

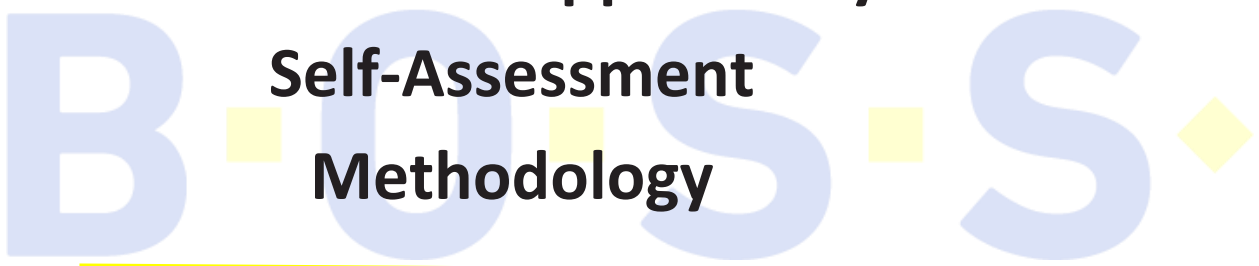


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**Business Opportunity Support System upgrade for  
strengthening European innovation ecosystem**

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**Business Opportunity  
Self-Assessment  
Methodology**



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## Business Opportunity Self-Assessment Methodology

Project Acronym:	BOSS
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Abstract	<p>The self-assessment methodology developed by the BOSS project anticipates all the issues either a student, researcher, teacher or an entrepreneur can face when transforming an idea or research into a business opportunity. It offers users the possibility to self-assess their projects in two layers measuring innovation maturity and business opportunity potential. The tool is divided in 6 dimensions (technology, team, market, unique value proposition, IP, financials) covering the major points for assessment for an objective evaluation and benchmark of the project.</p>
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## Why BOSS?

The Business Opportunity (BO) Self-Assessment Methodology has been developed within the BOSS project by the University of Belgrade, the University of Liege and META Group. Despite the variety of existing instruments and solutions, we believe there is a missing link between research and entrepreneurship and our tool aims to strengthening the ties between the two worlds. The self-assessment tool developed by the BOSS project anticipates all the issues either a student, researcher, teacher or an entrepreneur will face when transforming an idea or research into a business opportunity.

In order to do so, the consortium has taken into consideration eight self-assessment and evaluation tools that tackle innovation and business readiness. In the review process of those tools, BOSS mapped the key pillars and features of each methodology, as well as audience targeted and feedback on improvements for each tool. In addition to our expertise, we consulted trusted partners coming from the business, investment and research world making sure that our tool answers to the pain points that users using self-assessment tools are struggling with. BOSS focused on a tool that could be user friendly, have a broad application, focus on quantified statements, adopt a 360 approach and a clear path on strengths, weaknesses and actions that need to be undertaken. Taking inspiration, but also reviewing pros and cons of each methodology, BOSS project partners developed the existing methodology for the self-assessment of a business opportunity.

## Introduction and background

In today's fast-changing society, marked by the turbulence of the economy, changeable funding conditions, technical progress, and globalization, the connections between education, research and business have become increasingly important. Accordingly, open and receptive approaches to real world problems are required from universities in order to enable researchers, teachers and students to develop innovative solutions together, turn ideas and research results into products and services, and to be able to diffuse these widely (Todorovic et al. 2005, Perkmann et al. 2013).

In response, Higher Education institutions have engaged in the fostering of university – industry collaborations and supporting entrepreneurial behaviour of university staff (teachers and researchers) and students through a range of mechanisms. In spite of their best efforts, still too few people in Europe have the entrepreneurial mindset and competences required to start their own business and to continuously adapt to the evolving requirements of the labour market (European Commission, 2016).

## Research methods applied

For the market, team, financials and unique value proposition pillars BOSS built on the business model canvas, lean canvas and Kauffman FastTrack methodologies for the development of questions, statements and their order of display. For the technology and market pillars BOSS took into consideration the IPscore® program.

Business Model Canvas is a methodology for the description of a business model, which extends well beyond the simple description of the organizational and financial structure of a business operation or the analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT), which are two conventional ways of analysing a business model. This methodology was developed by *Osterwalder and Pigneur (2010)*, and has been acquired wide recognition and acceptance. According to the Business Model Canvas, a business model can best be described through nine elements (basic building blocks) that show the logic of how a company intends to create and deliver value and make money: Customer segments, value propositions, customer relationships, channels, key activities, key resources, key partners, revenue streams and cost structure.

The nine blocks cover the four main areas of a business:

1. Customers (Customer segments, Customer relationships, Channels)
2. Offer (Value propositions)
3. Infrastructure (Key activities, Key resources, Key partners)
4. Financial viability (Revenue streams, Cost structure)

The business model is a concept of analysis that emphasizes on explaining how firms can effectively create and capture value, moving beyond the conventional financial aspects of a business models to examine comprehensively the business operations.

Business modelling is a valuable tool for the analysis of business operations, especially in industries undergoing fundamental changes, such as the energy. The task of business modelling provides the baseline for the conception and the development of innovative business approaches in energy efficiency.

The Lean Canvas is an adaptation of Business Model Canvas by *Alexander Osterwalder* which *Ash Maurya* created in the Lean Startup spirit (Fast, Concise and Effective startup). Lean focuses on problems, solutions, key metrics and competitive advantages.

The canvas is a good tool to focus on the exploitation model and start collecting information for the exploitation plan. Among the different type of canvas, the lean business model canvas, by *Ash Maurya*, is the most suited for R&D projects. It is a powerful tool to be used by the partners to further develop the characterization of their KERs, prepare the materials to be discussed at consortium meetings and draft the exploitation/business plan for a KER.

The lean canvas helps to fine-tune and develop the exploitation strategy for a KER having in mind four questions:

1. Who is “my customer”?
2. What is “her/his” problem?
3. How does “She/he” solve the problem now?
4. Is our solution more efficient than the current one?

The nine blocks of the lean canvas include: problem, customer segment, unique value proposition, solution, unfair advantage, channels, revenue streams, key metrics and cost structure. Even though both templates look like very similar, there are several differences between them. These changes were made by *Ash Maurya* in order to adapt to what startups need.

- **Key Partners → Problems:** One key aspect for every business, mainly for startups is to be really sure of the problem they are solving and that is something LC wants to emphasize.
- **Key Activities → Solution** Once the problem is specified, it is convenient to define the main features of the product that will help to solve the problem.
- **Key Resources → Key Metrics:** It is essential for any startup to define 3-4 indicators that are going to be used to measure the business model. Key elements when pivoting.
- **Value Propositions → Unique Value Proposition:** This part gathers something that is very difficult to make it tangible, but is the key of any business determining the success over the competitors.
- **Customer Relationship → Unfair Advantage:** A real unfair advantage is one that cannot easily be copied or bought. In-depth knowledge or skills that are critical to the problem domain. Basically, this means being well positioned to understand a problem, create a solution, and continue to innovate faster than others.

The late entrepreneur and philanthropist Ewing Kauffman established the Ewing Marion Kauffman Foundation as the first foundation to focus on entrepreneurship as one of its primary areas of interest. Today the Kauffman Foundation is devoted to advancing entrepreneurship as one of the fundamental aspects of life in the United States. Focusing on research, education, technical assistance, and policy, the Kauffman Foundation works to increase the number and success rate of individuals engaged in the process of starting or growing their own business or idea. It designs programs based on the proven principles, techniques, and leadership tactics that make starting and growing a business a more common choice for Americans of all walks of life. To that end, the Kauffman Foundation's FastTrac programs are part of a wide range of learning resources developed by and with hundreds of successful entrepreneurs who have shared their knowledge, insights, and stories so that others might learn from them.

Kauffman FastTrac® is an educational curricula specific to supporting entrepreneurs with critical steps before, during and after the start up process. FastTrac boasts three separate frameworks, all with a successful track record of achieving these outcomes. The program is built to create highly transformative economic outcomes, and increase start-up success when paired with high quality delivery organizations. The methodology is divided in two main sections the concept analysis and the business planning. The first section addresses the features and benefits of the product, its value proposition and unique positioning in the marketplace and tests the feasibility of the business concept and technology.

The purpose of the Business Planning section is to develop the business concept into a completed business plan. This concept considers management, financial, and operations issues that will affect the future success of an enterprise. Upon completion of the Business Planning section, the entrepreneur will be able to create a full business plan with the goal of obtaining outside financing. This concept will also enable the entrepreneur to create an investor presentation geared toward effectively communicating:

- Market opportunity
- Business strategy
- Value proposition
- Financial plan
- Investment potential



FastTrac provides the fundamentals on how to start, fund, grow, and manage a business and how to create an Elevator Pitch, a Business Plan, and an Investor Presentation to communicate the business concept.

IPscore® is a tool owned and distributed by the European Patent Office to evaluate patent portfolios. The program enables to analyze, visualize and document the strengths and weaknesses of patents and research projects. It contains a qualitative and a quantitative section. Only the qualitative section was used to build the BOSS tool. It contains a series of questions regarding different dimensions (technology, market, legal status, finance and strategy). Each question has five possible answers with a grading. Results are then presented in the form of radars, each dimension having a separate radar.





## Key Stakeholders

### University of Belgrade

University of Belgrade is the oldest university in Serbia and the largest in this part of Europe. Founded in 1808, it consists of 31 faculties, 11 research institutes, 13 University centers, Computer Center and the University Library with more than 3.500.000 volumes. It provides education in sciences and mathematics, technology and engineering sciences, medical sciences, social sciences and humanities, with emphasis on commercialization of research results and students' entrepreneurship. UB gathers over 102.000 students and over 5.000 academic and research staff. UB has served its people, and its former students and teachers have greatly contributed towards the development of economic, cultural, scientific, educational and political life of our country. Since entrepreneurship and collaboration with industry are of great importance for further development of entrepreneurial spirit among students and researchers, knowledge transfer in this area has been a one of primary focus of UB. UB supports and incites knowledge, innovation and technology transfer from the University to the industry. Its dedication to raising awareness about the importance of entrepreneurship and enabling more intensive collaboration with industry is embodied in activities of UB's Center for technology transfer (CTT). CTT plays a supportive role through promotional, educational, networking and matchmaking activities realized through numerous initiatives and projects. CTT's main goal is to facilitate knowledge and technology transfers and connections between researchers and industry. In order to do so, CTT provides information, assistance and trainings to researchers and help them step into the world of industry and business. At the same time, CTT helps businesses and companies connect with educational and research facilities to the benefit of both sides. Such flow/circulation of knowledge and technologies allows research results and innovations to reach the market, also developing a profitable innovations network connecting researchers and companies.

### University of Liège

The University of Liège (ULiège) is one of the three main and complete Universities of the French speaking Community of Belgium, hosting 24 000 students, which 23 % are foreign. 24% of our graduates have an experience abroad and 41% of our doctoral students are foreigners. ULiège is a member of the European EURAXESS (European Research Area - Mobility of Researcher) and has established the Centre of Mobility of the University of Liège who can help doctoral students with practical aspects and has been rewarded the European Human resources Strategy Label for researchers.

In the field of Knowledge Transfer, ULiège set up its tech transfer office in 1989 – called Interface Entreprises-University (ITF). A comprehensive system has been built step by step including a tech transfer company, a (pre)seed capital company, 2 incubators. Today more than 140 spin off companies have been grounded, about 150 patent families are permanently managed, and more than 200 licenses have been signed. ULiège-ITF was also a founder of the LIEU network, ASTP-Proton association, and so have access to a community and a lot of information and practices.

## META Group

META Group is an international advisory and investment firm dedicated to the creation and growth of fast-growing companies. META Group addresses entrepreneurs keen to start up or further develop a new company; researchers, interested in exploiting their research results; public and private investors committed in fostering regional competitiveness. Company's main activities are: research results exploitation, support to start-up creation, access to finance, management of early stage funds, innovation and entrepreneurship policies and strategies.

In the last 10 years META developed leading experiences in supporting researchers and startups in the exploitation process through the implementation of 3 dedicated framework contract of the European Commission (ESIC2, SSERR, CSSERR). Within such assignments, META supported more than 600 research projects across Europe with risk analysis of research results, exploitation seminars, business plan development, brokerage events, IPR assistance. Moreover, META has got important experiences in the implementation of the Lean Canvas methodology which has been used in several EU projects to better support researchers and startups in the definition of their business model and better preparing them to access finance and business partners.

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## The Methodology

### The Tool

The BO self-assessment tool offers users the possibility to self-assess their projects in two layers measuring innovation maturity and business opportunity potential. The tool is divided in 6 dimensions (technology, team, market, unique value proposition, IP, financials) covering the major points for assessment for an objective evaluation and benchmark of the project. Once all questions are answered, visual feedback can be generated showing how the business opportunity scores per dimension and per layer.

### The User

The user has to answer 59 questions by selecting the most suitable statement provided for each question. Answer options are valued on a scale of 1-5. The tool is applicable for students, researchers, teachers, entrepreneurs, one-person teams or consortiums to self-assess their business opportunities, whether these are already developed and commercially available or are still in an ideation phase.

### Dimensions

Each dimension tackles a specific field and is composed of several questions that measure both maturity and business potential.

### Outcome

By completing the self-assessment, the user can list all points where he/she lacks and plan future activities to improve and identify additional points that so far were not consider important. The BO self-assessment methodology has high learning value and users can use it in order to understand how to be innovation and business ready. The overall scoring per dimension is possible on a scale of 1 - 10, as well as the more specific scoring related to maturity and business potential.

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## Key components

**Clarity:** The tool includes a detailed glossary with terminologies for each component. This helps to form a common understanding of all questions and statements.

**Accuracy:** The BOSS self-assessment tool questions are scored by selecting one of the available statements. This ensures that the final scoring is anchored to specific statements.

**Objectivity:** One of the main risks while using a self-assessment tool concerns how objective and accurate your scoring may be. The BOSS methodology tackles that risk by using statements that present a specific situation.

**Wide scope:** The tool can be used by a wide variety of users from students, researchers and teachers to entrepreneurs and for ideas to already commercially available products/services.

**Two-layer evaluation:** The BOSS self-assessment tool includes both qualitative and quantitative questions. The final outcome can include a visual feedback.



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## Glossary

**Business Angels<sup>1</sup>:** Individuals who contribute their time, knowledge, contacts and money to innovative, fast growing companies (start-ups) usually in exchange for equity/shares.

**Business opportunity (BO):** the product or service that will enable sales or lease or another form of business and which is considered for the self-assessment.

**Commercialization:** Organization of something in a way intended to make a profit

**Competitor:** Any person or entity which is a rival against another. In business, this term refers to a company in the same industry or a similar industry which offers a similar product or service. \*

**Crowdfunding<sup>2</sup>:** Crowdfunding is a way of raising money to finance projects and businesses. It enables fundraisers to collect money from a large number of people via online platforms.

**Customer:** A party that receives or consumes products (goods or services) and has the ability to choose between different products and suppliers\*

**Disclosure:** a publication of the results that makes those available to the public before the strategy of protection has been defined and implemented and/or without a non-disclosure agreement.

**Early adopters:** The minority group (comprising about 14%) of a population which, after innovators, is first to try new ideas, processes, goods and services. For any new product to be successful, it must attract innovators and early adopters, so that its acceptance or 'diffusion' moves on to early majority, late majority, and then on to laggards. \*

**Equity financing<sup>3</sup>:** Equity financing is the process of raising capital through the sale of shares. Companies raise money because they might have a short-term need to pay bills or they might have a long-term goal and require funds to invest in their growth. By selling shares, they sell ownership in their company in return for cash. Equity financing comes from many sources; for example, an entrepreneur's friends and family, investors, or an initial public offering (IPO).

While the term equity financing refers to the financing of public companies listed on an exchange, the term also applies to private company financing. Equity financing is distinct from debt financing, which occurs when a business borrows funds.

**Intellectual Property (IP):** Intellectual Property refers to all creations of the mind, namely inventions, literary and artistic work, symbols, logos, names, images used in commerce.

**Laboratory notebook:** is a paper or electronic mean for the researcher to record its experiments, data and hypotheses. When correctly used, with dates and signatures, it can be used as a proof in case of Intellectual Property issues.

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<sup>1</sup> <https://www.europeanesil.eu/>

<sup>2</sup> [https://ec.europa.eu/growth/tools-databases/crowdfunding-guide/what-is/explained\\_en](https://ec.europa.eu/growth/tools-databases/crowdfunding-guide/what-is/explained_en)

<sup>3</sup> <https://www.investopedia.com/terms/e/equityfinancing.asp>

**Leadership skills:** Understands the mission, works well with others, shares team values, gets results, respects and inspires others, is respected by others, delegates appropriately, listens and communicates effectively

**Market:** An actual or nominal place where forces of demand and supply operate, and where buyers and sellers interact (directly or through intermediaries) to trade goods, services, or contracts or instruments, for money or barter.\*

**Market analysis:** Identification of a specific market and measurement of its size and other characteristics\*

**Marketing plan:** Product specific, market specific, or company-wide plan that describes activities involved in achieving specific marketing objectives within a set timeframe. \*

**Market validation:** Process of determining whether your product is of interest to a given target market, e.g. series of interviews of people in your target market.

**MTA:** refers to Material Transfer Agreement. It is a legal contract to secure the exchange of material between a provider and recipient. The contract is intended to secure the property and the conditions of use of the material.

**NDA:** refers to Non-Disclosure Agreement. Also referred to as a confidentiality agreement, it is a legal contract to secure the exchange of secret information between two or more parties.

**Proof of Concept<sup>4</sup>:** A Proof of Concept (POC) is a small exercise to test the design idea or assumption. The main purpose of developing a POC is to demonstrate the functionality and to verify a certain concept or theory that can be achieved in development.

**Raising funds:** The process of gathering contributions of money or other resources from individuals, businesses, charitable foundations, or governmental agencies.

**Target market:** A particular group of consumers at which a product or service is aimed

**TRL:** Technology Readiness Level is a scale used to measure the readiness level of a technology. It contains 9 levels.

**TTO:** a Technology Transfer Office, also refer to as Knowledge Transfer Office, is a University unit that is responsible for securing, managing, marketing and transferring the Intellectual Property of the University.

**Unique Value Proposition (UVP)<sup>5</sup>:** A clear statement that describes the benefit of your offer, how you solve your customer's needs and what distinguishes you from the competition. Your unique value proposition should appear prominently on your landing page and in every marketing campaign

**Value Chain<sup>6</sup>:** A value chain is a business model that describes the full range of activities needed to create a product or service. For companies that produce goods, a value chain comprises the steps that involve

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<sup>4</sup> <https://www.entrepreneur.com/article/307454>

<sup>5</sup> <https://unbounce.com/conversion-glossary/definition/unique-value-proposition/>

<sup>6</sup> <https://www.investopedia.com/terms/v/valuechain.asp>



bringing a product from conception to distribution, and everything in between—such as procuring raw materials, manufacturing functions, and marketing activities.

A company conducts a value-chain analysis by evaluating the detailed procedures involved in each step of its business. The purpose of value-chain analyses is to increase production efficiency so that a company may deliver maximum value for the least possible cost.

**Venture Capital Funds (VCs)**<sup>7</sup>: VCs are specialized (mostly) in risk capital investing to small, early-stage, emerging firms that are deemed to have high growth potential, or that have demonstrated high growth.



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<sup>7</sup> <https://www.europeanesil.eu/>

\* <http://www.businessdictionary.com/>



## Business Opportunity self-assessment pillars

### Technology

T1. Is the BO a unique technology?

- The technology can change the way in which the industry operates / works.
- The technology shows some improvement in relation to existing technology.
- The technology has a marginal effect in relation to existing technology.
- The technology shows an improvement in relation to existing technology.
- The technology is substantially improved and is clearly ground-breaking.

T2. Is the BO technically superior to substitute technology?

- There is substitute technology which is not yet competitive.
- There is a reasonably wide range of substitute technologies.
- There are no known substitute technologies.
- There is substitute technology, but it is limited in use and range.
- The technology is representative of a field where there are new, substitute and dominating technologies.

T3. To what extent has the technology been tested and validated?

- I am still in the ideation phase.
- Basic principles and technology concept have been formulated (TRL 1-2).
- There have been repeated experimental tests and validation tests in a lab environment (TRL 3-4).
- There have been validation tests in a significant environment (TRL 5-6).
- There has been prototype demonstration in operational environment (TRL 7).

T4. Are infringing copycat products easy to produce?

- The technology is easy to copy and reproduce by a skilled team in the art.
- The technology is easy to copy and reproduce by any similar R&D center.
- The technology is very easy to copy and reproduce by any company.
- The technology is difficult to copy and reproduce by a skilled team in the art.

T5. Do you know how to translate your BO into a usable/marketable solution?

- Not yet, I am focusing on developing the technology.
- Yes, I am doing this with the support of TTO / experts / coaches.
- Yes, I have developed a strategy for addressing the solution and received feedback from early adopters.
- Yes, I have developed a strategy for addressing the solution.
- Yes, I have an idea of a product for a usable solution.

T6. Have you performed a risk analysis related to the technology of your BO? (significant dependency on other technologies, life-cycle of technology too short, lower performance than expected etc.)

- Yes, I identified and ranked risks.
- Yes, I incorporated measures into our business strategy and planning to avoid the identified risks.
- Not yet.
- Yes, I identified risks and weaknesses.
- Yes, I imagined precautionary measures to lower the identified risks.



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## Team

Tm1. Do you have a team?

- Yes, we are a group and we are about to formalize our team.
- No, I am by myself.
- Yes, we are a formalized team.

Tm2. Do you have a team building and team development plan?

- The team is complete, roles are defined and team development procedures in place.
- I have negotiated with potential team members, still waiting for their responses.
- The team is complete, the roles and competences development plan established.
- No, not yet.
- The team is still incomplete; team development plan is established.

Tm3. What percentage of time do the team members foresee to dedicate to the BO?

- All team members work less than 50% on the BO and we do not foresee an increase in our time spend.
- All team members are full-time dedicated to the BO.
- All team members work less than 50% on the BO, but we envisage increasing our time spend.
- There is at least one full time team member dedicated to the BO.
- There is at least one team member spending more than 50% of his/her time on the BO.

Tm4. Is there a clear structure in the team with separation of roles (decisions making procedures in place, etc.)?

- Yes, we have a clear separation of roles and a plan to cover missing ones.
- No, it is a single effort.
- Yes, we have a clear structure in place and all key roles are filled in.
- No, it is a small team.
- Yes, we have a basic separation of roles.

Tm5. Have the leadership skills of the person in charge of the team been proved (understands the mission, works well with others, shares team values, gets results, respects and inspires others, is respected by others, delegates appropriately, listens and communicates effectively)?

- Yes, by his/her peers. Yes, he/she is an experienced project manager.
- We don't have a team leader.
- No.
- Yes, by his/her team members.

Tm6. How is information communicated between team members? (reaches the right people, appropriate information, timely, open and honest, respectful, interactive, secure and confidential)

- Communication protocols and tools are used but still there are issues with the communication flow.
- Main mode of communication is scattered. People are not sharing information with each other, or irrelevant people are copied, or too much/too little information is provided.
- Through non-formal communication.
- Regular meetings and tools used by everyone on a regular basis.
- Regular meetings are held and resource banks exist, but not everyone knows what resources there are and how to access them.

Tm7. Does the team provide internally all the tech skills needed for the project development?

- No, we have external collaborations.
- Yes, we have a dedicated team internally.
- Yes, but we also rely on external collaborators.

Tm8. Has the team previous experience in commercializing research results?

- Yes, at least one of the full-time members exited with success from a spin-off/startup or sold more than one license.
- No.
- Yes, at least one of the full-time members was part of a spin-off/startup or sold a technology.
- Yes, at least one of the team members was part of a spin-off/startup or sold a technology.

Tm9. Do you have people dedicated to marketing and sales in your team?

- Yes, we have an internal division with more than 5 years of experience.
- Yes, with more than 5 years of experience combined.
- Yes, with less than 5 years of experience combined.
- No.
- Yes, with less than 1-year experience combined.

Tm10. Do you have experience raising funds within the team?

- Yes, there is at least one team member who raised between €50k-€200k.
- No, but we rely on experts inside our institution.
- Yes, there is at least one team member who raised funds at international level through private donors/investors.
- Yes, there is at least one team member who raised both public and private funds at national/international level.
- Yes, there is at least one team member who raised public funds at national level.

Tm11. Is the core team willing to self-finance next steps?

- No.
- Yes, we already committed some money.
- Yes, we are discussing it.

Tm12. Is the team committed to commercialising the BO?

- Yes, we already started the commercialisation process of the BO.
- No, the team is not interested in commercialisation.
- Yes, the majority of us are committed to commercialising the BO together.
- Yes, we are planning next steps towards commercialisation.
- Yes, at least one of us is committed to commercialise the BO.

Tm13. In order to commercialize you are expected to be geographically flexible. Are your team members willing to relocate, even abroad if needed?

- No.
- Yes.

Tm14. Are team members sufficiently aware of all risks to team performance (internal conflicts, politics, confidentiality, conflicting agendas and priorities, etc.)?

- A verbal agreement regarding these issues exists.
- We talked about these risks.
- No.
- Official procedures exist.
- Informal written procedures exist.

Tm15. Is the team open to go through a mentorship program?

- Yes, the team is willing to be coached and has proposals or ideas for a program.
- No the team wants to manage the project and the commercialisation of the BO by themselves.
- Yes, the team is quite open to enter in a mentorship program.
- Yes, maybe the team could get some help with some aspects.
- Yes, the team is really willing to be coached.

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## Market

M1. Is your BO addressing identified and validated customer needs?

- Yes, I have identified customer needs and validated them with potential customers.
- No, I still haven't identified customer needs.
- Yes, I have identified a number of needs that we could satisfy.

M2. Has the market need been validated and how was it done?

- Yes, I obtained reports from relevant databases.
- No.
- Yes, the need was validated directly by our partners (investors, industry etc.).
- Yes, an external consultant validated the need.
- Yes, I did it by internet search.

M3. Have you performed a market analysis and how was it done?

- No.
- Yes, at national level, with the support of a TTO / expert.
- Yes, at global level, with the support of a TTO / expert.
- Yes, at European level, with the support of a TTO / expert.
- Yes, by myself.

M4. How regulated is the target market?

- The regulations are high but well-defined or there is a low risk of refusal.
- There are very complex regulations, unfavourable regulations or a high risk of refusal.
- There is a low level of regulations or there is no risk of refusal.
- The regulations are high and unclear or there is a risk of refusal.
- There are new regulations that are favourable for commercializing the technology.

M5. Have you searched for other existing solutions(products) that respond to the same customer need that you are addressing (competitors)?

- Yes, at national level, with the support of an expert / industry partner.
- No.
- Yes, at global level, with the support of an expert / industry partner.
- Yes, at European level, with the support of an expert / industry partner.
- Yes, by myself through internet search.

M6. Are competitive or substitute products active in the market?

- It is probable that competitive or substitute technology is being developed.
- I do not know.
- There is a good probability of exclusivity in the market.
- There is a high degree of development of competitive or substitute technology.

M7. When assessing potential customers were you able to identify early adopters?

- No, I haven't identified early adopters, I am contacting them all.
- No, I don't know who my customers are.
- Yes, I identified potential early adopters at international level and they provided positive feedback.
- Yes, I identified potential early adopters a regional/national level and they provided positive feedback.
- Yes, I identified potential early adopters and I have contacted them.

M8. Have you developed a marketing plan for your business opportunity?

- No, I have not.
- Yes, built on our previous experiences in going to market.
- Yes, I am preparing it right now with the help of an expert at national level.
- Yes, I am preparing it by myself.

M9. Has there been any commercial interest in your BO?

- No, potential customers were only identified.
- No, potential customers were identified and approached but no feedback was obtained.
- Potential customers have provided a positive feedback.
- We are in negotiation with some potential customer.
- Customers are secured / have signed a contract.

M10. What knowledge do you have of the application potential of your technology?

- I have no knowledge of the application potential.
- I validated the application potential with team members.
- I validated the application potential with external consultant.
- I validated the application potential with external consultant and commercial opportunities have been identified.
- I have some ideas about the application potential.

M11. Do you have a clear view of the process and the time needed to achieve a market launch?

- I have a clear plan regarding the industrialisation process and a clear timetable.
- No, I have not discussed it yet.
- I have a plan, technology wise.
- I have a clear view of the whole process for launching on the market, including sales and marketing activities.
- I have a clear view of the industrialisation/delivery plan and of the validation and authorisation process and schedule to launch the product.



## Unique Value Proposition

U1. Has the UVP been validated?

- No.
- I don't have an UVP yet.
- Yes, externally by clients.
- Yes, externally by expert/s.
- Yes, internally, by team members.

U2. Can you measure the added value of your BO?

- No, I cannot.
- Yes, I can in a qualitative and quantitative way.
- Yes, I can in a qualitative way.

U3. Can you communicate the benefits of your BO in a short message that is easy to understand?

- No, my solution is too complicate to communicate as there are many technical details.
- Yes, I can without adding technical details and I have messages prepared for each of our target groups.
- Yes, I can do it with some reference to technical details.
- Yes, but I need to add technical details to a large extent.

U4. Can you position the added value of your BO in the value chain?

- Yes, we have a value chain map.
- No, I have not considered it.
- Yes, but not all relevant actors are yet identified.

B-O-S-S

## Intellectual Property

11. Is the owner of the IP relating to the BO identified?

- No, the IP ownership is unknown.
- Yes, there are different well identified owners but there is no ownership agreement yet.
- Yes, a sole owner has been clearly determined.
- Yes, there are multiple owners and this is specified in an ownership agreement or contract.
- No, the IP ownership is unclear; some rights may be owned by a third party.

12. Has the confidentiality of the results been maintained?

- There has been some partial disclosure without any key elements.
- There has been some partial disclosure but containing some key elements.
- No, there has been a disclosure of the results (paper, abstract, poster, oral presentation, etc.).
- There has been no disclosure at all.
- There has been some disclosure under confidentiality agreements.

13. Does the BO include the institution's sole results only?

- Yes, and there is no NDA from a third party involved.
- No, the BO includes confidential results from a third party or involves the use of material from a third party, without any contract.
- I don't know.
- No, the BO involves material from a third party but with a MTA contract allowing their use.
- No, the BO includes confidential results from a third party but with an NDA contract.

14. Are the experiments/observations leading to the BO described in a laboratory notebook?

- No, nothing has been written down.
- All observations are written in a professional (paper or electronic) notebook that is dated and signed by a supervisor.
- Some observations are written in a personal notebook but have not been dated.
- Observations can be found in a notebook that is dated and signed by a supervisor.
- Some observations can be found in a personal notebook that is dated.

15. Has a strategy for protection been defined?

- Part of the strategy is defined. One aspect of the BO will be protected with consideration of a first targeted market.
- No.
- All the different aspects of the BO have been considered and a suitable protection for each aspect is defined, with consideration of first and future targeted market and territories.
- A strategy of protection has been defined for one major aspect of the BO with consideration of a first and future targeted market.
- Part of the strategy is defined. Several aspects of the BO will be protected with consideration of a first targeted market.

16. Have you considered the life cycle of your BO for your IP rights strategy?

- I considered the life cycle of the BO but the technical field is moving so quickly that patents or any other IP rights are irrelevant.
- This was not considered.
- I considered the life cycle and there is good adequacy between the BO and IP rights.
- Experts consider that the life cycle of the BO is in good adequacy with IP rights.
- I considered the life cycle of the BO but adequacy is difficult to find because the BO is so early and/or the time to develop it so long that patents will expire or cost too much before products will reach the market.

17. Which IP rights (patent, copyright, trademark, trade secret, registered design, sui generis database right, etc.) have you considered to protect your BO?

- All IP rights have been considered and at least one is in place.
- Only one IP right has been considered by the team.
- I have no idea; none have been considered yet.
- Some IP rights have been considered and at least one will be used.
- Some IP rights have been considered but none can be used.

18. Has a prior art search been performed?

- A search report was issued by a Patent Office.
- I did it by myself.
- No novelty search was done.
- I did it with the help of some of the team member/colleagues.
- A detailed search was performed by an expert.

19. Are products of infringing nature easy to identify?

- It is possible to identify infringing copycat products.
- It is difficult to identify infringing copycat products.
- There is no way to detect the use of the technology on the market.
- It is obvious to identify infringing copycat products.
- It is easy to detect the use of the technology on the market.

110. What is the patent status of your BO?

- A national patent application was submitted.
- Not applicable.
- At least one national patent was granted and patent applications are pending in other countries.
- National patents are granted at international level, according to the outcomes of the business and marketing plans.
- An international patent application was submitted.

111. Have you performed a risk analysis related to IP rights? (e.g. disagreement on ownership rules, patent infringement, easy to copycat, leaks of confidential information etc.)

- Not yet.
- Yes, I incorporated counterfeiting measures into our business strategy and planning.
- Yes, I identified the risks and weaknesses.
- Yes, I developed precautionary measures and addressed them in advance.
- Yes, I identified and ranked risks.

112. Does the use of the technology depend on license agreements with others (because the technology is within the scope of external patent or IP)?

- The use of the technology is totally independent of any license agreements.
- The use of the technology is dependent on extensive license agreements with competitors.
- The use of the technology is dependent on license agreements, but not with competitors.
- The use of the technology is dependent on some license agreements with competitors.



B-O-S-S

## Financials

F1. Have you ever attempted to raise funds, debt and/or equity to develop your project?

- Yes, for a prototype.
- No.
- Yes, to prove the concept.
- Yes, to protect the IP.
- Yes, only public funds for further research.

F2. Have you already contacted any potential investors different from those providing grants?

- Yes, at national level.
- Yes, at national and international level.
- No.

F3. What access to funding do you have available at local/national level for the development phase?

- I do not know.
- Access to a funding of prototype and testing.
- Access to a funding of the Proof of Concept (POC).
- Access to a funding to cover the whole development phase.
- Access to a funding of IP protection.

F4. What access to funding do you have for the scaling up phase?

- I do not know.
- Access to early stage investors, such as business angels, crowd funding.
- Access to institutional/governmental funds.
- Access to formalised investors such as venture capitalists or industry funds.
- Access to friends & family funding.

F5. If you obtain funds, is there a clear action plan on how to use them?

- No.
- Yes, I made the estimations with the support of experts.
- Yes, I made estimations by myself.
- No, I am working on it in the preparation of the business plan.

F6. Do you know the exact amount of money needed to make the next steps towards commercialization?

- No, I don't know the exact amount.
- Yes, I know the amount needed, we validated it with our first investor.
- Yes, I know the amount needed, we defined it with external experts.
- Yes, I know the amount needed, we analyzed it internally.

- Yes, I can roughly estimate the amount needed.

F7. To what extent have the financial needs been evaluated?

- Development costs have been evaluated.
- No evaluation has been done.
- Development, industrialisation, launch and sales costs (sales, distributions, marketing) have been evaluated.
- Development, industrialization and costs for launching on the market (validation, accreditations, regulatory costs) have been evaluated.
- Industrialisation (production, tools, investment) costs have been evaluated.

F8. How developed is your BO in terms of revenue generation?

- We are collecting the first revenues.
- We have no estimations.
- We have identified the business model.
- We have identified revenue streams and quantified them with KPIs and milestones to be achieved.
- We are assessing different scenarios.

F9. Have you estimated what will be the eventual price of your BO?

- Yes, it has been estimated within our market research with an external expert.
- No, it is too early to estimate the price.
- Yes, it was estimated internally, within the team.

F10. To what extent has the business plan been prepared?

- I have no idea of the business plan.
- I can estimate the Profits & Losses of the BO for 5 years.
- I have set up forecasts for sales.
- I have set up the cost structure of the BO.
- I have already set up a business model.

F11. Are you aware of possible support programmes or infrastructure available for BO development?

- I have no idea.
- I am already working with the office/hub and programme that supports BO development.
- I know one entity/office/hub and one programme that supports BO development (such as Mentorship, Start-up Lab, Grant, Competition, Hackathon, etc.) at national level.
- I know more than one office/hub and programme that supports BO development at national level.
- I know at least one person involved in BO development (IP protection/entrepreneurship/commercialisation).