



Call for Mentees – Guidelines

Breakthrough to Scale

Advanced Process Mentoring for Climate
Innovation

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Contents

- 4 Introduction
- 5 About the "Breakthrough to Scale" Mentoring Programme
- 6 Structure and impact for "Breakthrough to Scale" Mentoring
- 9 Mentees' Profile
- 14 Mentoring workflow
- 16 The Selection Process
- 17 Evaluation process
- 23 Contact
- 24 ANNEX 1 - Glossary of Terms
- 27 ANNEX 2 - Expression of Interest



Introduction

The aim of this document is to give potential future mentees key references that will support them in assessing their expectations and readiness in relation to the “Breakthrough to Scale” mentoring programme that is being offered. The document is also offering guidance to support the mentees in preparing an Expression of Interest that would turn them into the future beneficiaries of the “Breakthrough to Scale” Advanced Process Mentoring for Climate Innovation.

The role of the mentor is to collaborate with business owners in order to analyse the status of their climate innovation and provide the business with an outside perspective and recommendations on next steps. The mentoring process and relationship are a good way to discuss and evaluate the status of business and innovation projects and to gain new perspectives on how to advance the business strategic objectives and projects.

The mentoring process is offering an unbiased evaluation and perspective on the status and opportunities associated with business and innovation strategies and projects, and this unbiased view offers a strong catalyst for change and progress.

While working with a mentor is always beneficial, there are specific instances in which this collaboration is strongly recommended. Some of these instances are if the business is preparing for an innovation journey, where the risk is high or where the novelty of the project needs external resources support and / or niche knowledge.

The vision behind the mentoring programme is to address the complex needs of Small and Medium Sized Enterprises (SMEs)¹ that generate radical innovative products or processes which bring an outstanding contribution to tackling and reversing the effects of climate change. In most cases, such "breakthrough" and revolutionary product or process innovations demand large scale resources, research and innovation infrastructures, extensive competencies, and teams, as well as strong networking. The aim of the "Breakthrough to Scale" mentoring approach is to offer systematic support for these needs, by providing a bespoke, adapted, and result-oriented mix of training, mentoring, and coaching, based on state-of-the-art methods and tools for performant in-house innovation management. Furthermore, the mentoring programme will funnel additional resources and connections at the international level, for the specific benefit of the selected mentees. The programme is suitable for start-ups, SMEs at growth stage, and for scaleups².

About the "Breakthrough to Scale" Mentoring Programme

¹ See Annex 1 – Glossary of Terms.

² High-growth (scaleup) definition of firms growing their employment numbers and/or turnover by more than 20% a year over a period of three years, with at least 10 employees at the start of the period". (OECD)

Structure and impact for “Breakthrough to Scale” Mentoring

The “Breakthrough to Scale” support package is structured on 5 key Drivers and 3 Enablers, which will be delivered to the SMEs either individually or combined (i.e. one Driver or one Enabler per company, or more Drivers and Enablers per company), based on the needs identified through an innovation diagnostic and a thorough needs analysis process.

The mentoring programme will offer an estimated 10 hours of mentoring for each selected Driver and Enabler. Moreover, the programme is offering a cross-cutting component of the mentoring package, dealing with climate specific methods, tools and KPIs for SMEs.

The following document section offers a description of the programme Drivers and Enablers.

TABLE 1 Mentoring content

Drivers	Impact for mentees
1 Advancement of the technology maturity level of the innovative solution	Implement a sound internal process for technology readiness level (TRL) advancement, with clear milestones and indicators, as well as potentially decreasing the time needed to advance one TRL.
2 Design of the innovation strategy	Design and implement a complete innovation strategy at the company level, which would lead to an increased competitiveness based on innovation.
3 Innovation life cycle management from idea to development	Gain systematic understanding and knowledge of the internal innovation life cycle processes, apply the information at the company level, and potentially decrease time-to-market.
4 Go-to-market: achievement of time-to-market, early adopters, and breakeven point	Develop a sound go-to-market approach, considering the “breakthrough” character of the innovative product or process, and potentially decrease the time-to-profit.
5 Scaling roadmap	Assess and attain scalability of the radically innovative product or process, by designing and implementing a relevant scaling roadmap.



Enablers

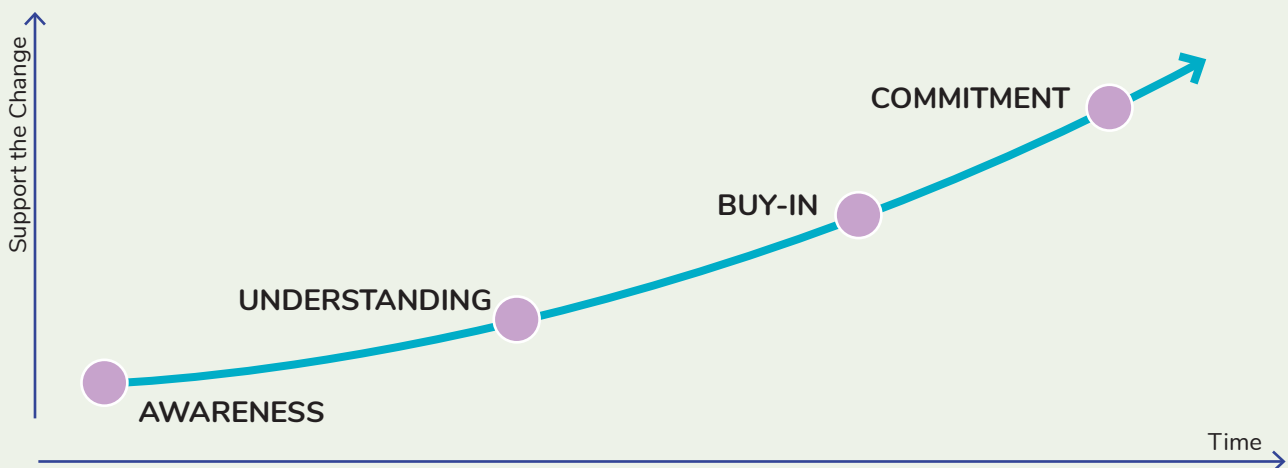
- 1 Funding strategy**
Gain systematic understanding and knowledge of the appropriate mix of funding types available for the development and scaleup of the radically innovative product or service.
- 2 Internationalisation**
Position the radically innovative product or process on the global market, by gaining systematic understanding and knowledge of market intelligence, alliances, and specific conditions.
- 3 Digitalisation**
Gain systematic understanding and knowledge of the application of digital technologies in support of advanced prototyping and manufacturing, as well as digital enablers specifically adapted to the scaling case of the in-house innovation.

The programme is offering the possibility of creating a mix approach between a Driver and an Enabler.

The mentoring programme is structured, designed, and delivered using a change management approach (see Figure 1 below) and a gradual implementation process that spans from

1. creating awareness at the mentor and mentee levels about the starting point of the mentoring process to...
2. understanding the needs and aims of the mentees which will be embedded in the response of the mentor, then through...
3. the stage of “buy-in” and consensus / uptake and rollout of the mentoring content, as well as implementation of practical steps by the mentee, and then...
4. arriving to the final stage of feedback from the mentor regarding the overall results of the mentee’s work within the mentoring programme, as well as securing “commitment” and offering operational details towards sustaining the results achieved through the mentoring process.

FIGURE 1 Change Management Approach



We are envisioning that the programme will offer the following outcomes for the Mentees:



Decreased time-to-market for innovative products or processes.



Decreased time-to-profit for innovative products or processes.



Increased *income* from sales from innovative products or processes.



Increased *sustainability* at the company level and/ or at end user level (e.g. carbon neutrality, all new products and processes compliant with circular economy, setup of cross-functional sustainability team within the company, waste recycling, energy monitoring and savings, net zero value chain requirements (e.g. suppliers and entire product life cycle), energy production from renewable sources, reduction of water consumption, energy efficient machinery, fully recycled materials in packaging, low emission manufacturing methods, other (relevant to the UN SDGs);



Decreased time needed to advance one scale of the TRL level for an innovative product or process.



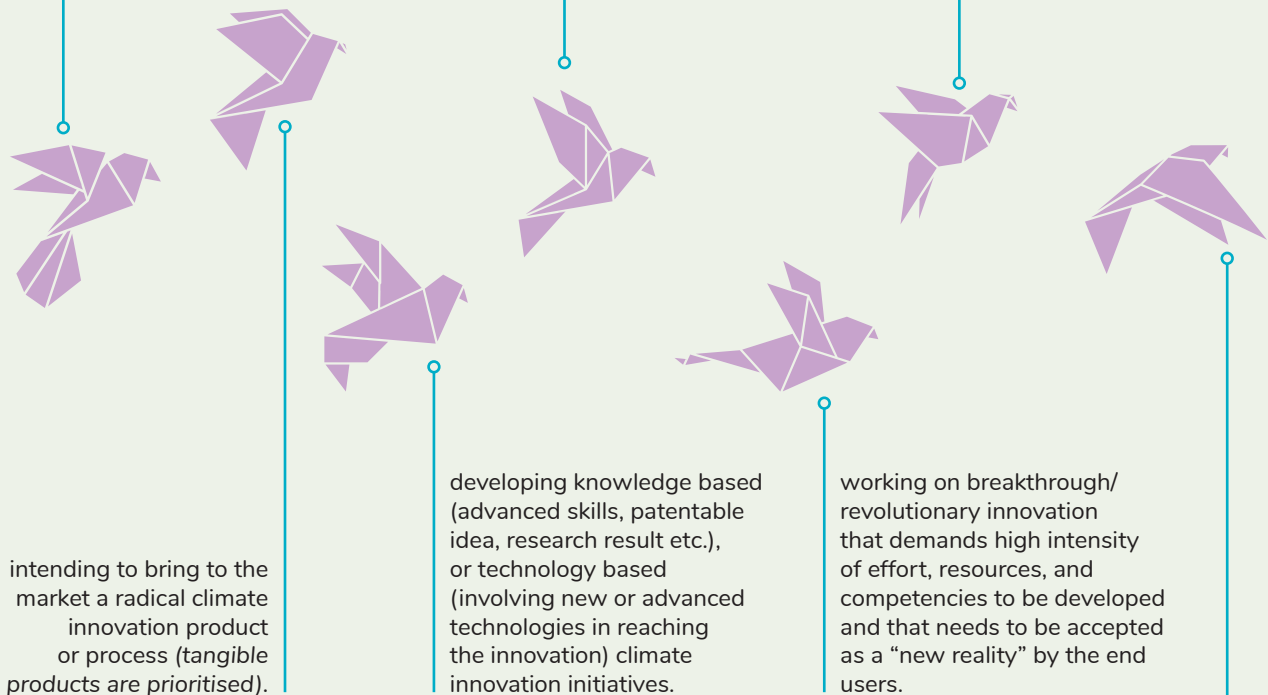
Mentees' Profile

We are looking for SMEs that are currently seeking to develop or scale an in-house radical product or process innovation, cumulatively meeting the below criteria:

generating climate innovation which is science-based and proving potential exponential impact on tackling and reversing the consequences of climate crisis.

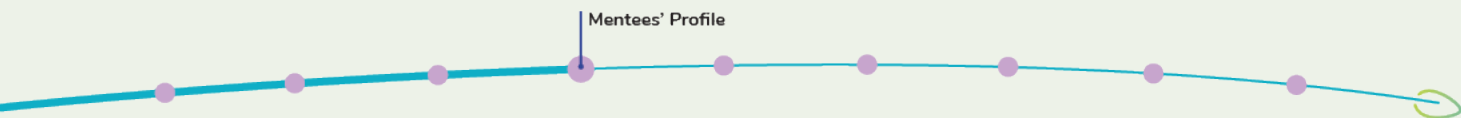
creating radically innovative processes that can be embedded into various industries, to generate positive impact at scale in terms of climate.

demonstrating at least TRL3 (*experimental proof of concept*), in the case of an innovative idea resulting in a tangible product.



focusing on new and emerging trends, such as nature-based solutions, bio mimicry, planet centricity etc.





In terms of the innovation ambition, the ideal mentees are placed in the sections marked in red of the Ansoff's innovation matrix (see Figure 2 below).

FIGURE 2 Ansoff Innovation Matrix

Products and processes new to the world	Trendsetter	Changing the rules of the game	Breakthrough innovation
	Lifecycle management	Frowth by innovation	Market creation
	Business as usual	Expansion	Diversification
Products and processes new to the firm			
Existing products and processes			
	Existing market	Market new to the firm	Market new to the world

The target group of the “Breakthrough to Scale – Advanced Process Mentoring for Climate Innovation” is represented by:

- Innovative SMEs worldwide, which comply with the above profile of mentees, and are interested in receiving mentoring, upon a fee, through one or more Drivers and Enablers.

The target sectors and NACE codes³ are presented in the below table:

TABLE 2 NACE codes

Code	NACE Definition Rev. 2	Verticals
SECTION A - AGRICULTURE, FORESTRY AND FISHERIES		
014	Animal breeding	Food and agritech Blue economy
015	Activities in mixed farms (vegetable culture combined with animal husbandry)	Circular economy Sustainability
032	Aquaculture	Nature-based solutions
SECTION B - EXTRACTIVE INDUSTRY		
081	Extraction of stone, sand, and clay	Circular economy Energy and cleantech
SECTION C - MANUFACTURING INDUSTRY		
101	Production, processing and preservation of meat and meat products	
102	Processing and preservation of fish, crustaceans and molluscs	Food and agritech
103	Processing and preservation of fruits and vegetables	Circular economy
104	Manufacture of vegetable and animal oils and fats	

³ The NACE codes can be primary or secondary at the level of the SME. Moreover, the sectors where the innovation will be applied are also relevant within the selection process. The complete list of NACE codes can be found [here](#).




Code	NACE Definition Rev. 2	Verticals
13	Manufacture of textile products	
14	Manufacturing of articles of clothing	
15	Tanning and finishing of hides; the manufacture of travel and leather goods...	Chemical engineering Nature-based solutions
16	Wood processing, manufacture of wood and cork products, with the exception of furniture	
17	Manufacture of paper and paper products	
18	Printing and reproduction on media of recordings	Circular economy
19	Manufacture of coke oven products and products obtained from crude oil processing	Circular economy Chemical engineering
20	Manufacturing of substances and chemical products	Circular economy
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	Chemical engineering
22	Manufacture of rubber and plastic products	Nature-based solutions
23	Manufacture of other products from non-metallic minerals	
24	Metallurgical industry	Circular economy Sustainability
25	The industry of metal constructions and metal products, exclusive of machines, equipment and installations	Energy and cleantech
27	Manufacture of electrical equipment	
28	Manufacture of machines, machinery and equipment n.e.c.	
29	Manufacture of road transport vehicles, trailers and semi-trailers	
30	Manufacture of other means of transport	Energy and cleantech
27	Manufacture of electrical equipment	Circular economy Sustainability
28	Manufacture of machines, machinery and equipment n.e.c.	
29	Manufacture of road transport vehicles, trailers and semi-trailers	
30	Manufacture of other means of transport	
31	Furniture manufacturing	Sustainability



Code	NACE Definition Rev. 2	Verticals
SECTION D - ELECTRICITY, GAS, STEAM, AND AIR CONDITIONING SUPPLY		Energy and cleantech Circular economy
SECTION E - WATER DISTRIBUTION; SANITATION, WASTE MANAGEMENT, DECONTAMINATION ACTIVITIES		
360	Water collection, treatment and distribution	
370	Waste water collection and treatment	Sustainability
381	Waste collection	Nature-based solutions
382	Waste treatment and disposal	
383	Material recovery	
390	Decontamination activities and services	
SECTION F - CONSTRUCTION		Energy and cleantech Circular economy
SECTION H - TRANSPORTING AND STORAGE		Energy and cleantech
SECTION M - PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES		
711	Architecture, engineering activities and related technical consultancy services	Sustainability
721	Research and development in natural sciences and engineering	

We are providing below several examples⁴ of radically innovative products or processes, as reference to our future mentees.



The CO₂ Revolution

General use fabrics

Fairbrics uses molecular chemistry to convert waste CO₂ into polyester fabric.

“CO₂ is captured from industrial sources and then reacted with a catalyst and solvent to produce chemicals used in polyester synthesis. These chemicals are polymerized to form polyester pellets, which are spun into yarn and then into fabric. In a near future, our technology will produce carbon negative, 100% sustainable PET.”

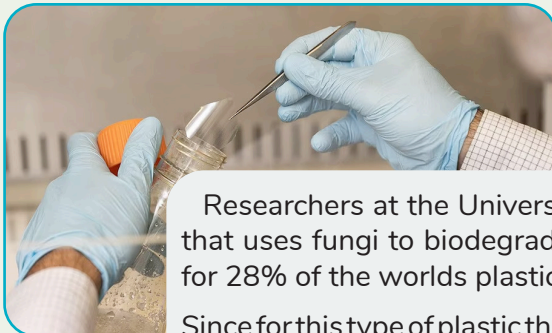
⁴ The examples provided are identified by the TRENDONE GmbH company providing a structured approach on global trends regarding, technologies, markets, and innovation. The examples have been identified to represent the Planet Centricity megatrend. The texts however are edited by the authors, based on publicly available data on the examples websites.





Organic materials replacing plastic for mass use

Melodea is an Israeli company that is offering coating services within the packaging industry. Their MelOX Eco-friendly coating is made from wood and offers superior resistance to oxygen and oil & grease, thus making it applicable for a large set of industries.



Plastic biodegraded based on nature solution

Researchers at the University of Sydney have conducted a laboratory experiment that uses fungi to biodegrade polypropylene, a plastic that is estimated to account for 28% of the worlds plastic waste.

Since for this type of plastic the recycling rate are extremely low, natural biodegradation could fill this market gap.



Nature based solution for soil regeneration

The Winner of the European Inventor Award 2022, researcher Claude Grison, has developed a process to extract metal elements such as zinc and nickel from contaminated soils using a technique known as phytoremediation. This way, plants absorbing these metals are becoming biomass which is further used to recuperate the metal salts.



Complete circularity solution in transversal industries

Biosphere Solar is a Dutch company focusing on circularity within the design, production and exploitation of solar panels.

“We envision a world where solar energy and biodiversity regeneration are brought together, and the use of open-source PV module design enables rapid and resilient developments.”



Mentoring workflow

	Step/Stage	Description	Relevant documents
1 CALL	Launch of the Call for Mentees by LUMINSPINO	Rolling base / 2 times a year	Guidelines for the Call for Mentees webpage
	Submission of the online Expression of Interest (Eoi) by the future potential mentee companies	Applicants submit their Eoi on the designed link	Online survey
2 EVALUATION	Evaluation of the received Eois by LUMINSPINO	The expert is evaluating the Eoi using an online instrument	Online evaluation tool
	Elaboration of the consolidated evaluation report by LUMINSPINO	Based on the excellence and impact a first consolidated report is delivered to the mentee	Consolidated Evaluation Report per each company
	Elaboration of the questions and clarifications necessary during the Interview stage by LUMINSPINO	Based on the Eoi's evaluation, a first list of clarifications is made to be asked during the interview.	Document in preparation for the Interview with each company
	Elaboration of the Interview Report, including (re) positioning of the proposed innovation	Based on the interview phase a final consolidated report is delivered to the mentee	Interview Report
3 ONBOARDING	Signature of the mentoring contract with the mentee company	The mentoring process is mediated by a contract between Luminspino and the mentee company	Mentoring contract
	Signature of the NDA on behalf of LUMINSPINO	An NDA is signed between Luminspino, the mentee company and for each additional expert engaged	Non-Disclosure Agreement
	Introductory meeting	The meeting has the role to present the full role of the mentoring process	Kick-off Deck Guidelines for the introductory meeting



4

MENTORING

Step/Stage	Description	Relevant documents
Perform innovation diagnosis and needs assessment by LUMINSPINO, through interview/dialogue with the mentee company	The interview has the role to clarify the innovation positioning in the mentee company and to assess the overall capacity	Innovation Diagnosis and Needs Assessment
Workshop 1 by Mentor high level objective	A first presentation is delivered by the mentor to clarify the concepts and to prepare the common grounds	PowerPoint presentation no.1
Workshop 2 Tools and templates for the mentee company, by Mentor- Action plan	A presentation is delivered by the mentor to present all the tools that will be used during the mentoring activity and the deliverable that the mentee will develop during the mentoring process. It consists of a specific action plan that will be filled by the mentee.	List of tools and templates Individual tool/template in intended format
Elaborate Intermediary report about the mentoring process by Mentor	The Intermediary report is completed by the mentor to assess that the mentoring is on track and that there is commitment of the mentee	Intermediary Report
On-demand mentoring	Mentoring meetings are taking part to provide additional help on the areas identified during the process	Guidelines for on-demand mentoring
Workshop 3 by Mentor	A second presentation is delivered by the mentor to show some case studies for the mentee	PowerPoint presentation no.2
Feedback by Mentor to the work done by mentee company	Mentoring meetings are taking part to review the work that the mentee has done	Guidelines for feedback to mentees
Elaborate Final report about the mentoring process by Mentor	The mentor assesses the mentoring process and the results obtained by the mentee	Final Report
Fill in Achievement Survey by mentee	The mentee assesses the mentoring process and the results obtained	Achievement Survey based on Mentee Perception





The Selection Process

The selection process will go through the following stages:

- 1. Submission of Expression of Interest (EOI)
- 2. Evaluation of the Expression of Interest

EOI Submission Step

The submission of the EOIs is done on a continuous basis.

Selected mentees will be onboarded, and the mentoring process will start immediately after the completion and communication of the evaluation results.

The Expression of Interest – Submission Details

The Expression of Interest request to become a mentee within the “Breakthrough to Scale – Advanced Process Mentoring for Climate Innovation” programme will be submitted [online](#).

For the mentees, the aim of the Expression of Interest is to provide a comprehensive picture of the radically innovative product or process that is currently developed or scaled, and to present the company’s readiness to receive and benefit from the mentoring programme.

From the mentor team’s side, the aim of the Expression of Interest is to allow us to generate, in response, the optimal value proposition to be offered through the “Breakthrough to Scale – Advanced Process Mentoring for Climate Innovation.”

The template of the Expression of Interest is presented in Annex 2.



EXCELLENCE

This criterion will assess the radical nature of the innovation, the current situation of the innovation, and the ambition level of the innovation, based on the information provided in the Expression of Interest (see Table below).

No.	Questions for the evaluator	Items to be considered
1	<p>Is there a clear innovative aspect? Is it clearly presented?</p> <p>Score 0-5</p>	<p>A.1. Describe what is the innovative product consisting of</p> <p>B.1 What are the industries for which the newly/significantly improved process is meant?</p>
2	<p>Are the results clearly stated, measurable? Are the innovative features / new characteristics adequately described?</p> <p>Score 0-5</p>	<p>A.2. Does it generate tangible products? If YES, describe the new features and its benefits to the climate.</p> <p>B.2. What are the envisaged results? Provide impact indicators, if available.</p>
3	<p>Is there a clear link between the product/process innovation outcome and the climate challenges?</p> <p>*having both features and functions is not important and doesn't provide extra points. The clarity of the connection between features / functions and climate matters the most.</p> <p>Score 0-5</p>	<p>A.3. Does it add new features to a product? / A.4. Does it add new functions to a product?</p> <p>B.3. Does it add new features to a process? / B.4. Does it add new functions to a process?</p> <p>Describe the new features / functions and their benefits to the climate</p>
4	<p>Is the radical / incremental innovation aspect evident and supported by arguments and not by claims? Is the ambition convergent with the breakthrough concept?</p> <p>*See point L from the Glossary of terms</p> <p>Score 0-5 in case of Radical innovation Score 0-2 in case of Incremental innovation</p>	<p>18. Your project is a radical innovation / Incremental innovation</p>
5	<p>Is there a clear contribution of knowledge / technology to the innovation?</p> <p>*See point L from the Glossary of terms</p> <p>Score 0-5 in case of Knowledge based innovation Score 0-4 in case of Technology based innovation</p>	<p>19. Your innovation project is Knowledge / Technology based</p> <p><i>If Knowledge-based, please describe the related advanced skills it involves, the patentable idea or research result from which it derives, etc.</i></p> <p><i>If Technology-based, please describe the new or advanced technologies involved that will help to reach the innovation.</i></p>
6	<p>Are there clear demonstration and arguments that the innovation project has at least TRL3 level?</p> <p>Is the TRL level clearly demonstrated? Is there a consistency between the TRL level and arguments?</p> <p>Score 0 in case of not showing at least TRL3 Score 1 for demonstrated TRL3- TRL4 Score 2 for demonstrated TRL5- TRL6 Score 3 for demonstrated TRL7 Score 4 for demonstrated TRL8 Score 5 for demonstrated TRL8</p> <p>*minimum TRL3 is an eligibility criteria</p>	<p>23. Indicate the status of technology maturity readiness (TRL) of your innovation project</p> <p><i>Justify your selected option, providing relevant information to match the definition of selected TRL</i></p>



IMPACT

This criterion will assess the impact of the innovation on tackling and reversing climate change, the scalability of the innovation, and the relevance of the innovation regarding the macro trends in climate innovation, based on the information provided in the Expression of Interest, complemented by the interview with the potential future mentee. In terms of the innovation ambition, the ideal mentees are placed in the sections marked in red of the Ansoff's innovation matrix (see Table below).

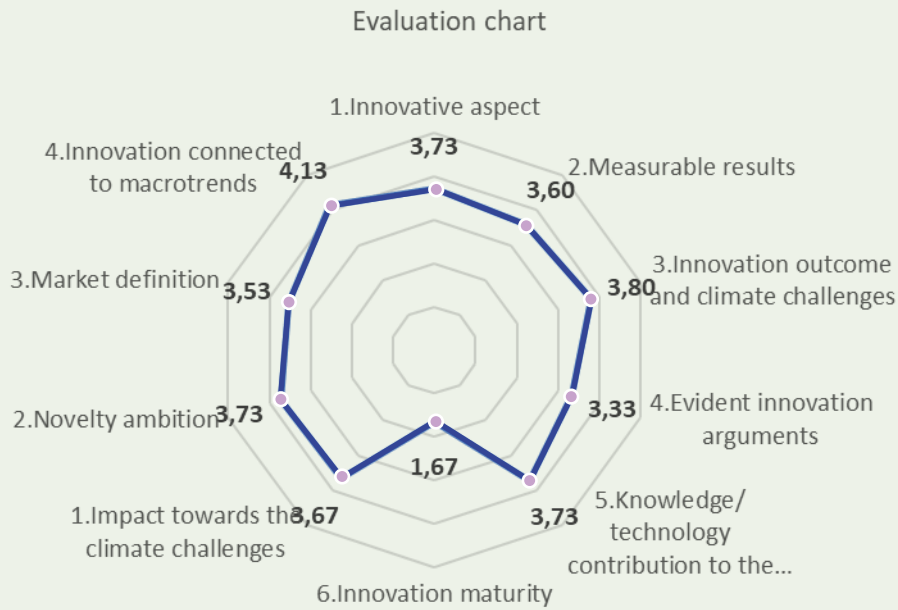
No.	Questions for the evaluator	Items to be considered
1	<p>Is there a clear link between the product / process innovation outcome and the climate challenges? Does the applicant reasonably estimate the impact with indicators? Are these indicators relevant and ambitious?</p> <p><i>*The absence of quantifiable indicators shows a lack of commitment and maturity level regarding the innovative solution, including lack of market awareness</i></p> <p>Score 0-5 in case of Yes response Score 0 in case of No response</p>	<p>20. Is your innovation project intended to be applied in climate sector, to mitigate the climate changes?</p> <p><i>How does the proposed innovation tackle reverse the consequences of the climate changes at local, national, or global level.</i></p> <p><i>What is the estimated impact sought? Provide impact indicators, if available.</i></p>
2	<p>Is there a novelty ambition? Is the ambition based on clear arguments?</p> <p><i>*The absence of market novelty is showing a lack of scalability potential</i></p> <p>Score 0-5 in case of: A product/process new to the world Score 0-3 in case of: An existing product/process, present on the market / A product/process new to the company</p>	<p>21. In terms of novelty of the product/process, your innovation project is... <i>justify your selected option</i></p>
3	<p>Is there a clearly defined market?</p> <p>Is the market ambition backed by the description with facts, figures, indicators?</p> <p><i>*The absence of market estimation is showing a lack of scalability potential</i></p> <p>Score 0-5 in case of: A market new to the world Score 0-3 in case of: An existing market / A market new to the company</p>	<p>22. In terms of novelty of the targeted market, your innovation project targets are... <i>justify your selected option</i></p>
4	<p>Is there a clear connection between the innovation project and the macro trends?</p> <p>Is the innovation project convergent with the macro trends and supporting them?</p> <p>Does the innovation project create / open new markets related to the macro trends?</p> <p>Score 0-5 in case of reasonable convergence with at least 3 macro trends Score 0-4 in case of in case of reasonable convergence with at least 2 macro trends</p> <ol style="list-style-type: none"> 1. Circular Economy 2. Alternative Materials /Eco Materials 3. Regeneration & Biodiversity 4. End of fossil fuels 5. Clean Tech Design 6. Smart Grid 7. Bioengineering 8. Smart Materials <p><i>*The scope is to check the market potential and more markets means increased scalability</i></p>	<p>24. What are the global macro trends in climate innovation that your innovation project is envisaging?</p> <p><i>Justify your option, providing relevant information to match the definition of selected microtrend(s).</i></p>





Evaluation Process

Based on excellence and impact, the following type of chart will be generated.



IMPLEMENTATION

This criterion will assess if there is a clear understanding of needs and challenges, at mentee level, about the future development or scaling of the innovation, if there is readiness at mentee level in relation to actively participating in the mentoring programme, and if the “Breakthrough to Scale” mentoring programme represents the optimal response to the needs and challenges of the mentee. The necessary information for this criterion will be harvested during the interview with the potential future mentee.

There will be additional check performed in terms of ethical issues which might arise from the applications at this stage (e.g., involve the use of human embryos, human participants, personal data, animals, military applications etc.).



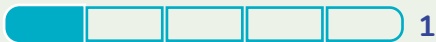
Evaluation scoring

Each criterion will be granted a score from 0 to 5 (Excellence, Impact, and Implementation). Score values will indicate the following assessments:



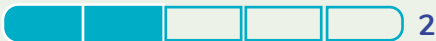
FAIL

The proposal fails to address the criterion under examination or cannot be judged due to missing or incomplete information.



VERY POOR

The criterion is addressed in an unsatisfactory manner, and it should be discarded if only this criterion was considered.



BELOW AVERAGE

While the proposal broadly addresses the criterion, there are significant weaknesses that would need correcting.



ABOVE AVERAGE

While the proposal broadly addresses the criterion, it does not stand out for it. In top 50% tier for this criterion.



GOOD

The proposal addresses the criterion well, although certain improvements are possible. In top 40% tier for this criterion



VERY GOOD

The proposal successfully addresses all relevant aspects of the criterion. Any shortcomings are minor.

The default threshold for Excellence, Impact and Implementation criteria is 3. The default overall threshold, applying to the sum of the 3 individual scores, is 10.



TABLE 3 Evaluation scoring system

Criterion	Score	Threshold	Comments
Excellence	0-5	YES	3
Impact	0-5	YES	3
Implementation	0-5	YES	3
Ethical issues	YES/NO question	YES	NA

The final score of each proposal will be calculated as an average of the individual scores provided by evaluators and collected in the individual evaluation report for each applicant. Scores are based on a qualitative assessment, considering weaknesses and strengths related to the different aspects considered within each evaluation criterion.

Ethics

Evaluators will check if any potential ethical issues arise from the proposals at this stage (e.g., involve the use of human embryos, human participants, personal data, animals, third countries from outside of the EU, military applications etc.). At the beginning of the selection process, the experts will review the selected Use Cases' ethical issues. If there is an evident risk regarding to ethics the evaluation will be put on hold.

The evaluation process may be suspended if the evaluators are asking for additional information related to a project to clarify technical or ethical aspects.





Contact

All relevant information about the Call for Mentees within the “Breakthrough to Scale” mentoring programme is available on the link <https://luminspino.eu/breakthrough-to-scale-mentorat-avansat-de-proces-pentru-inovare-climatica/>

For any issues encountered during the filling in of the [Expression of Interest](#), please access the [online contact form](#) available on the Eol page (upper right hand side).



ANNEX 1

Glossary of Terms

Micro-enterprise

an enterprise that has up to 9 employees inclusive and achieves a net annual turnover and/or a total annual balance sheet with total assets of up to 2 million euros, in accordance with the provisions of Annex no. 1 to Regulation (EU) no. 651/2014⁵;

Small enterprise

- an enterprise with less than 50 employees and an annual turnover and/or a total annual balance sheet below 10 million euros, in accordance with the provisions of Annex no. 1 to Regulation (EU) no. 651/2014;

Medium-sized enterprise

- an enterprise that has between 50 and 249 employees and achieves a net annual turnover of up to 50 million euros or has total assets that do not exceed 43 million euros, in accordance with the provisions of Annex no. 1 to Regulation (EU) no. 651/2014;

Product Innovation

- a new or improved good or service that differs significantly from the firm's previous goods or services and that has been introduced on the market⁶;

Process Innovation

- a new or improved business process for one or more business functions that differs significantly from the firm's previous business processes and that has been brought into use by the firm⁷;

⁵ Regulation (EU) no. 651/2014 of the Commission of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of articles 107 and 108 of the treaty, Published in the Official Journal of the European Union, series L, no. 187 of June 26, 2014

⁶ Oslo Manual 2018 GUIDELINES FOR COLLECTING, REPORTING AND USING DATA ON INNOVATION, OECD, 4TH Edition (<https://www.oecd-ilibrary.org/docserver/9789264304604-en.pdf?expires=1690542889&id=id&accname=guest&checksum=D0BFEF526BF0578776E33772F7F5D0C1>)

⁷ Oslo Manual 2018 GUIDELINES FOR COLLECTING, REPORTING AND USING DATA ON INNOVATION, OECD, 4TH Edition (<https://www.oecd-ilibrary.org/docserver/9789264304604-en.pdf?expires=1690542889&id=id&accname=guest&checksum=D0BFEF526BF0578776E33772F7F5D0C1>)



Radical innovation

- totally new products, services, processes, organizations, or business models. Radical innovation projects are of high uncertainty and complexity and therefore, of high risk. Radical innovation is when a new product, service, process or strategy is introduced to a market, but is designed to make a significant impact by completely replacing existing technologies and methods;

Radical product innovation

- totally new product introduced into a new market, based on an evidently different technology, and creating new customer value. (Example: Apple's iPhone);

Radical process innovation

- introduction of a totally new production process. (Example: Netflix's "choose-your-own-adventure" programming);

Incremental Innovation

- a series of small improvements or upgrades made to a company's existing products, services, processes or methods. The changes implemented through incremental innovation are usually focused on improving an existing product's development efficiency, productivity and competitive differentiation. Many enterprises use incremental innovation to help maintain or improve a product's market position. Incremental innovation has become a common tactic in the consumer technology industry, as companies strive to regularly improve personal devices with customer-friendly features;

Technology Readiness Level (TRL)

- a set of metrics that enable the assessment of the maturity of a particular technology and the consistent comparison of maturity between different types of technologies, all in the context of a specific system, application, and operational environment.

TABLE 4 TRL definition

TRL Scale	Definition
TRL 1 – Basic Research	Basic principles observed. Lowest level of technology readiness. Scientific research begins to be translated into applied research and development.
TRL 2 – Technology Formulation	Technology concept formulation. Once basic principles are observed, practical applications can be invented, and R&D started. Applications are speculative and may be unproven.
TRL 3 – Needs validation	Experimental proof of concept. Active research and development are initiated, including analytical/laboratory studies to validate predictions regarding the technology.
TRL 4 – Small scale prototype	Technology validated in the lab. Basic technological components are integrated to establish that they will work together.
TRL 5 – Large scale prototype	Technology validated in relevant environment. The basic technological components are integrated with reasonably realistic supporting elements, so they can be tested in a simulated environment.
TRL 6 - Prototype system	Technology demonstrated in relevant environment. A representative model or prototype system is tested in a relevant environment.
TRL 7 - Demonstration system	System prototype demonstration in operational environment. A prototype system that is near, or at, the planned operational system.
TRL 8 - First of a kind commercial system	System complete and qualified. In an actual system, the technology has been proven to work in its final form and under expected conditions.
TRL 9 - Full commercial application	Actual system proven in operational environment. The system incorporating the new technology in its final form has been used under actual intended conditions.

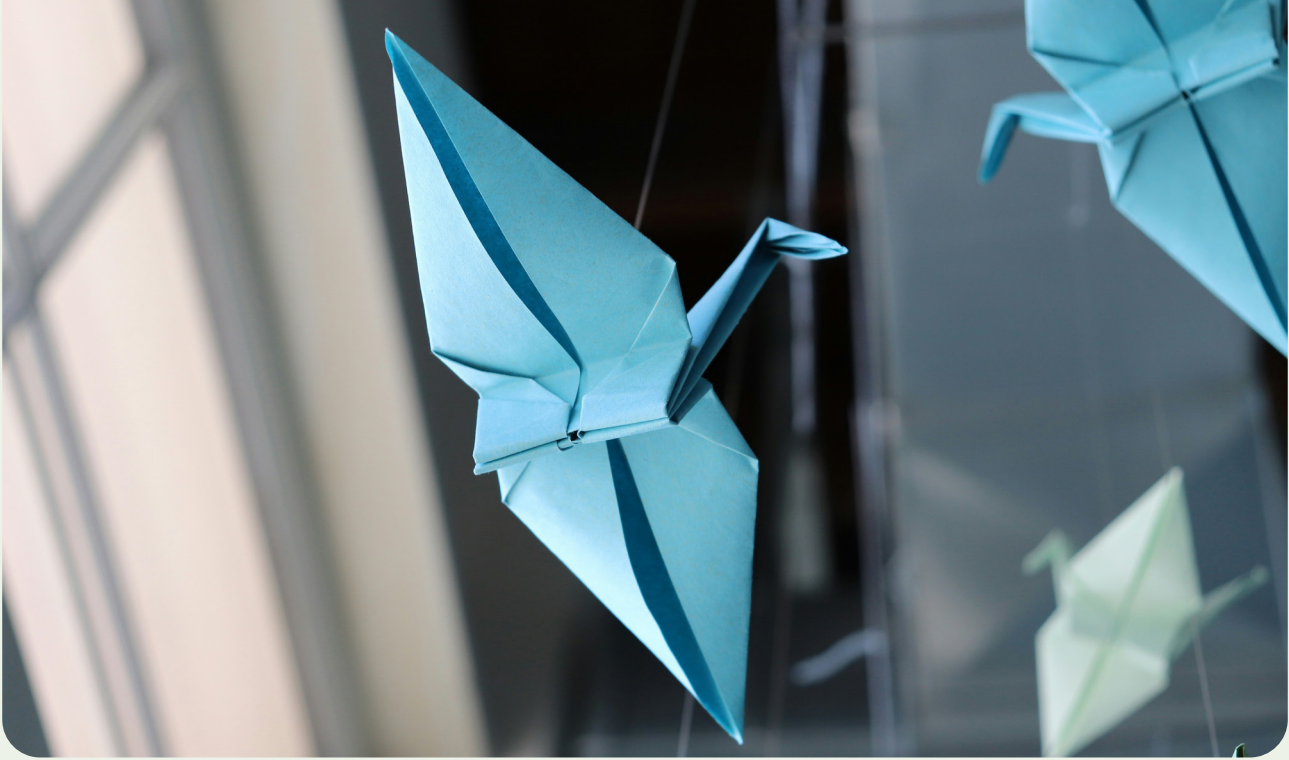


Megatrends and microtrends

TABLE 5 Megatrends and microtrends

Category of trend	Title and definition
Megatrend	Sustainability / Planet Centricity
Macrotrends	<p>Circular Economy - The circular economy aims to prevent products being turned into waste after their use and to feed them back into the production cycle as secondary raw materials.</p> <p>Alternative Materials /Eco materials - Modern materials must be produced sustainably and be biodegradable or recyclable</p> <p>Clean Tech Design - describes this transition towards a planet-oriented design, which sees the value of new technologies not only in functionality, but also in their environmental performance</p> <p>Smart Grid – manages multiple energy sources including renewables, which is becoming increasingly important as part of the energy transition, requires dynamic grid operation.</p> <p>Regeneration & Biodiversity - goes one step further than sustainability and involves active restoration and care, so that eco-systems can thrive (again).</p> <p>End of fossil fuels - interception and storage of gases that are harmful to the climate, shows how a wide variety of players are bringing solutions to neutralize emissions onto the market.</p>
Megatrend	Engineered Evolution
Macrotrend	Bioengineering - combines areas of expertise and technologies like genetic engineering, nanoengineering and 3D printing (bioprinting). This symbiosis enables organic material like tissue, cells, proteins and molecules to be manipulated, reconstructed and specially programmed using, for example, Crispr gene editing.
Megatrend	Exponential Industries
Macrotrend	Smart Materials - are being developed that can flexibly adapt to their surrounding conditions.





ANNEX 2

Expression of Interest

“Breakthrough to Scale” - Advanced process mentoring for Climate Innovation

Expression of Interest

Part. A - Company Profile

Question1. Company name

Question2. Company address

Question3. City/village

Question4. Province/county

Question5. Region

Question6. Country

Question7. What type of SME is the company?

Before choosing your option, please read carefully Annex 1 - Glossary of Terms.

- Microenterprise
- Small enterprise
- Medium-sized enterprise



Question8. Main NACE code

Question9. NACE code of the innovation project, subject to the Mentorship Programme, if different.
.....

Question10. Company gender profile. The company has:

- Women as major stakeholders (own at least 51% shares)
- Women in top management (CEO, CFO, COO, CTO)
- No women as major stakeholders
- No women in top management

Question11. Company website

Question12. Social media presence (LinkedIn link/ others)

Question13. Contact person (name and surname)

Question14. Function

Question15. Email address

Question16. Telephone

Part B. Innovation Project

Question17. What type of innovation project are you currently developing and need mentorship for?

Before choosing your option, please read the definitions from Annex 1 – Glossary of Terms.

- Product Innovation
- Process Innovation

Question18. Your project is a:

Before choosing your option, please read the definitions from Annex 1 – Glossary of Terms.

- Radical innovation
- Incremental innovation

Question Please, justify your chosen option.

Question19. Your innovation project is:

- Knowledge based
- Technology based

Question20. Is your innovation project intended to be applied in climate sector, to mitigate the climate changes?

- Yes
- No



Question21. In terms of **novelty of the product/process**, your innovation project is:

- An existing product/process, present on the market
- A product/process new to the company
- A product/process new to the world

Question Please, justify your selected option

Question22. In terms of **novelty of the targeted market**, your innovation project targets:

- An existing market
- A market new to the company
- A market new to the world

Question Please, justify your selected option

Question23. Please, indicate the current status of technology maturity readiness (TRL) of your innovation project.

Before choosing your option, please read the definitions from Annex 1 - Glossary of Terms.

- TRL 1 – Basic Research
- TRL 2 – Technology Formulation
- TRL 3 – Needs Validation
- TRL 4 – Small Scale Prototype
- TRL 5 – Large Scale Prototype
- TRL 6 - Prototype System
- TRL 7 - Demonstration System
- TRL 8 - First of a kind Commercial System
- TRL 9 - Full Commercial Application

Question Please justify your selected option, providing relevant information to match the definition of selected TRL.

Question24. What are the global macrotrends in climate innovation that your innovation project is envisaging?

Before choosing your option(s), please read the definitions from Annex 1 - Glossary of Terms.

- Circular Economy
- Alternative Materials /Eco Materials
- Clean Tech Design
- Smart Grid
- Regeneration & Biodiversity
- End of fossil fuels
- Bioengineering
- Smart Materials

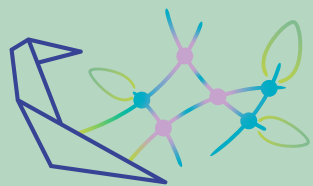


Question Please, justify your option, providing relevant information to match the definition of selected microtrend(s).

Question25. [Click here to indicate that you have read and agree to the terms presented in the Privacy Policy agreement](#)

- Yes
- No





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