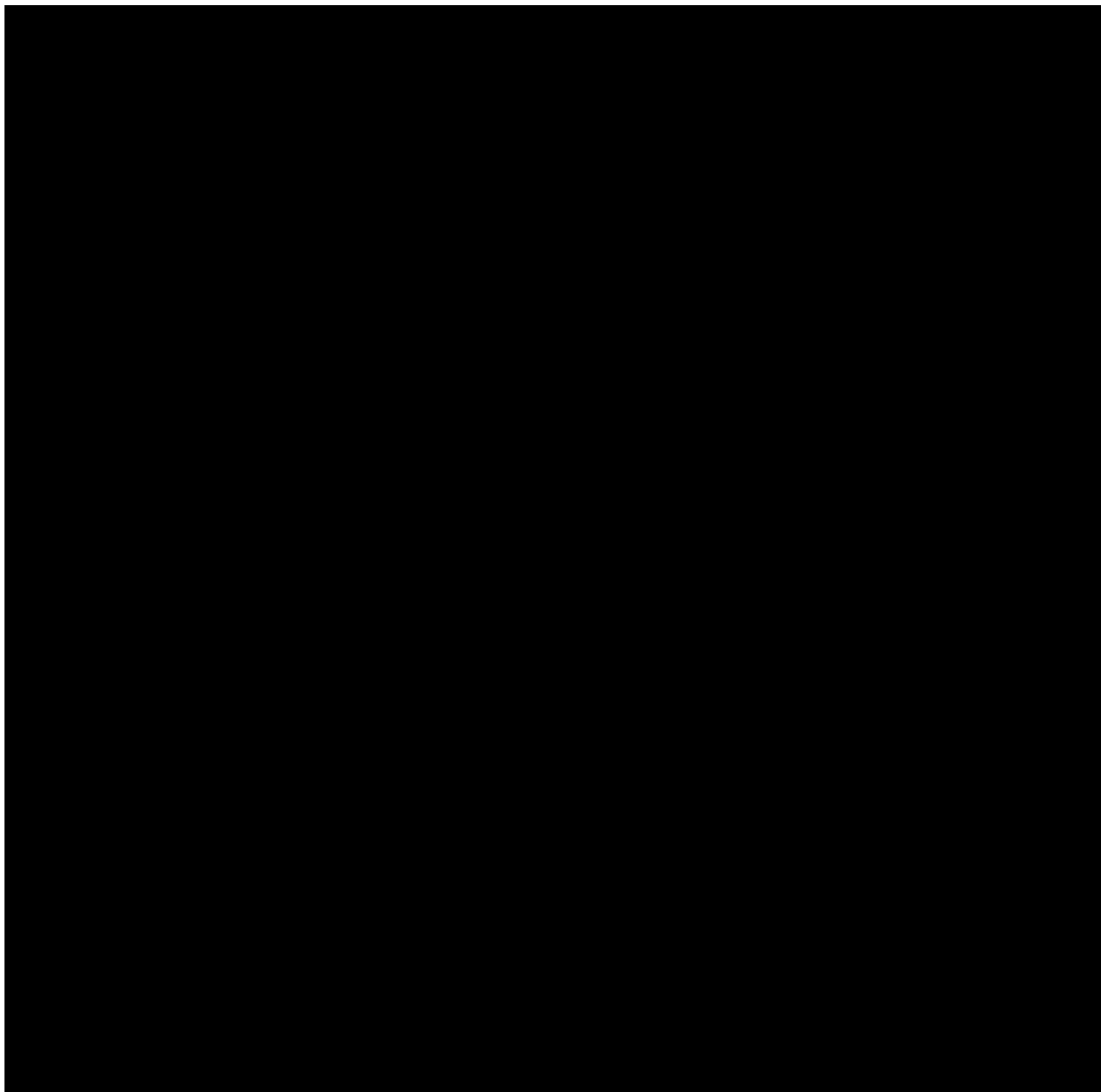
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€600,595.90

## The Pitch

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What do you want to do?

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### Why do you want to do it?

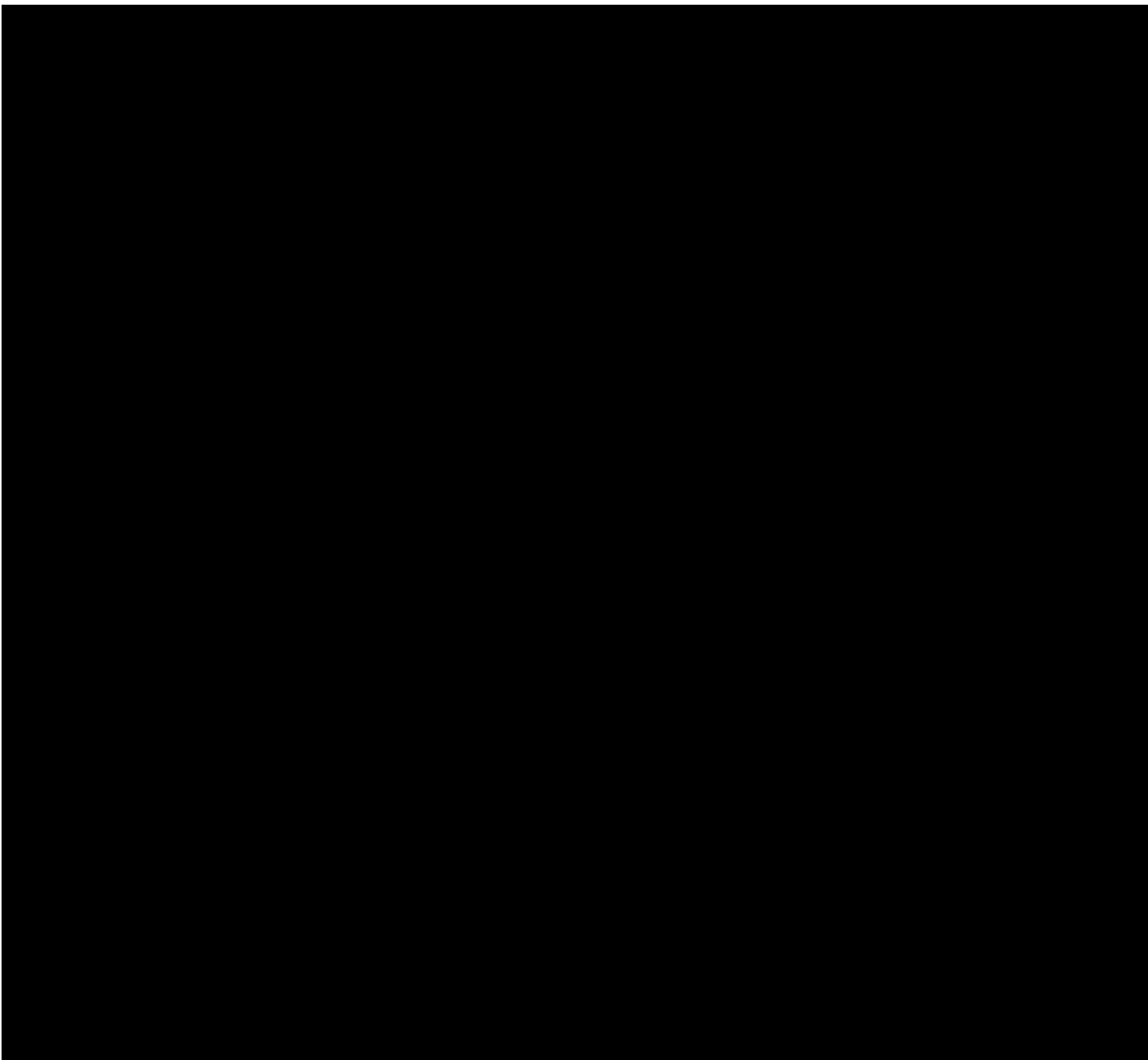
The extreme effects of climate change are severely affecting agriculture. Annual precipitation does not vary significantly, but its distribution does. The number of rainy days is decreasing, which is causing huge damage to agriculture. The most important arable crops in Hungary are wheat and maize. According to the data of the Hungarian Central Statistical Office between 2011 and 2021, the lowest average yield of wheat was 3750 kg/ha (2012), while the highest was 5930 kg/ha (2021). For maize, the lowest yield average is 4000 kg/ha (2012), while the highest is 8630 kg/ha (2016). The data show the differences in yields, mainly due to the variability of the weather.

[REDACTED]

[REDACTED] By using the product developed in the AMASING project, the dependence of agricultural crops on weather conditions could be reduced, which would increase crop safety. By increasing crop security, users would also gain financially, allowing them to develop their economy and employ more people from the additional income, thus improving living standards. The improvement in the quality of life of farmers would not only be in terms of financial gain, but also in terms of improved morale and desire to have children, as the risks associated with growing crops would be reduced and there would be less stress about exposure to the weather. The project will assess not only the impact of the product on plants, but also the explanation for it.

[REDACTED]

How will the participants make money?



## Technological and market areas

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### Technical Area

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Agriculture and Marine Resources

**Specify Technical Area**

---

Agriculture

**Specify Technical Area Further (if applicable)**

---

Crop Production

**Market Area**

---

Agriculture and Environment

**Specify Market Area**

---

Agriculture, Forestry, Fishing, Animal Husbandry & Related Products

**Specify Market Area Further (if applicable)**

---

Cultivation of cereals / crops / vegetables

**Keyword 1**

---

Crop stimulation

**Keyword 2**

---

Crop safety

**Keyword 3**

---

[REDACTED]

**Any further Annexes**

---



## Impact - The Business Case

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**What are you going to sell? To whom and how?**

**Would you define this as a new product/service/process, an improvement of an existing product/service/process adapted for a new market (or a combination)?**

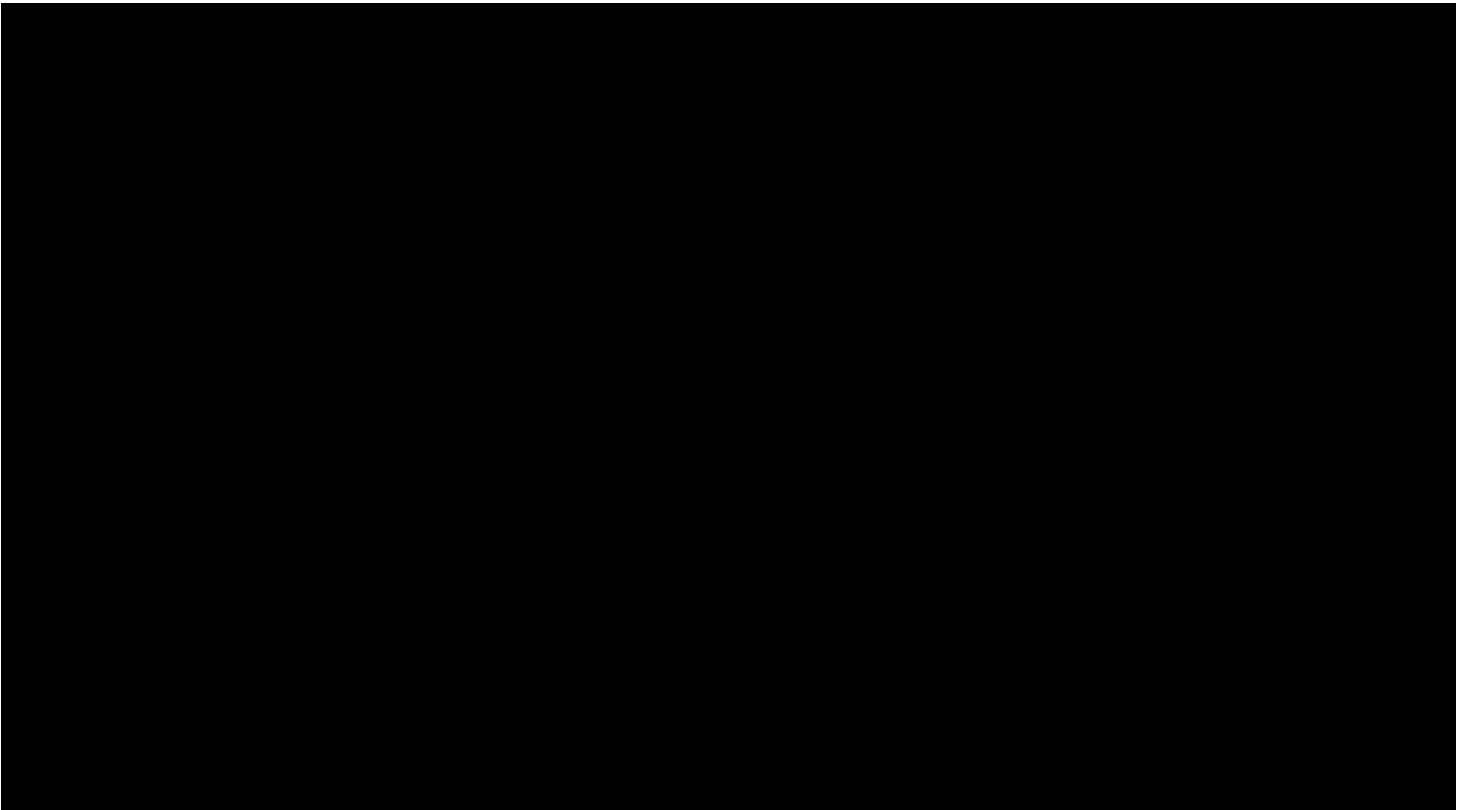
**Describe the steps and timeline towards commercialisation and beyond for all partners.**

How many months after project completion will it take for the main result to reach the market

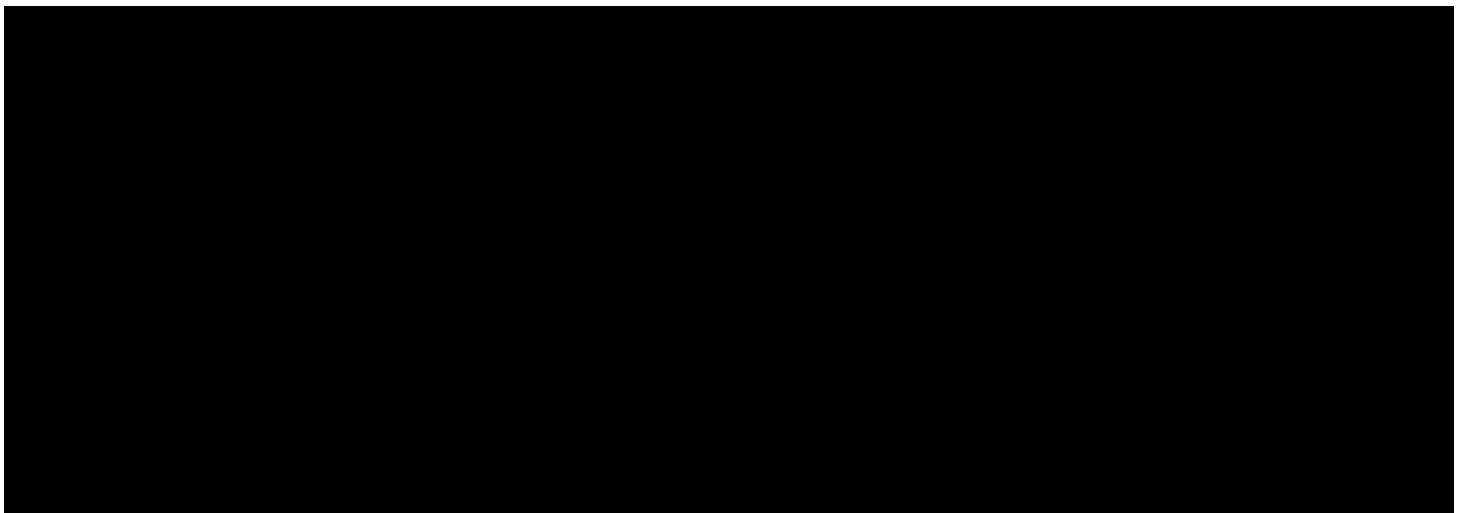
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12

With reference to your business plan, quantify the scientific and financial investments made to date, the project costs, and the future investments needed to bring this project to the market

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Describe the commercial state-of-the-art which is available today in your sector

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### Target Market

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Continental

### Continents

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Europe, Asia

### Competition in the industry:

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#### Identify the potential barriers to market entry and describe how each will be overcome

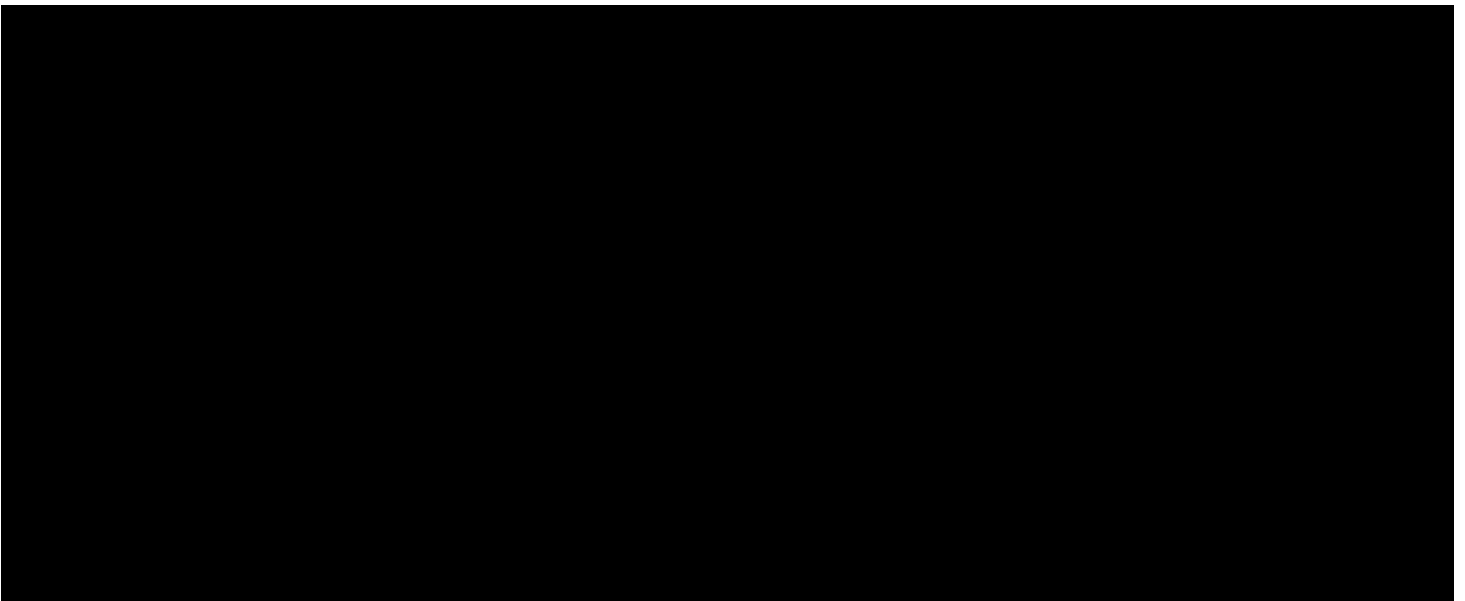
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The first barriers to market entry are licensing procedures, which differ significantly. These are domestic, each country's own and the EU authorization (EC). These must be carried out, and we can speed up the Hungarian procedure by having the large-scale plant experiments carried out in the 3rd year of the project at a GAP-certified (Good Agricultural Practice) experimental site or at the premises of the licensing National Food Chain Safety Office (NÉBIH).

There is a lot of competition on the foliar fertilizer market, there are a large number of different products and companies present both in the country and in the EU. The share of algae-based products is gradually increasing, and so will that of the new product, because it is much more environmentally friendly and can be used more precisely compared to other products.

We will introduce it as a premium product and, in connection with this, at a premium category price. In the retail (residential) market, we will more easily increase the regular and recurring purchases of the increasingly environmentally conscious "city" residents.

#### How is your product, concept, deliverables or service different? Why is it innovative?



**How will it be positioned with respect to the competition?**

We have no information about competing products under development and licensing, and the licensor does not release them before the deadline.

**What is the estimated market penetration and sale forecast? Justify your answer. What is the payback period for the initial investments?**

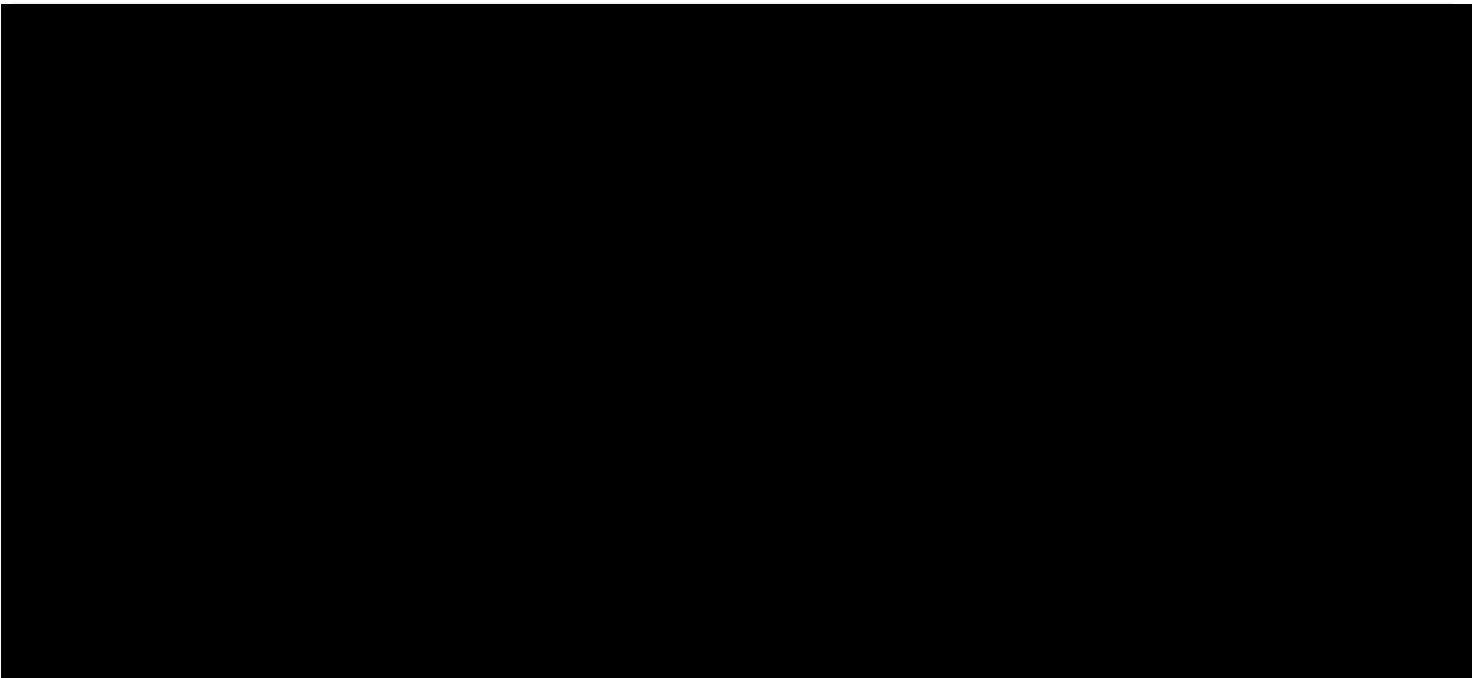
**Are there other expected non-commercial benefits of project for the project partners and for society?**

## Excellence - Innovation and R&D

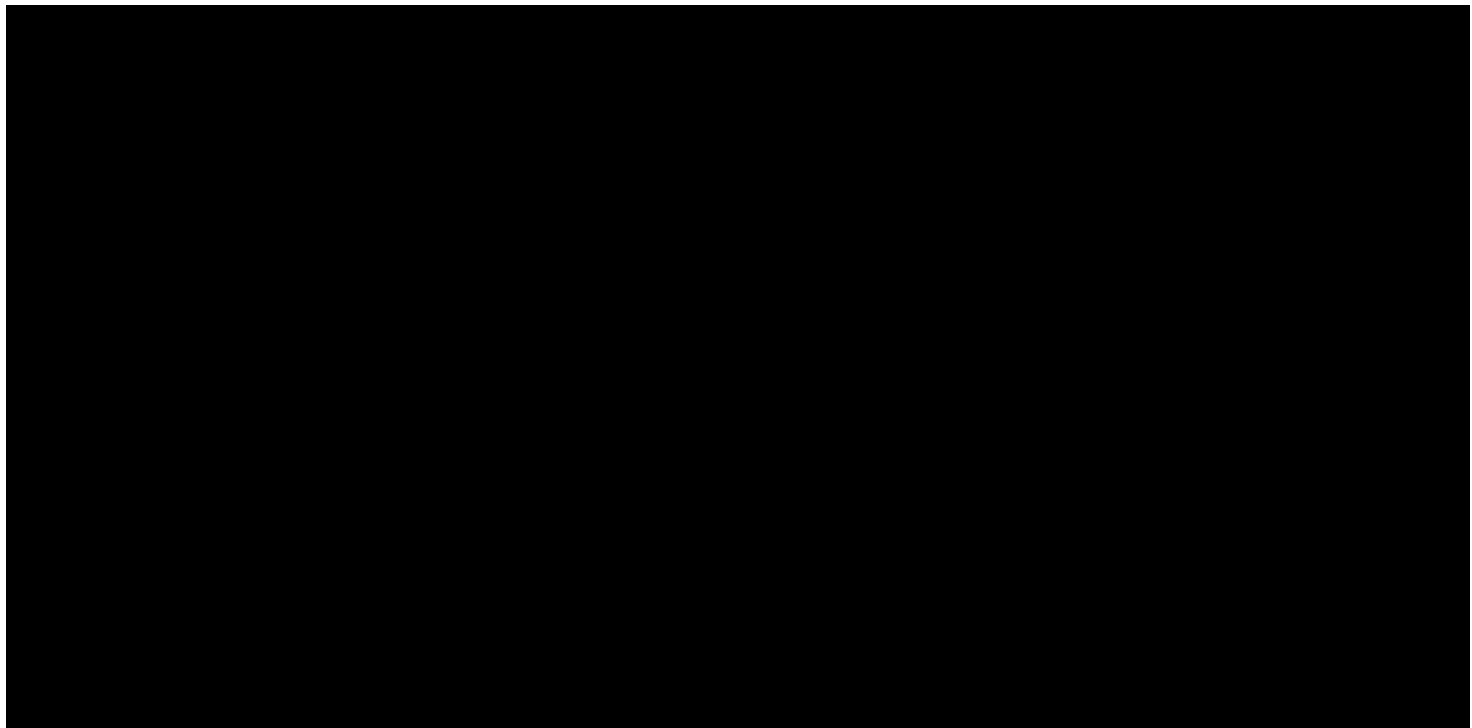
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What is the method/approach/research hypotheses you will use?

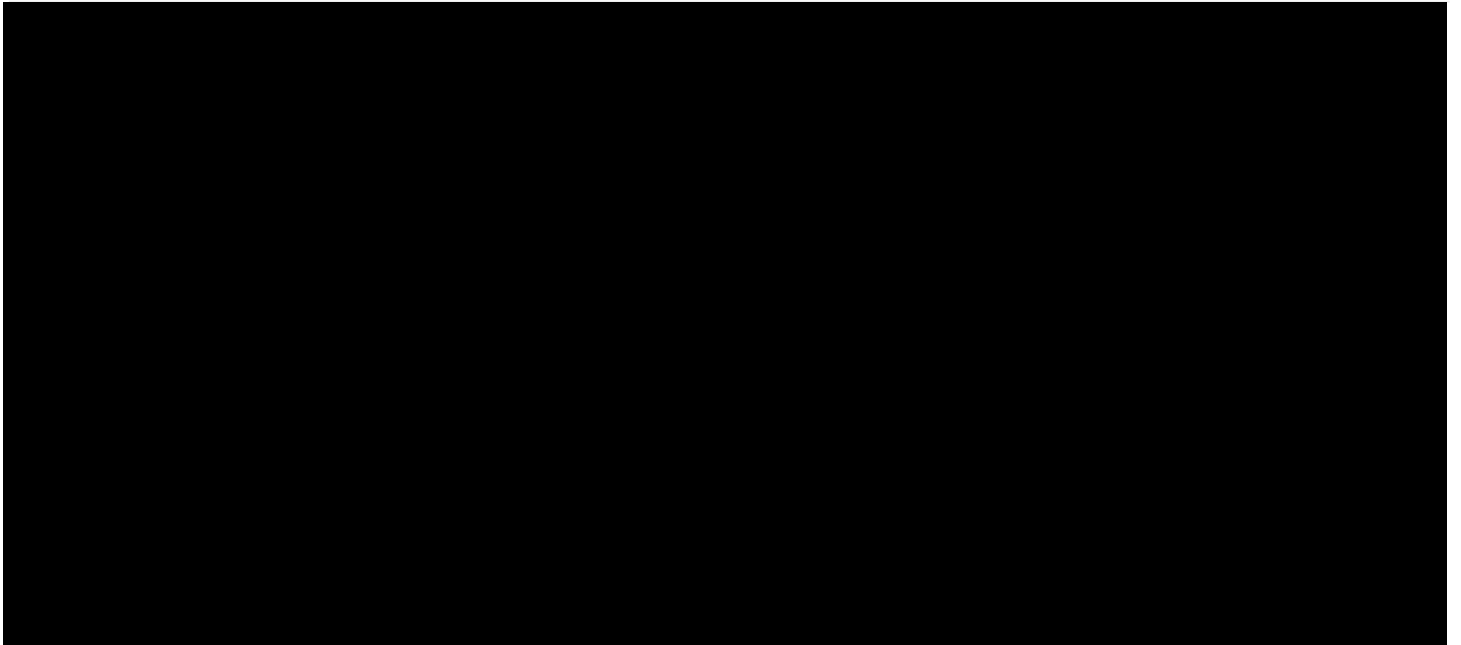
Why did you choose this?

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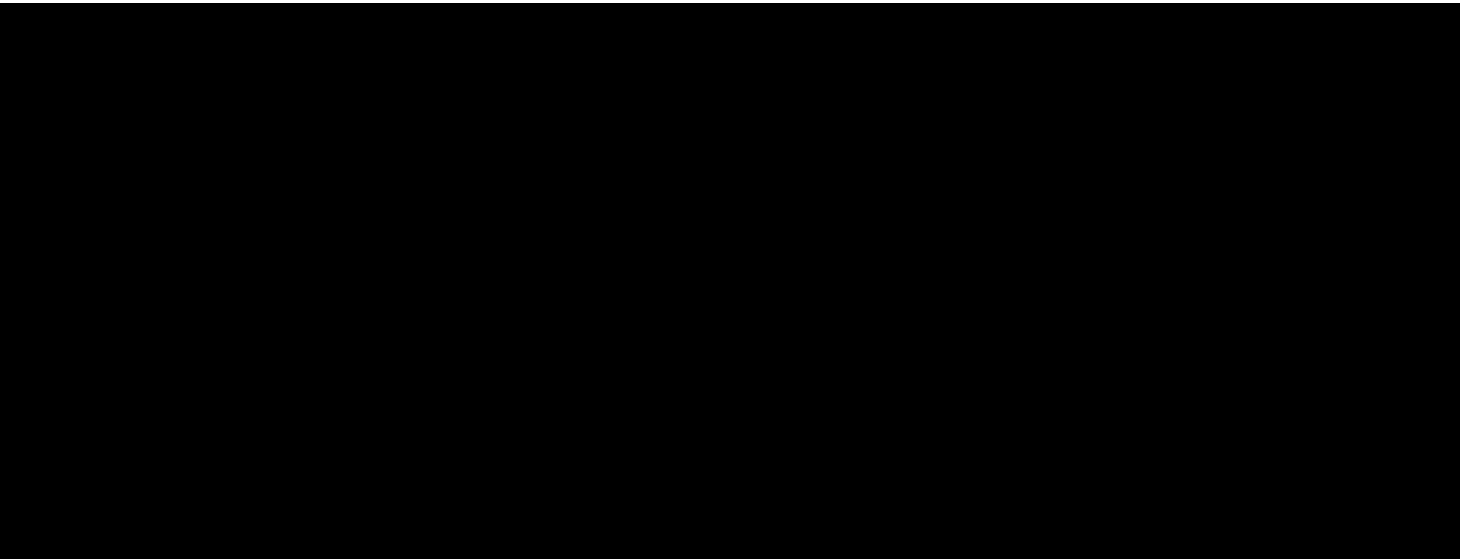
What are the risks of this approach? How will you reduce these risks

A large black rectangular box redacting the content of the second question.

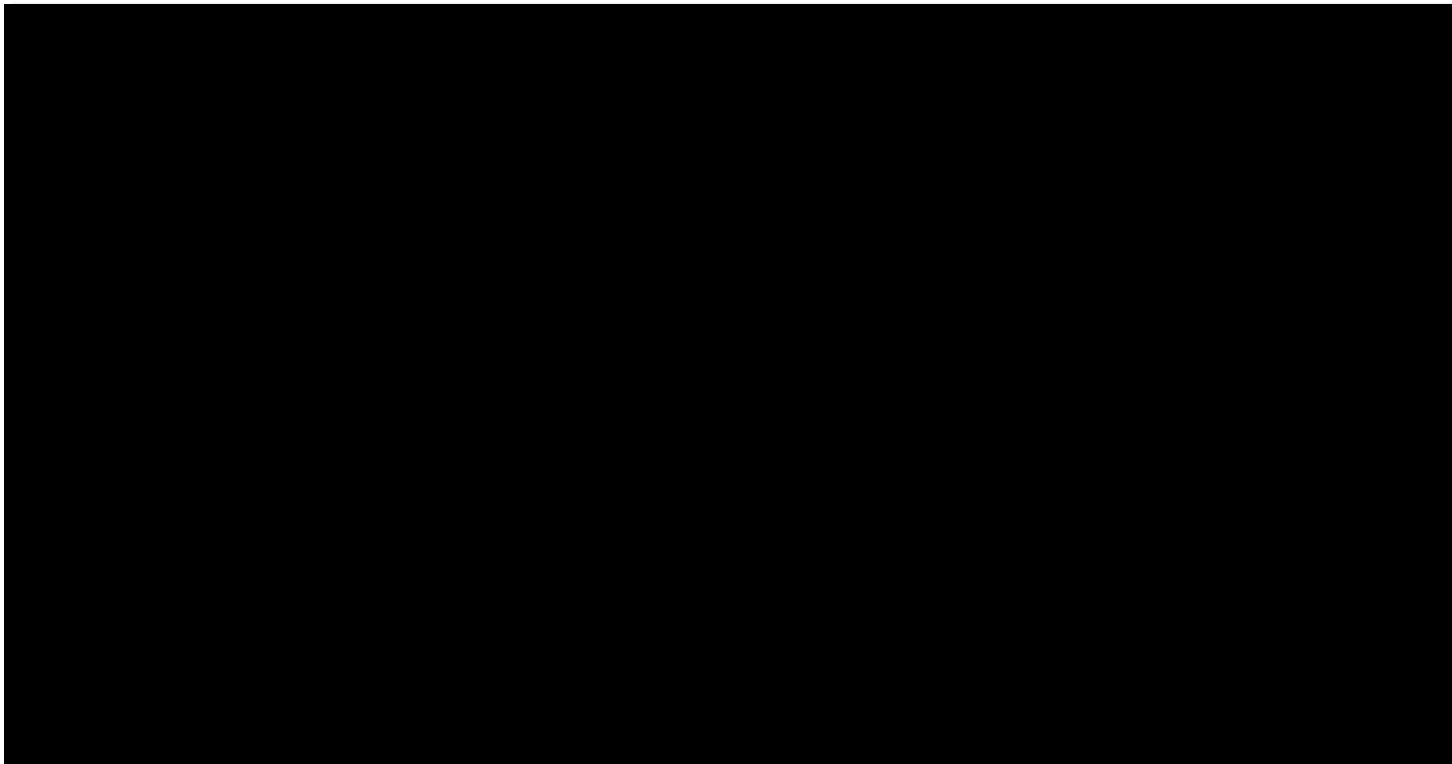
**What is the state-of-the-art within this technical and scientific field?**

A large black rectangular box redacting the content of the first question.

**What kind of development is envisioned? Breakthrough or incremental?**

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What other methods/solutions are available (both technical and non-technical)? Why is yours better?






## Quality and efficiency of the implementation

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**Why and how will this project benefit each partner through the collaboration? Is this the first cooperation between members of this consortium?**

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The project partners have not worked together on any project before. This project will provide an opportunity for effective cooperation between two SMEs and a university from different countries. Both the university and the SMEs have different strengths and will therefore complement each other well in the project.




**What is the added value of the international cooperation?**

Partners from different countries will bring diverse perspectives and experiences to collaboration, leading to innovative solutions and products. Collaboration will allow for the sharing of technological knowledge, know-how, and expertise, significantly boosting technological potential and competitiveness for the partners. Companies participating in research projects gain fundamental market insights through their involvement. Participants will have the opportunity to work with colleagues who have different experiences, skills, and approaches. This diversity will significantly enrich the R&D process and bring forth new ideas. Collaborating with companies from different countries will provide access to new markets and customers. This will lead to expanded business opportunities and increased sales. The cooperation also facilitates the sharing of resources, such as access to specialized equipment, facilities, or shared financing. This shared burden can significantly reduce the financial strain on all involved parties and maximize the opportunities inherent in the project. Additionally, research initiatives based on collaboration offer excellent networking opportunities. Organizations can expand their professional networks, establish valuable connections with other research institutes, companies, and industry experts, and potentially open doors to future collaborations and business prospects. Simultaneously, international collaboration will reduce the risks associated with doing business in a foreign country. The creation of a global network of partners, strengthening the position of companies on the international stage.

**How will the project results be distributed across the consortium? Who will own them? Who will be able to exploit them?**

During the project, a novel product that can be used in agriculture will be developed, which in addition to its growth-stimulating effect will also increase the resistance of plants to drought stress, a technological process will be developed that includes the production and formulation of the algae culture that serves as the product's raw material. In addition, we will have the protocols that demonstrate how changing the cultivation conditions affects the biologically active substances of the algae culture and how it affects the growth and stress tolerance of plants.



**What will happen in the event of a partner leaving the consortium? How will access to the knowledge and results as well as their ownership be affected?**

Partners are indispensable as they bring unique insight, technologies, methodologies, and tools not available from other collaborators. The goals of the project would be impossible to fulfill in the event of a partner leaving the consortium. This situation is unlikely. All partners have extensive experience with research project management and research collaboration and are able to resolve many kinds of unexpected issues. While it may not be possible to completely eliminate the risk of a partner leaving a consortium, there will be strategies that are employed to mitigate this risk. A detailed collaboration agreement that clearly outlines the roles, responsibilities, and expectations of each consortium partner will be signed by all consortium partners. The ownership of intellectual property and project results will be clearly specified in this agreement. Open and transparent communication among consortium members will address any issues or concerns promptly. Regularly held meetings will be used to discuss progress, challenges, and any potential deviations from the project plan. Clearly define the benefits that each partner expects to gain from the collaboration.

**Will the project's results be protected? How? Do you intent to submit an application for a patent; industrial design; CE mark; etc. in the course of the project?**

The domestic patent application must be submitted as the first step in the 3rd year of the project, as a (mandatory) commitment, and then, taking into account the market importance, uniqueness and power of the new product developed, the international patent application will also be made within 12 months following the domestic application. But before that, we conduct a 9-month novelty test (PCT) with the patent attorney, the result of which will determine the validity of the international application. We plan to do it depending on a positive result and the appropriate amount of our own and tender resources available in the future.

We plan to expand the market first by involving neighboring countries (such as Slovakia, Ukraine, Romania, Serbia, Croatia, Slovenia, Austria) and subsequently reaching out to more distant ones in all over Europe and Asia (such as Spain, France, Italy, Turkey, Uzbekistan, Kazakhstan, Azerbaijan, Pakistan). In these countries, we aim to protect the product through territorial trademark registration and CE mark in the European Economic Area.

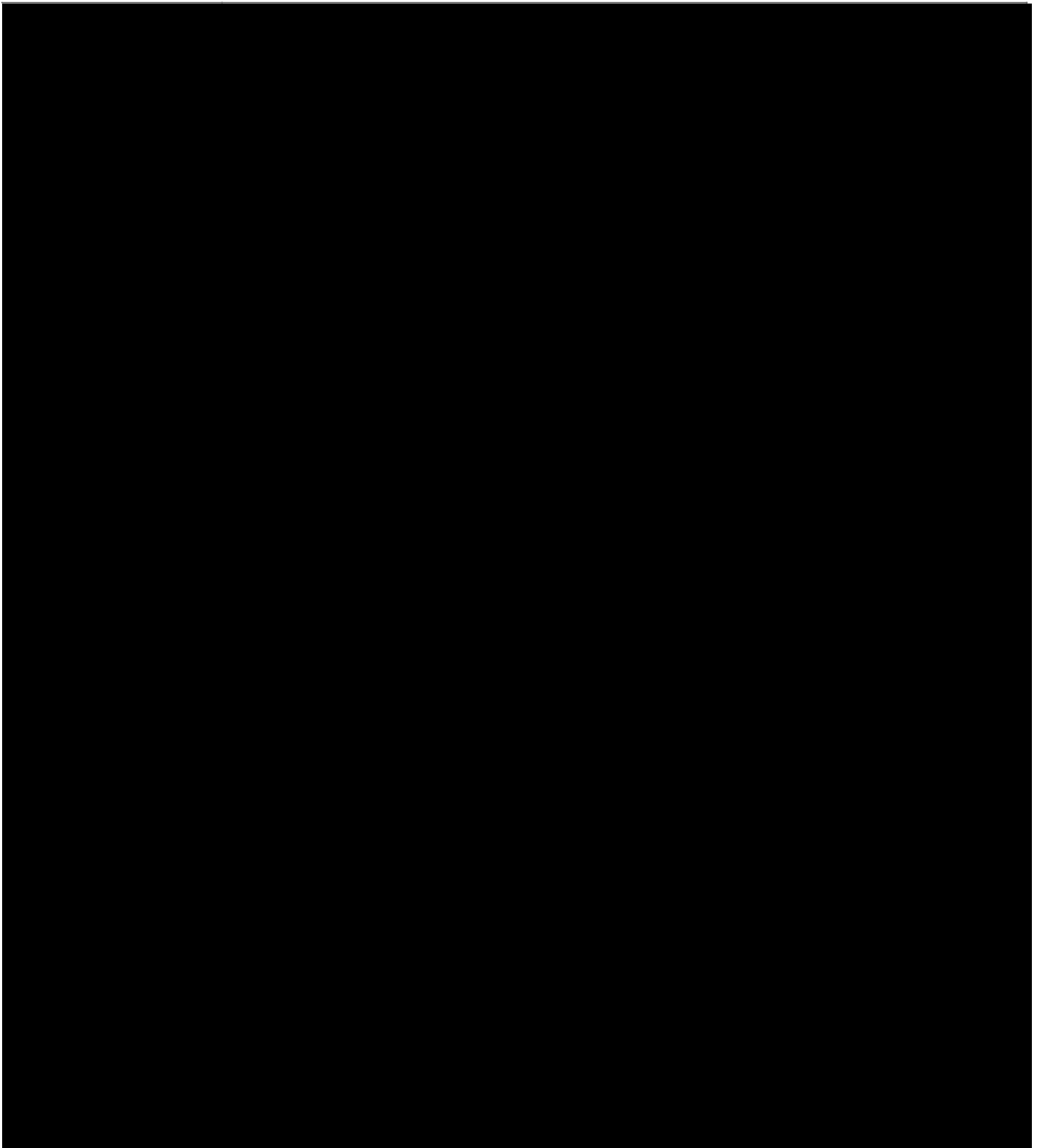
**Attach a Gantt Diagram of the Work Packages with clearly identified leaders for each WP****AMASING\_GANTT\_20231201.pdf**

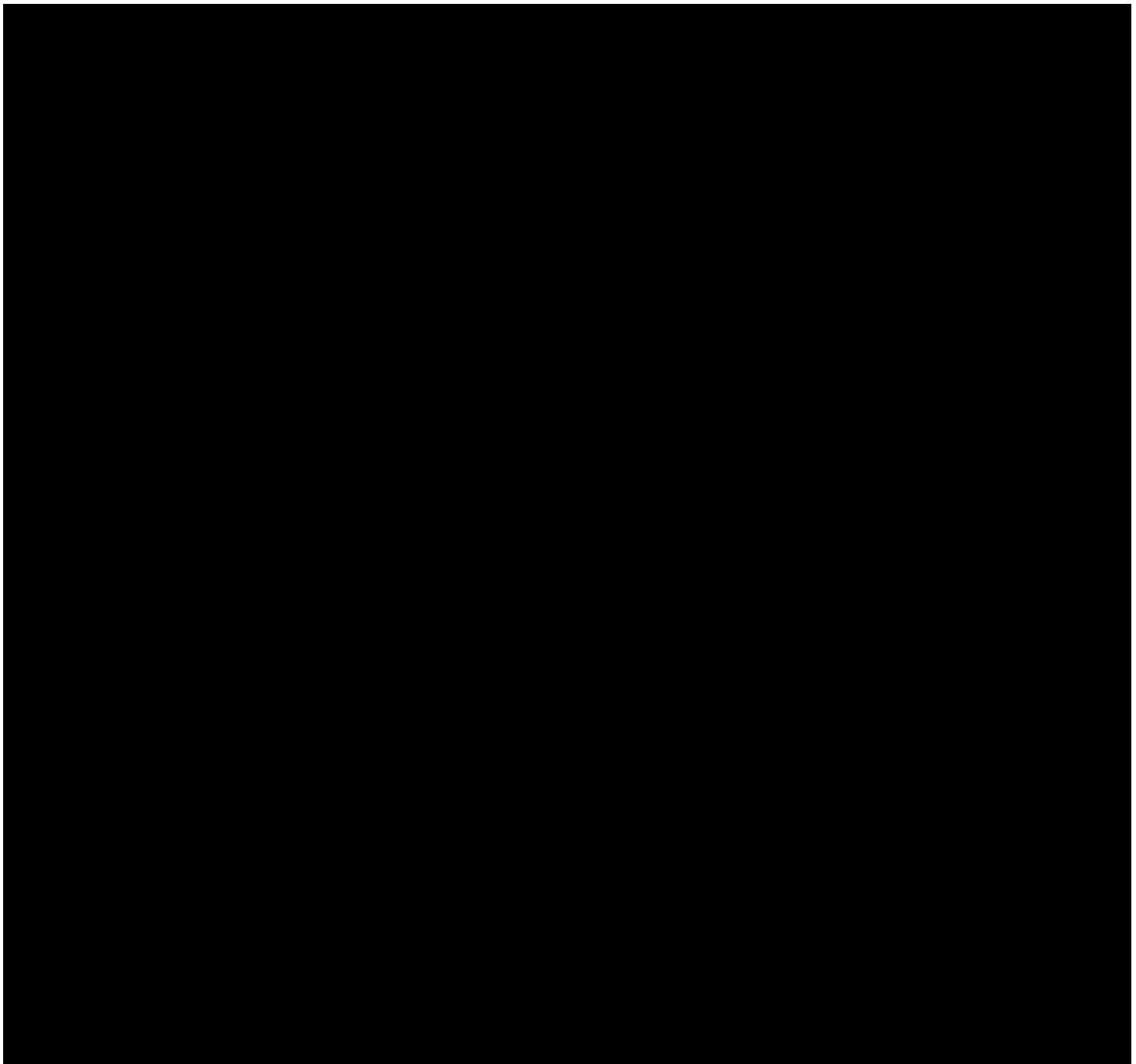
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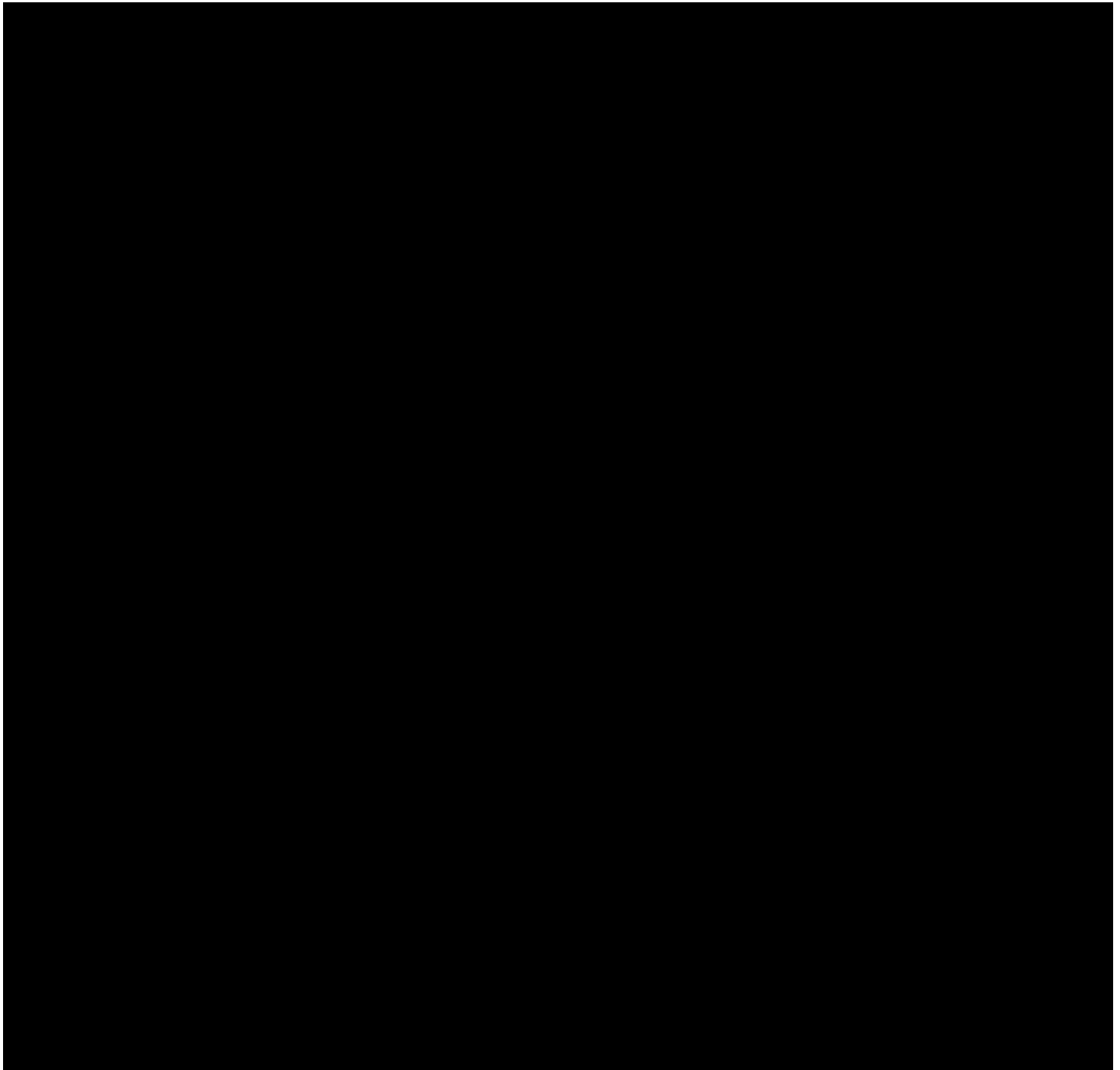
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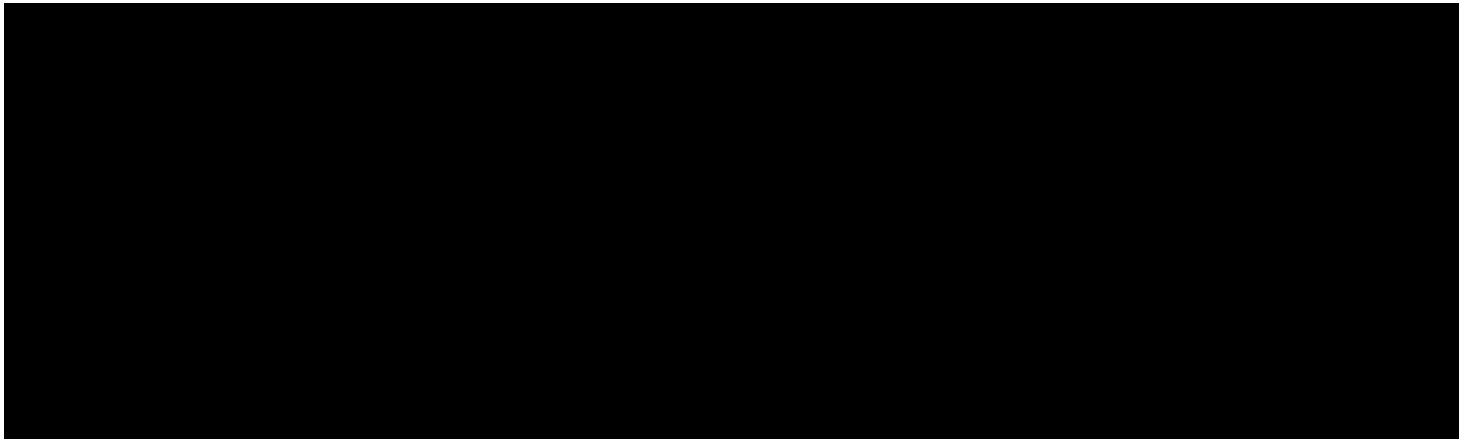
**Work Package List**

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## Partner Form - Albitech Biotechnological Ltd.

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**What are your core business activities and expertise (technological and managerial)? Do you have previous experience in international R&D&I cooperation?**

[Redacted content]



### In which sectors do you operate?

The activities of Albitech Biotechnological Ltd. cover multiple sectors:

Education and development: development of products related to microalgae, as well as the employment of students from universities in the framework of internships or as apprentices. The company is represented at scientific conferences and exhibitions, where we give presentations for the interested public.

Agriculture: products developed by the Company are used in agriculture, we are also testing products in field and small plot experiments with farmers and research institutes.

Services: our company has extensive experience in isolation and maintenance of microalgae and microalgae fermentation.

Sustainability and environmental protection: the products developed by the company are of biological origin and have no harmful effects on nature and can be used on organic farms. In the development of production technology, solutions are developed to reduce the ecological footprint of product production.

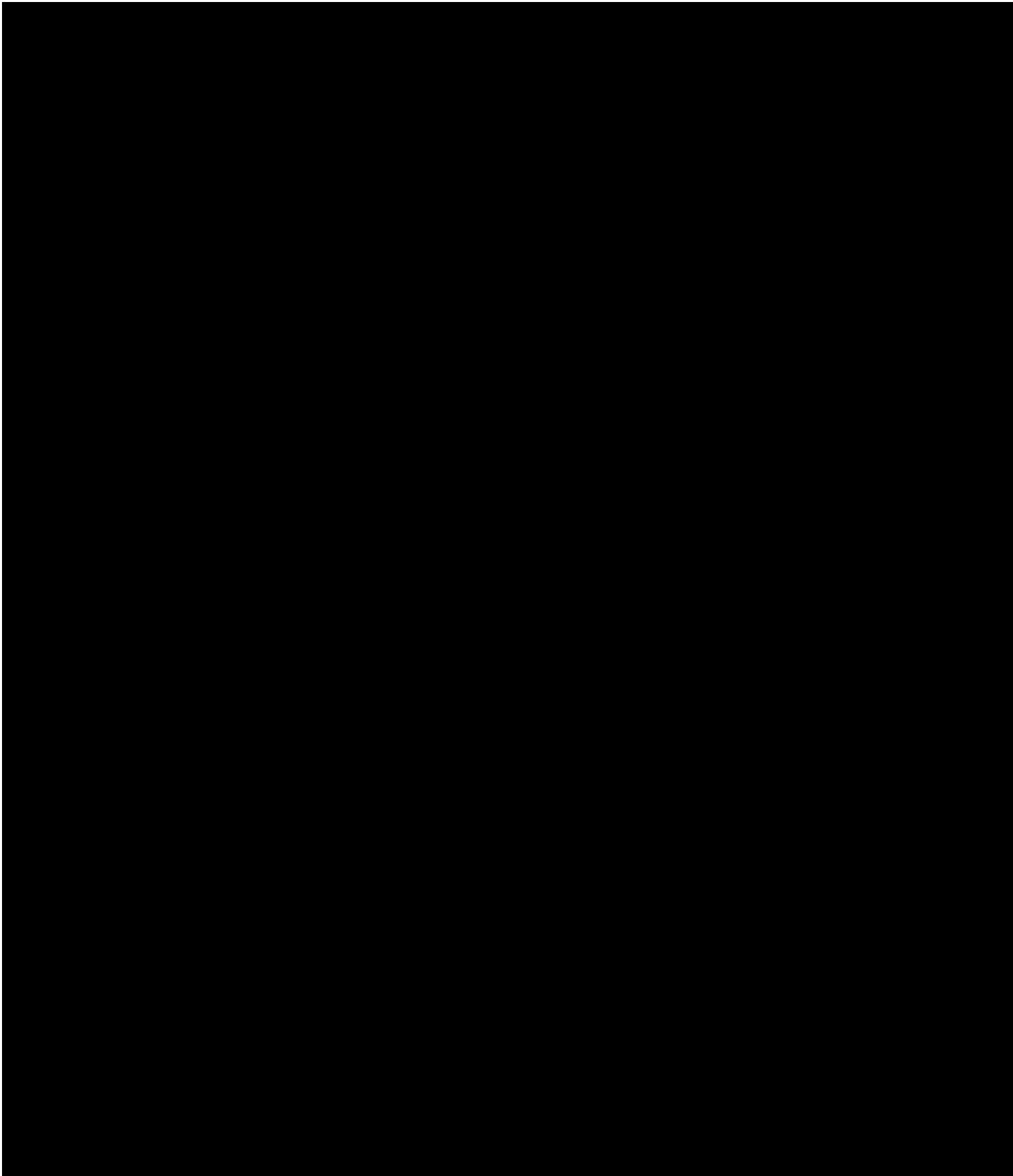
Biotechnology: our company has more than 10 years of experience in biotechnological processes. We produce our products and their raw materials using biotechnological processes (photoautotrophic fermentation) in different photobioreactors with scale-up and optimizing their growth conditions using advanced cultivation techniques.

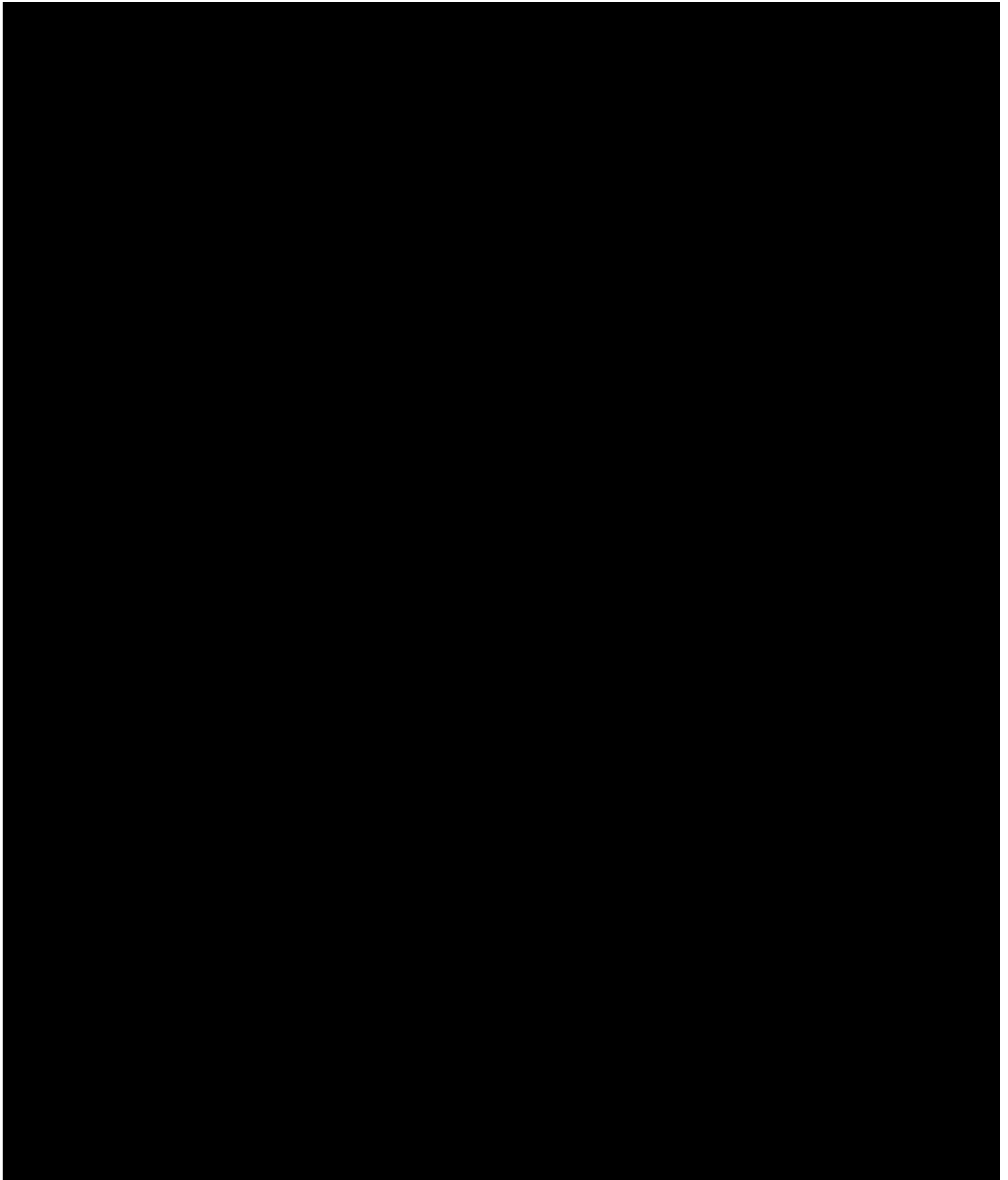
### Explain your contribution to the project.

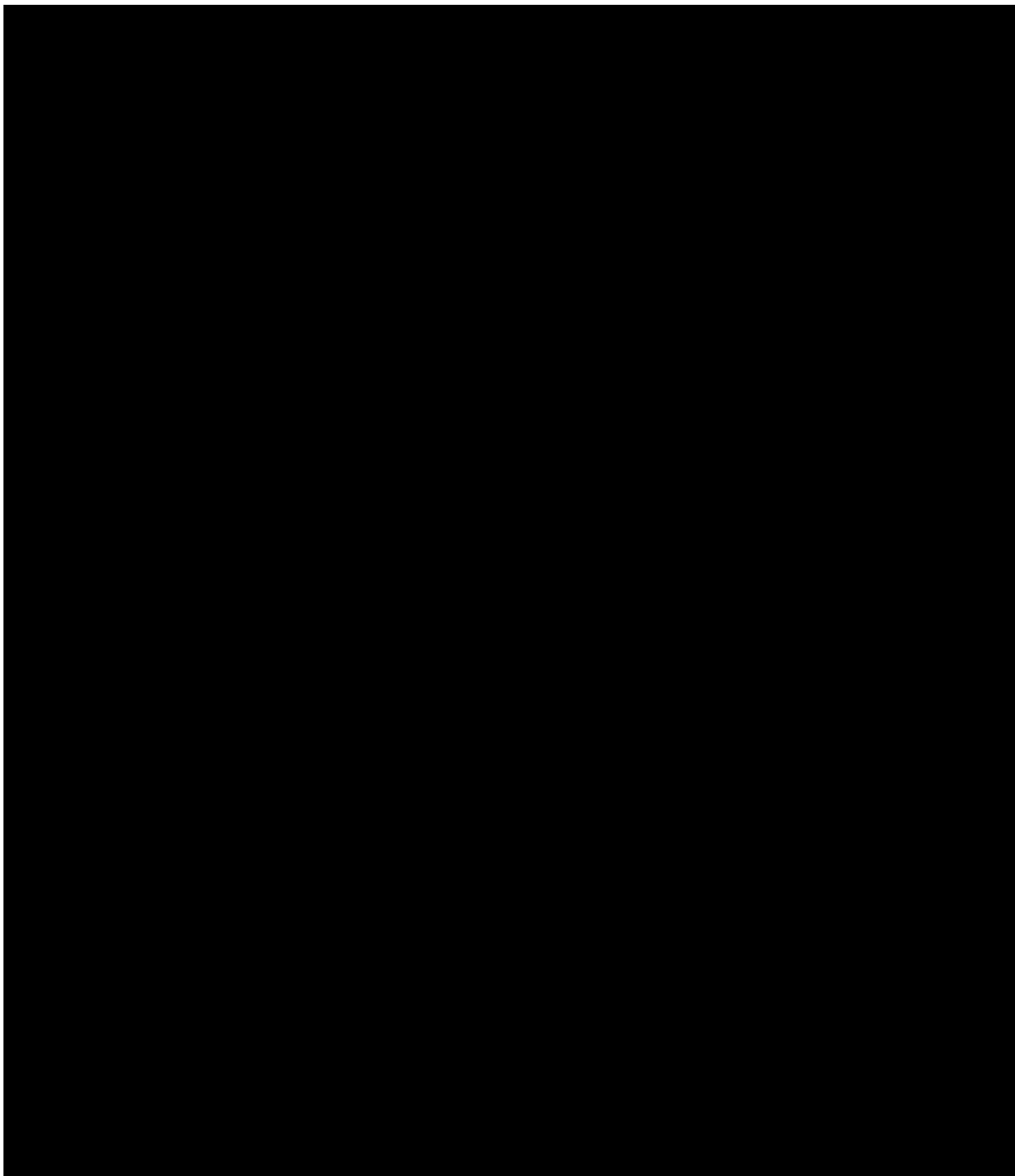
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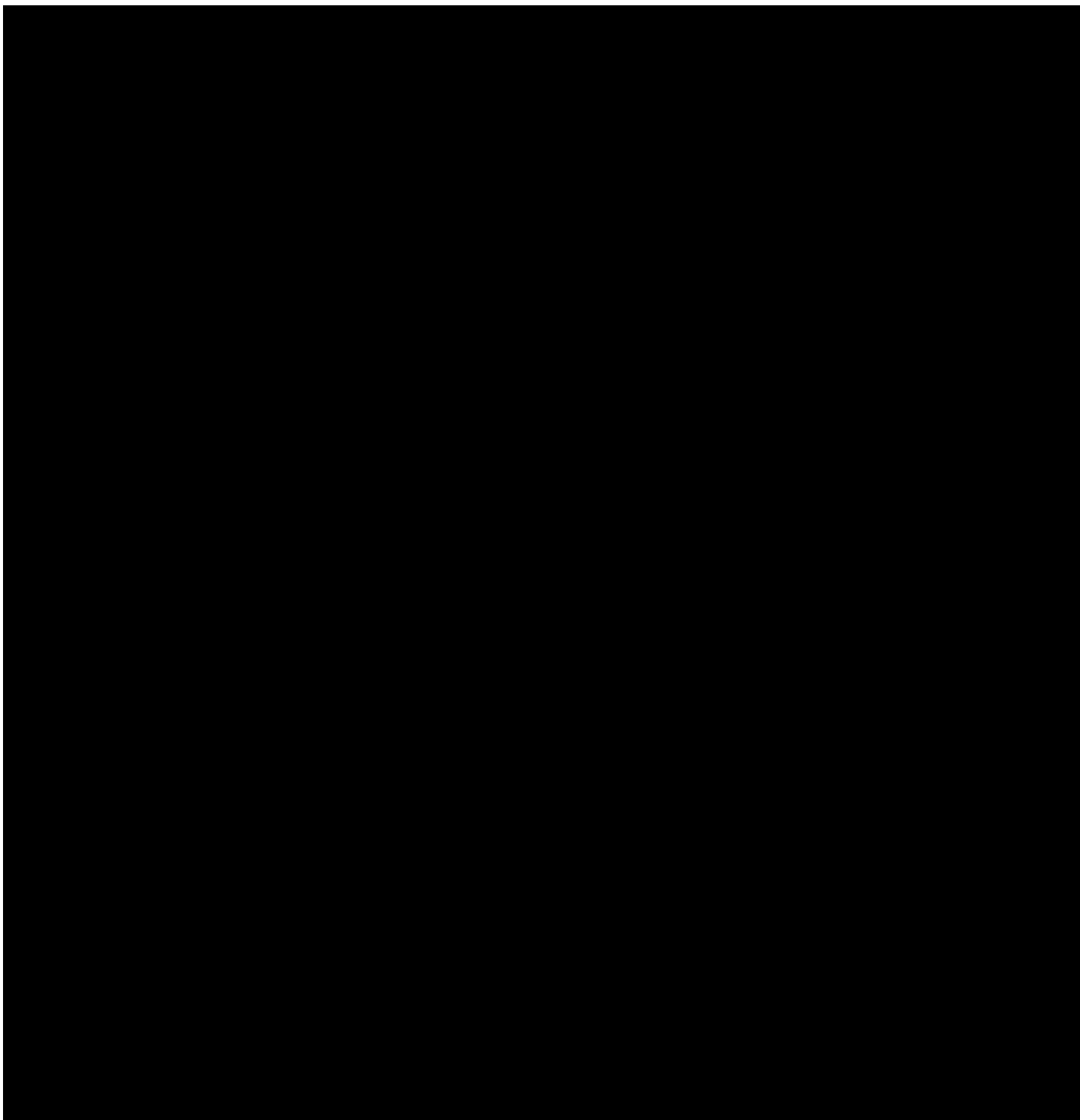
### Work package list

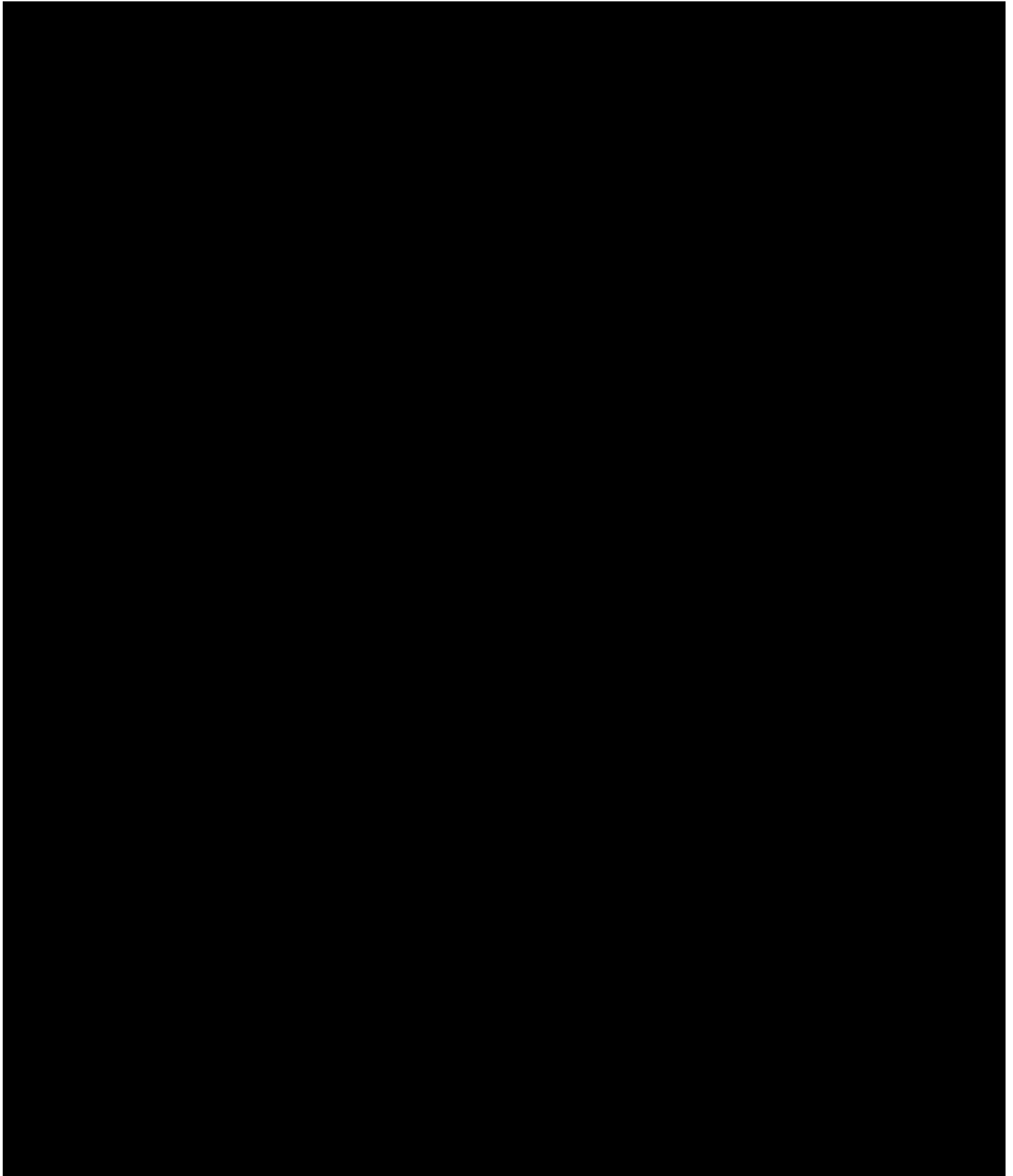
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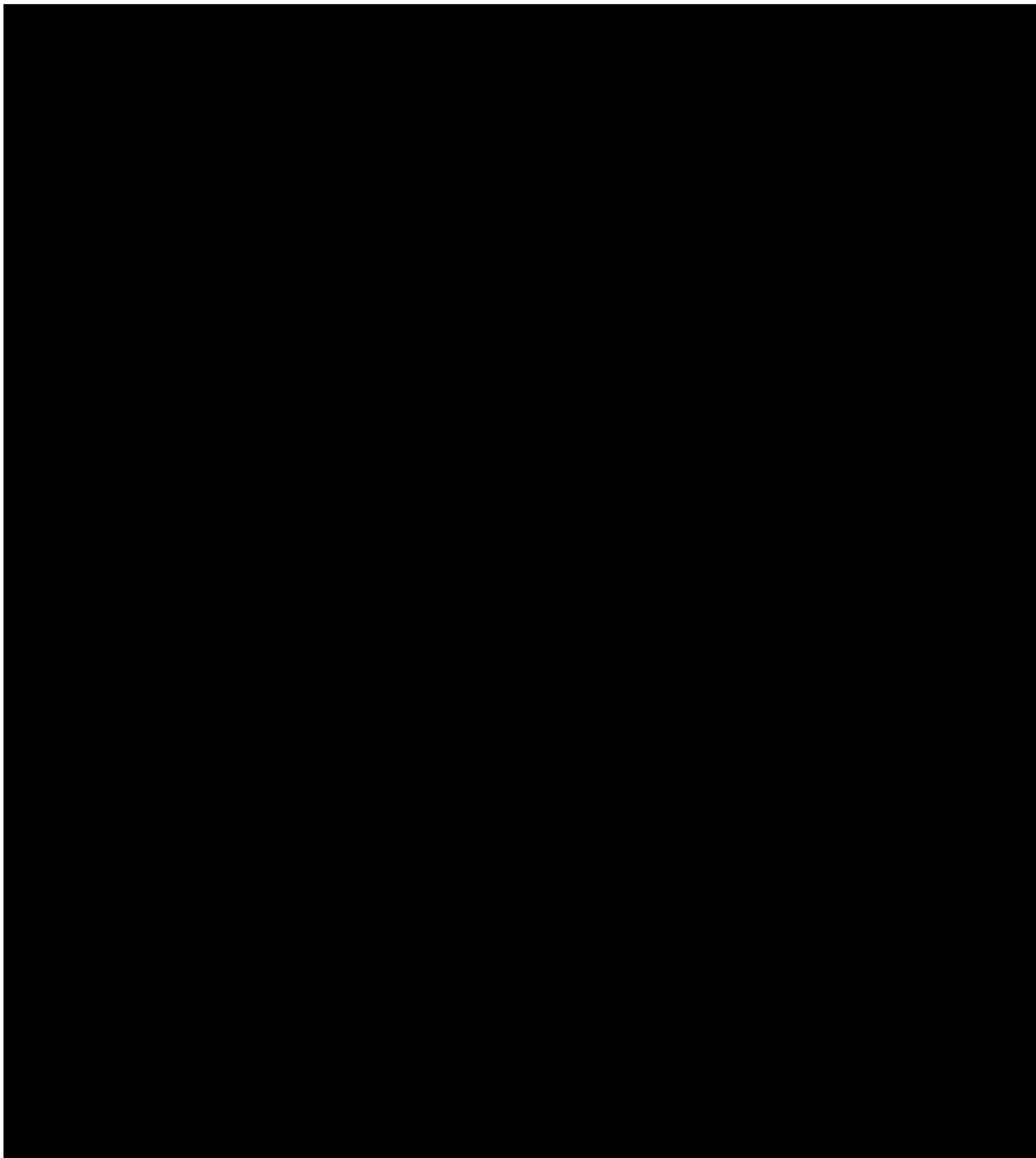


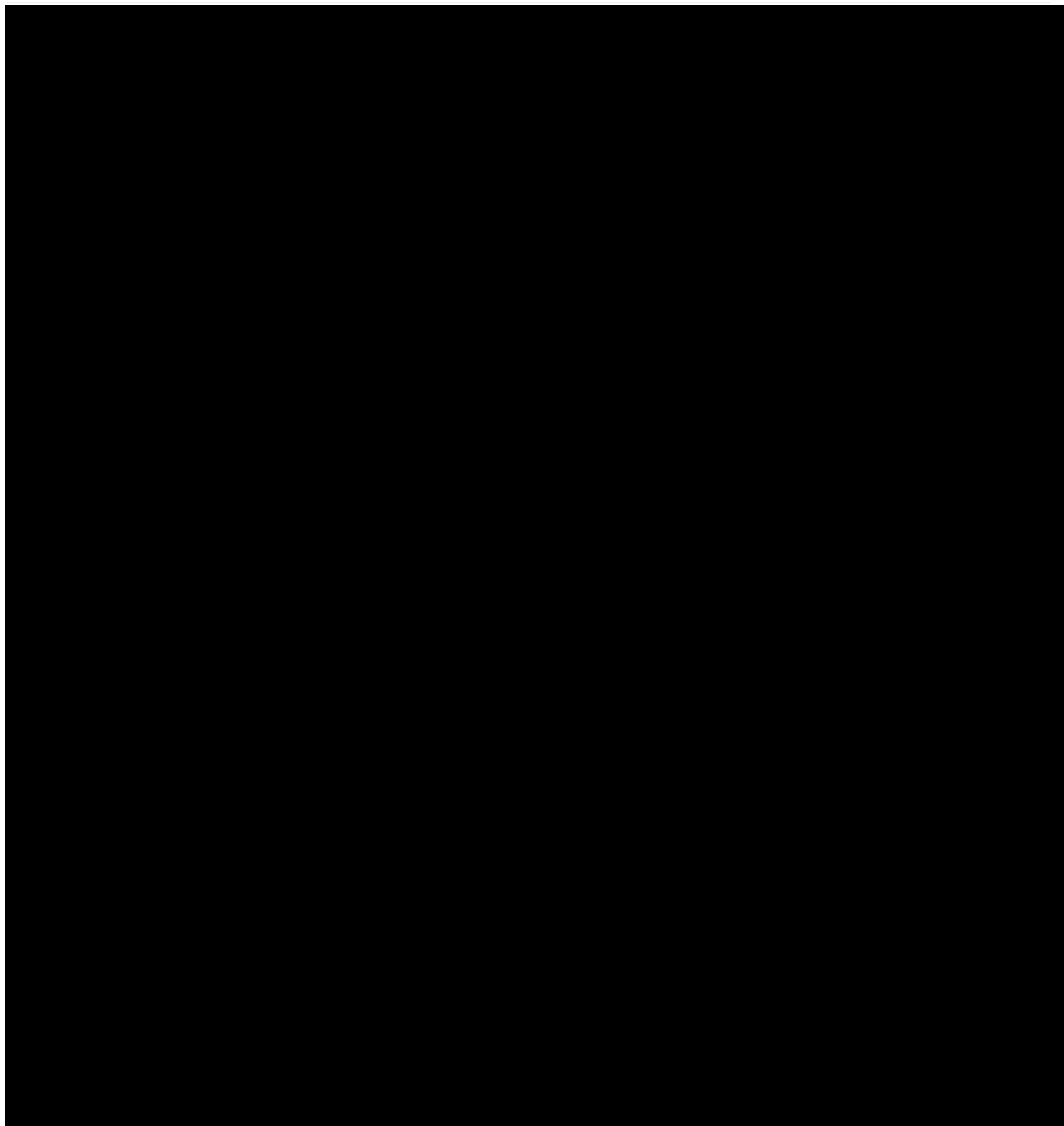












With reference to the work package list/descriptions, please indicate each of your tasks and deliverables in the project.

WP1 / 



[REDACTED]

[REDACTED]

WP2 / Impact assessment [REDACTED]

[REDACTED]

2.3 Testing [REDACTED]

WP3 / Impact assessment [REDACTED]

[REDACTED]

3.3 Testing [REDACTED]

WP4/ Production optimisation [REDACTED]

[REDACTED]

4.1 Production optimization

WP5 / Preformulation experiments

[REDACTED]

5.1 Preformulation experiments

WP6 / Product formulation and testing

[REDACTED]

Final project report



WP7 / Project management



7.1 Communication plan

7.2 Monitoring and Evaluation Plan and Risk management plan

7.3 Quality assurance plan, legal and ethical compliance program

7.4 Financial and technical reports

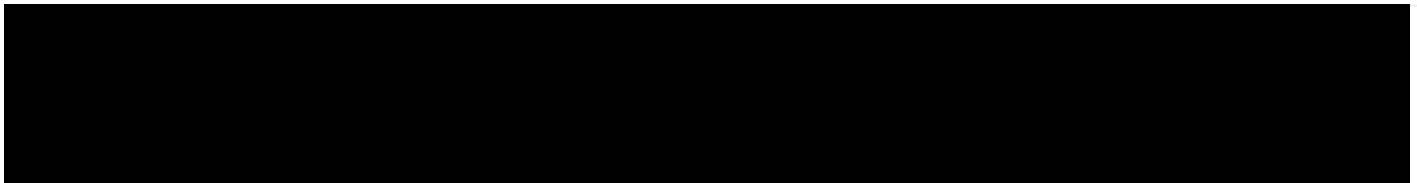
**Will you subcontract any work?**

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Yes

**Please describe the subcontracting work**

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## Budget Details

Work Package Name	Person months	Personnel costs (€)	Overheads (€)	Travel (€)	Materials (€)	Other (€)	Subcontracting (€)	Total
WP1. [REDACTED]	3.75	€13,175.00	€1,090.00	€0.00	€527.00	€0.00	€2,108.00	€16,900.00
WP2. [REDACTED]	15	€52,700.00	€4,360.00	€2,398.00	€2,108.00	€1,504.00	€0.00	€63,070.00
WP3. [REDACTED]	11.25	€39,525.00	€3,270.00	€2,398.00	€1,581.00	€0.00	€2,635.00	€49,409.00
WP4. [REDACTED]	3.75	€9,170.00	€726.60	€0.00	€351.30	€0.00	€0.00	€10,247.90
WP5. [REDACTED]	3.75	€9,170.00	€363.30	€0.00	€175.70	€0.00	€0.00	€9,709.00
WP6. [REDACTED]	23.75	€58,075.00	€2,180.00	€0.00	€1,054.00	€0.00	€14,625.00	€75,934.00
WP7. [REDACTED]	4.25	€11,989.00	€0.00	€0.00	€0.00	€0.00	€6,324.00	€18,313.00
	65.5	€193,804.00	€11,989.90	€4,796.00	€5,797.00	€1,504.00	€25,692.00	€243,582.90

## Co-Signature

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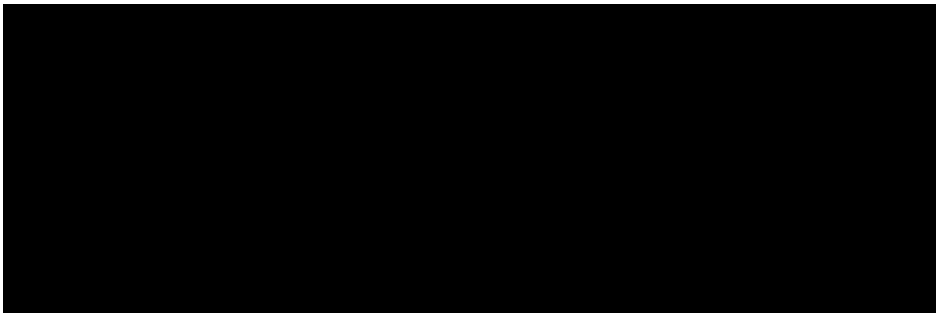
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## Partner Details

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## Partner Form - Palacký University Olomouc

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### **What are your core business activities and expertise (technological and managerial)? Do you have previous experience in international R&D&I cooperation?**

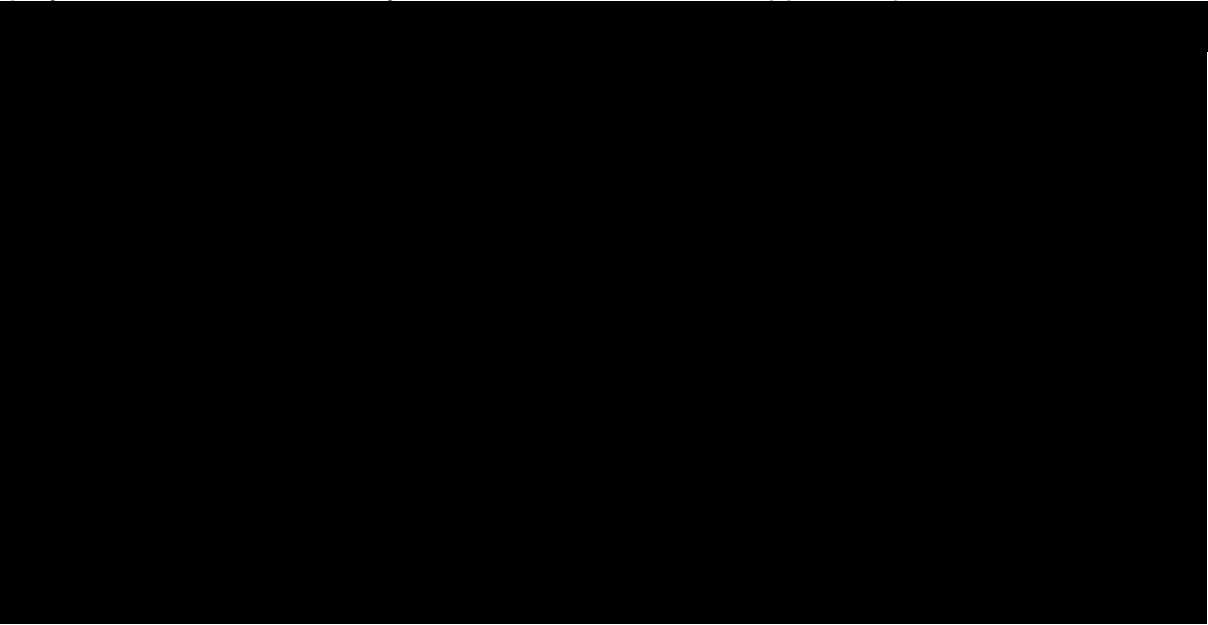
Palacký University Olomouc (PU) is an organisation in the Czech Republic, which I represent as a researcher responsible for the scientific solution of the project. This organisation is a public university and has no business activities. PU members of the consortium has been/ are involved in several international and national projects such as European Regional Development Fund projects "Centre for Experimental Plant Biology" (2018 –2023; CZ.02.1.01/0.0/0.0/16\_019/0000738), "Towards Next Generation Crops (TANGENC)" (2023 –2028; CZ.02.01.01/00/22\_008/0004581), „New biotechnological products of Institute of Experimental Botany Czech Academy of Sciences" (CZ.1.05/3.1.00/14.0327; 2014-2015), „BioNetwork. Connecting universities, research institutes, and the application sphere" (2012-2015; CZ.1.07/2.4.00/31.0025), „FytoChem - interdisciplinary integration of teaching focused on plant biochemistry and phytopathology" (2012-2015; CZ.1.07/2.2.00/28.0171), „New analytical approaches for the determination of phytohormones" (2014-2016; 14-34792S) or „Gibberellin biosynthesis and signal transduction – identification of novel targets for plant growth regulation" (2018-2020; 18-0349S), the last two provided by the Czech Science foundation.

### **In which sectors do you operate?**

Academic

**Explain your contribution to the project.**

Palacký University Olomouc (PU) is a scientific-educational institution where results are generated mainly in the category of basic research. Many of these results are then applied in practice in the form of applied research.

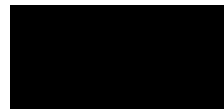
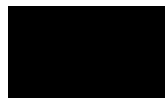
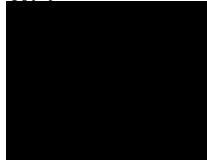
**Work package list**

WP ID / Name	WP summary (including milestones and outcome)	WP Start Date	Duration of WP (months)	WP Leader	Other Participants
					

WP1



WP2





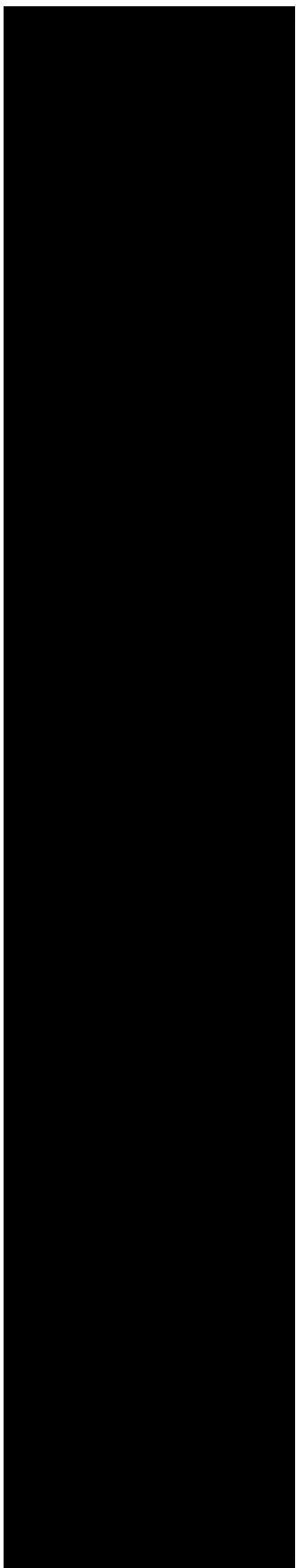
WP3



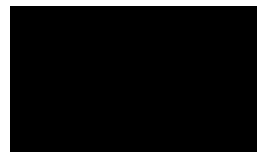
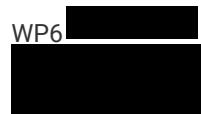
WP4



WP5  
Preformulation

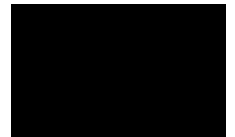


WP6



Project management in this EUREKA project involves several key tasks, similar to project management in other contexts. We will identify the Identify potential risks to the project's success, develop the risk mitigation strategy as we will deal with live organism and regularly assess and update the risk management plan; facilitate communication among project team members

WP 7 Project  
management



With reference to the work package list/descriptions, please indicate each of your tasks and deliverables in the project.

WP1 /  
WP2 /  
WP3 /  
WP6 / Product formulation and testing

WP 1.3/  
WP 2.3/  
WP 3.2/  
WP 6.3/

Will you subcontract any work?

No

## Budget Details

Work Package Name	Person months	Personnel costs (€)	Overheads (€)	Travel (€)	Materials (€)	Other (€)	Subcontracting (€)	Total
	3	€6,825.00	€2,822.00	€203.00	€4,260.00	€0.00	€0.00	€14,110.00
	12	€26,894.00	€11,187.00	€812.00	€17,042.00	€0.00	€0.00	€55,935.00
	9	€20,446.00	€8,510.00	€812.00	€12,781.00	€0.00	€0.00	€42,549.00
	6	€13,630.00	€5,639.00	€406.00	€8,521.00	€0.00	€0.00	€28,196.00
	30	€67,795.00	€28,158.00	€2,233.00	€42,604.00	€0.00	€0.00	€140,790.00

## Co-Signature

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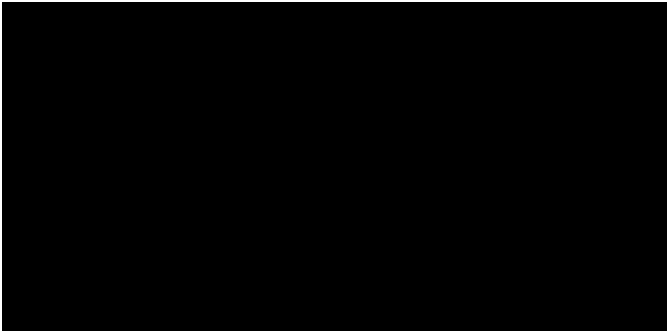
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## Partner Details

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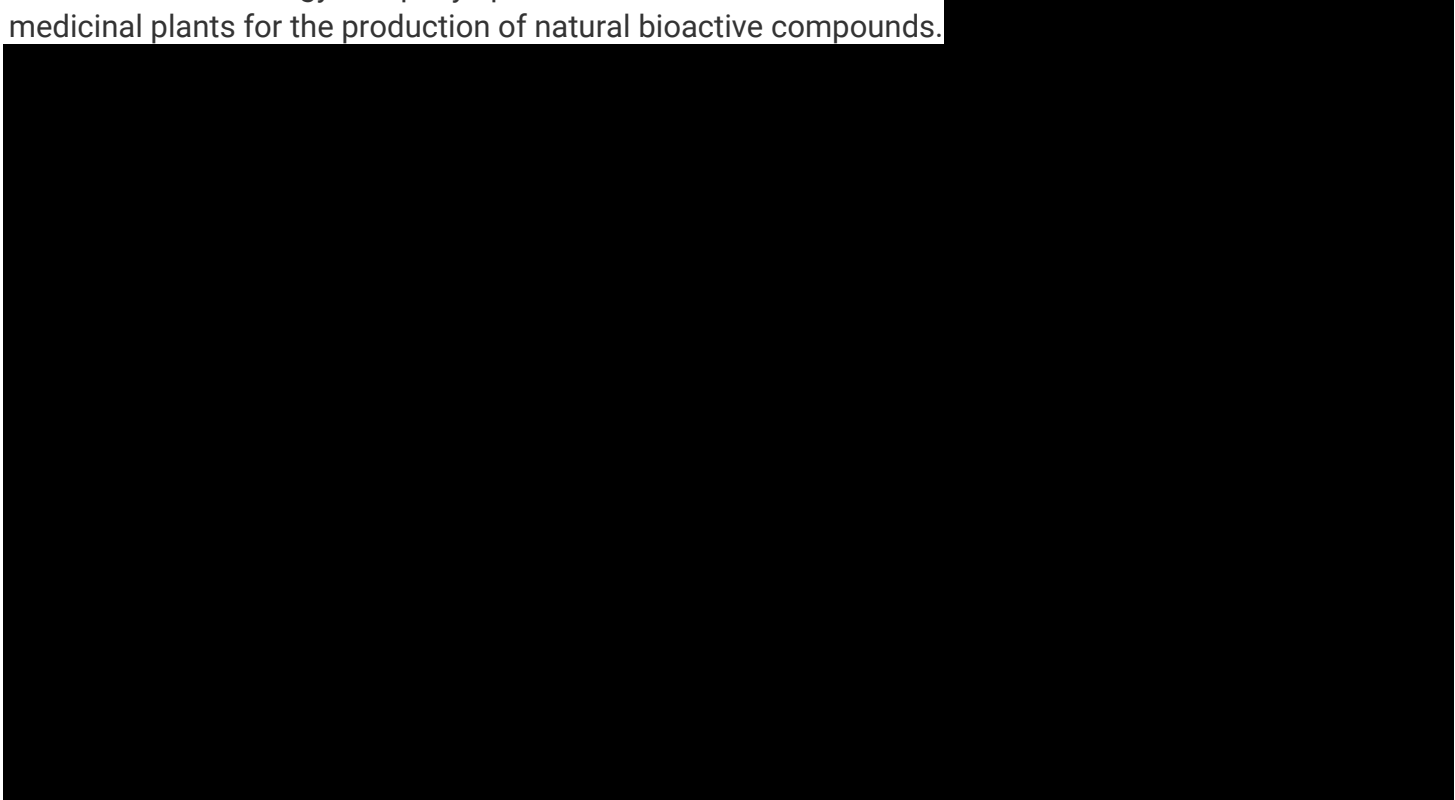


## Partner Form - EcoFuel Laboratories s.r.o.

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**What are your core business activities and expertise (technological and managerial)? Do you have previous experience in international R&D&I cooperation?**

We are a biotechnology company specialized in the research and utilization of microorganisms and medicinal plants for the production of natural bioactive compounds.





**In which sectors do you operate?**

We are a biotechnology company specializing in the research and utilization of microorganisms and medicinal plants for the production of natural bioactive compounds.

**Explain your contribution to the project.**

EcoFuel Laboratories brings extensive expertise in biotechnological processes,

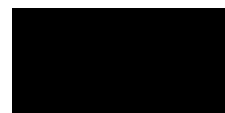
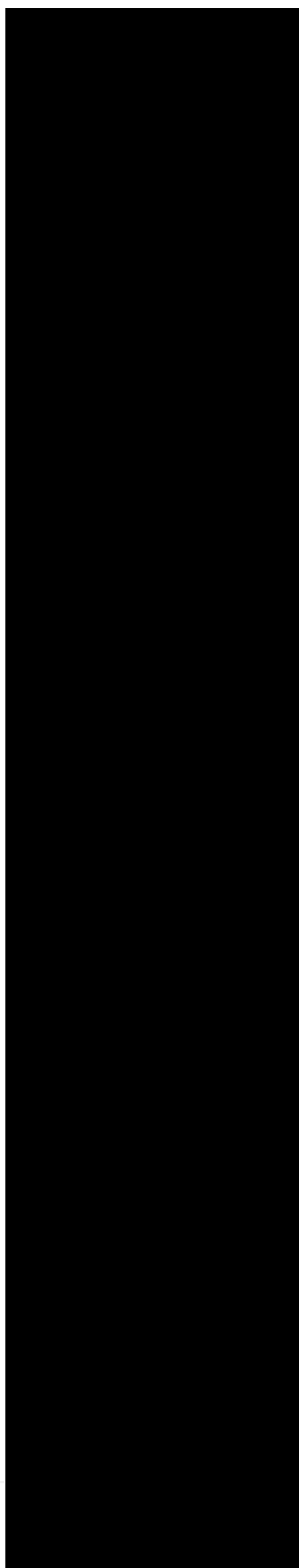
**Work package list**

WP ID / Name	WP summary (including milestones and outcome)	WP Start Date	Duration of WP (months)	WP Leader	Other Participants

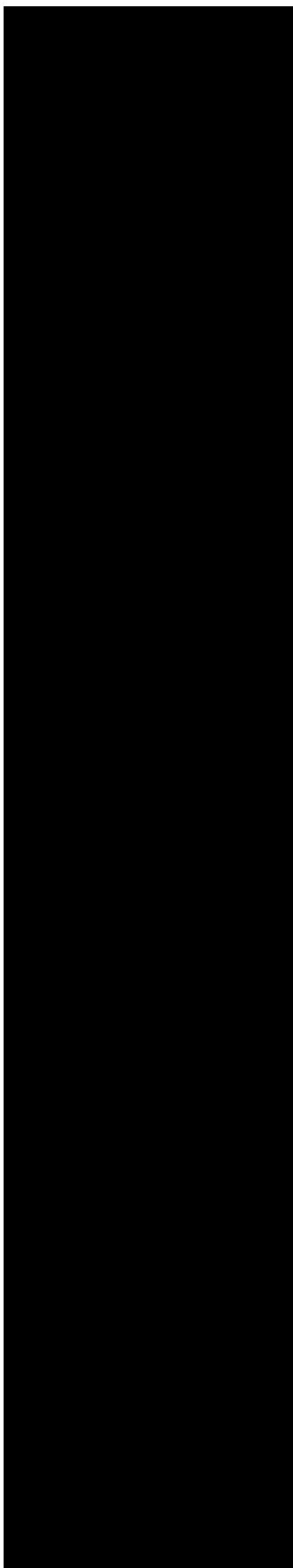
WP1



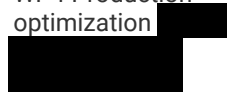
WP2 Impact  
assessment



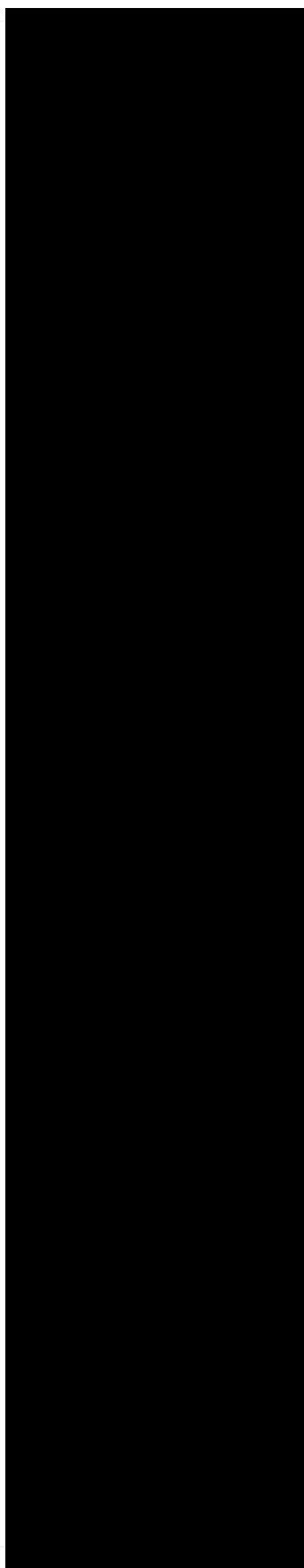
WP3 Impact  
assessment



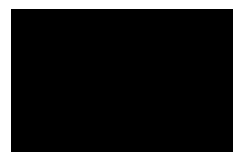
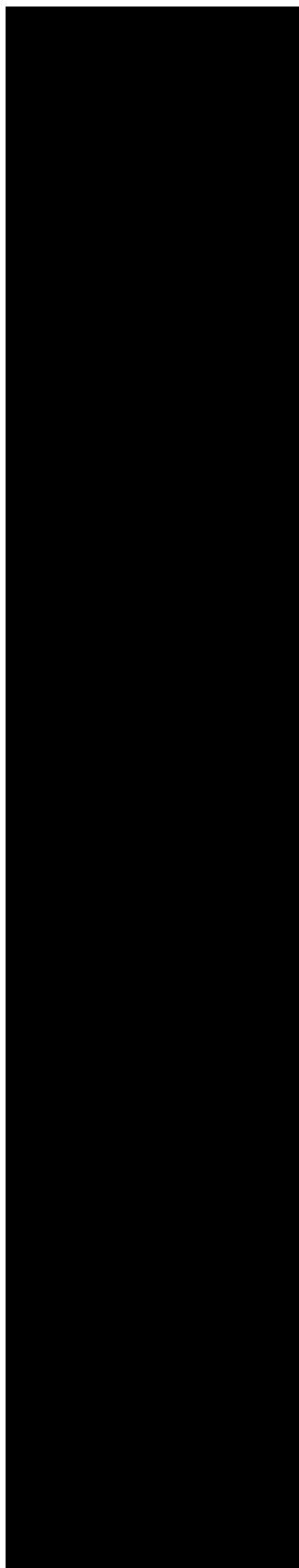
WP4 Production  
optimization



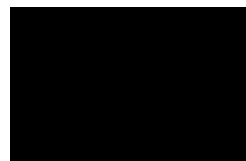
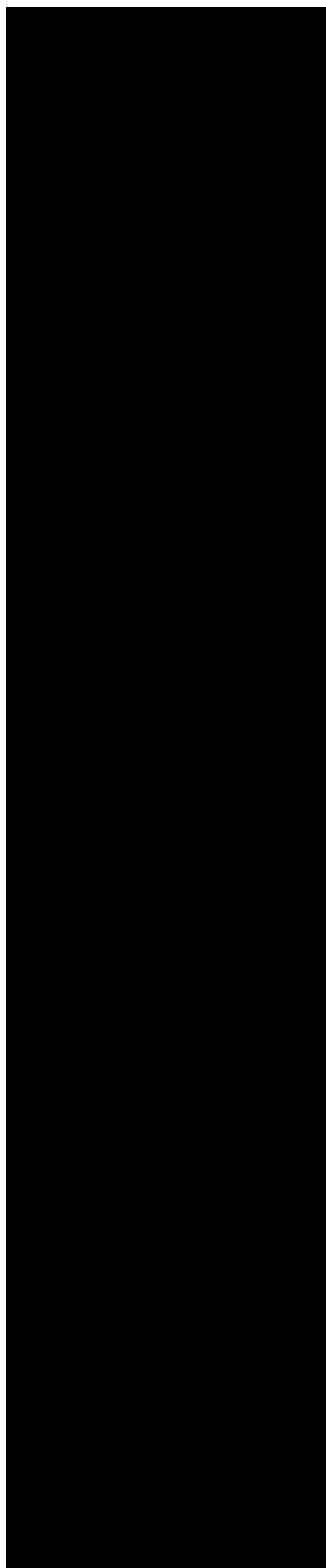
WP5  
Preformulation



WP6 Product  
formulation and  
testing



WP 7 Project  
management





With reference to the work package list/descriptions, please indicate each of your tasks and deliverables in the project.

1.2. We will focus on identifying candidates for the subsequent development

2.2.

3.1. The basic problem in meeting the conditions

4.1 We will provide feedback on production optimization to our partners

5.1 Preformulation experiments will focus on optimizing the effectiveness, safety, and practical application of these products.

6.1 and 6.5 Product documentation will be completed and delivered at this stage as it is crucial for commercialization.

7.1 – 7.4 Project management will involve a set of activities and processes aimed at achieving specific project goals within defined constraints such as time, budget, and scope.

**Will you subcontract any work?**

Yes

**Please describe the subcontracting work**

Subcontracts are intended for external costs associated with the specialized modification and optimization

## Budget Details

Work Package Name	Person months	Personnel costs (€)	Overheads (€)	Travel (€)	Materials (€)	Other (€)	Subcontracting (€)	Total
WP1	3	€9,916.00	€3,736.00	€284.00	€2,992.00	€0.00	€0.00	€16,928.00
WP2	12	€39,663.00	€14,942.00	€1,136.00	€11,970.00	€0.00	€4,666.00	€72,377.00
WP3	12	€26,441.00	€9,921.00	€811.00	€7,764.00	€0.00	€2,894.00	€47,831.00
WP4	3	€6,611.00	€2,480.00	€203.00	€1,941.00	€0.00	€724.00	€11,959.00
WP5 Preformulation	3	€6,611.00	€2,480.00	€203.00	€1,941.00	€0.00	€724.00	€11,959.00
WP6 Product formulation and testing	6	€19,832.00	€7,446.00	€609.00	€5,843.00	€0.00	€2,191.00	€35,921.00
WP 7 Project management	33	€19,248.00	€0.00	€0.00	€0.00	€0.00	€0.00	€19,248.00
<b>72</b>		<b>€128,322.00</b>	<b>€41,005.00</b>	<b>€3,246.00</b>	<b>€32,451.00</b>	<b>€0.00</b>	<b>€11,199.00</b>	<b>€216,223.00</b>

## Co-Signature

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### Upload signed co-signature document

**CO-SIGNATURE\_EUREKA\_Partner\_Agreement\_AMASING\_EcoFuel.pdf**  
3.2 MB - 30/11/2023 11:19

Total Files: 1

## Partner Details

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