The Business Development Programme & Public-Private Investment and Financing framework

D6.6

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Modification Control

VERSION	DATE	DESCRIPTION AND COMMENTS	AUTHOR
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3.1	22/11/2019	Final version of amended deliverable.	Linde Boekhoudt and Luuk Schagen, The Funding Company

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Glossary

Business Case:	A financial feasibility study which (exclusively) contains the necessary information to decide whether to invest (time, capital, or both) in a business or project.
Business Development Programme:	The comprehensive BRIGAID business development activities, comprising of the MAF+, the workshop and business plan support, resulting in a full business strategy assessment and a finalised business plan. It is followed up by the PPIF.
Business Model:	A description and overview of the proposed revenue streams for a product or service.
Business Plan:	A comprehensive document describing amongst other things the company strategy, the technological description, the financial viability and strategy and the market analysis. Includes all contents of a business case and the business model.
Business Plan 101:	A document that guides start-ups in developing their Business Plan. Included in Appendix B.
CIW:	The Climate Innovation Window, the new name of the ISP.
Funding Approach:	The process that aims to assist innovators after finishing their Business Plan in gaining insights in and access to sources of public and private funding.
Funding Platform:	The proposed potential expansion on the current CIW dedicated to funding (elaborated upon in chapter 5).
Funding Scan:	The process of assessing options for public funding. This process is part of the PPIF and is incorporated into the GGG. It is designed to be a standardised approach, which can be completed by the innovators themselves. However, experts from TFC offer guidance and support where necessary.
GGG:	Government Grants Guide. Accompanying document to the PPIF. Includes the Funding Scan.
ISP:	The Innovation Sharing Platform. A knowledge sharing platform developed as part of the BRIGAID programme. Now rebranded as *CIW* (see above).
MAF+:	Market Analysis Framework. A package of exercises designed to guide the Market Analysis for Innovations. Presented in D6.2

PPIF:	Public-Private Investment and Financing framework. A process and methodology used to provide assistance for innovators in obtaining public and private funding after establishing their business plan. Includes the Funding Approach and accompanying background documents on the world of funding.
Quick Scan:	An entry questionnaire that assesses the current state of the innovator at the start of the Business Development Programme.

Executive Summary

Due to climate change, there is an increase in occurrence of natural disasters in Europe. Although there are different innovations that try to rise to the challenge and increase disaster resilience, technology-based start-ups have much difficulty entering the market and surviving in the long run. This is especially true for social innovations, such as the environmental innovations that will increase disaster resilience. The BRIGAID programme is created to bridge this gap from inventions to successful innovations and businesses, aiming to support the adoption of these solutions by governments and other end-users alike.

A key element of BRIGAID's approach is to make sure the innovations are 'investment ready' and receive guidance with the acquisition of funding and entering the market. This deliverable explains the three processes related to this aim: the Business Development Programme (chapter 3), the Public-Private Investment and Financing model (chapter 4), and our investigations into the business case for establishing a Funding Platform (chapter 5).

One of the central aspects to achieve investment-readiness is for innovations to have a high-quality Business Plan. BRIGAID has created the Business Development Programme, in which innovators learn how to create such a high-quality Business Plan by use of face-to-face sessions and online tools. TFC furthermore evaluates these Business Plans and provides scoring, so that there is an indication of the 'investment readiness' of the innovations. This is explained in chapter 3. This chapter includes updates that have been made to the Business Development Programme, based on the experiences and insights of WP6 partners from applying the process with a number of innovators. The business plans themselves, which have resulted from this programme, are not presented in this deliverable, but can be found as part of Deliverable 6.2.

A follow-up to the creation of a high-quality business plan, is using this business plan to acquire funding. To this aim, the Public-Private Investment and Financing (PPIF) model has been developed. The PPIF aids innovators into getting insights into the world of funding and finance, and guides them in exploiting their new knowledge, skills and assets (e.g., the business plan) to apply for funding. This latter part is achieved by the Funding Approach, an integrated part of the PPIF.

Lastly, BRIGAID intends to connect innovators with suitable end-users and potential financers in such a way that it can continue beyond the project's duration. This is established through different routes, amongst which are the Communities of Innovation (WP7) as well as workshops and events held at BRIGAID meetings. Another route that has been explored is the development of a digital Funding Platform, where innovators could present their innovations (and corresponding investment-readiness) to potential funders. Chapter 5 discusses the business case for such a Funding Platform.[1] This updated version of this deliverable documents our research into the development of the

1 Note that alternative routes are explored as well, in particular the continuation of BRIGAID's activities and support for climate adaptation innovators through "BRIGAID Inc.". This is a joint effort of multiple BRIGAID partners – including Ecologic, TFC, HKV, iCatalist, Off Course, ICRE8 and TU Delft – and will be further elaborated on in a separate new deliverable.

Funding Platform, including investigation of user-needs and progress developing planned functionality of the platform. However, based on our research and interviews with competitors, innovators, and investors, we conclude that there is no business case for an independent Funding Platform. Chapter 5 justifies this decision and identifies more productive alternatives.

Overall, the Business Development Programme and PPIF provide frameworks that directly support and evolve BRIGAID innovators in their market- and investment-readiness. Through active participation and expert guidance, innovators that are new to the world of business and finance are transformed into entrepreneurs who are prepared for the next steps towards successful implementation of their innovations. Through these frameworks, BRIGAID contributes to the survival of these start-ups and thereby to enhanced impact on Europe's disaster resilience.

1 Introduction

The current climate change dramatically increases the number of natural disasters that occur within Europe. The need for innovations that can decrease the chances of these disasters occurring, lessen the impact these disasters have, or decrease the vulnerability of people and the environment has therefore never been higher. Bringing innovations to the market can be a difficult task, however. As many as 90% of the start-ups fail and those start-ups which are based on new technologies (the so-called New Technology Based Firms, or NTBFs) have even higher death rates (Forbes, 2014; Grimaldi et al, 2011; Wennberg et al, 2011; Ortín-Ángel and Vendrell-Herrero, 2014).

When looking at the reason behind the high death rates of these start-ups, CB Insights (2014) has shown show that the 8 of the top 10 reasons (everything aside from a poor product and a lack of funds) can be anticipated upon and prevented by developing a good Business Plan. Furthermore, the second most common reason of failure is difficulty in acquiring sufficient capital.

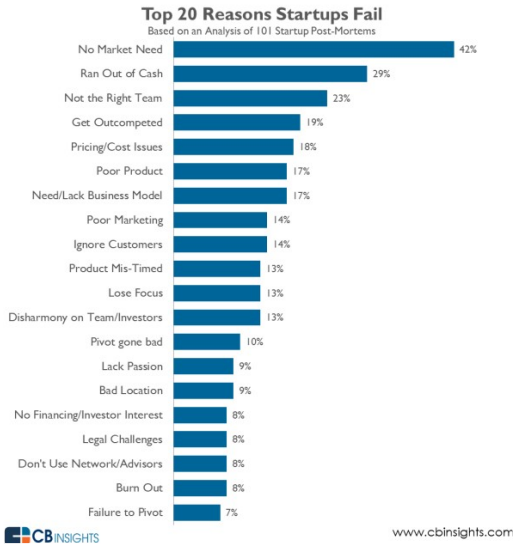


Figure 1: Top 20 reasons start-ups fail (CB Insights, 2014)

This leads to one of the core goals of the BRIGAID programme: to bridge the gap from invention to a successful (and profitable) innovation and business to increase the odds of the innovations being adopted and used. This deliverable (D6.6) addresses that goal, by helping innovators create a good Business Plan and help them acquire funding.

The updated deliverable describes the Business Development Programme, the PPIF (including the Funding Approach), as well as the results and discussion of the Funding Platform business case. It also provides a timeline for what is planned for the remainder of the BRIGAID programme taking into consideration the results of business case of the Funding Platform.

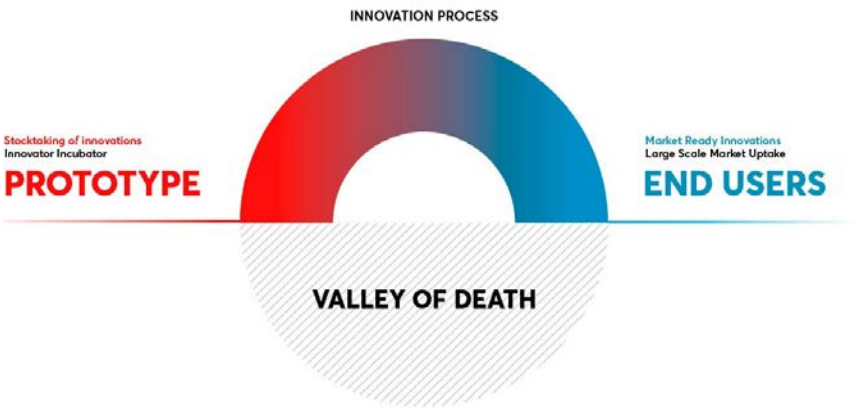


Figure 2: The mission of BRIGAID (bridging the gap between science and market) (BRIGAID, 2017)

The aim of the tasks as described in the Grant Agreement is *"(…) to instruct the innovators on how to elaborate a business plan using a flexible, iterative and incremental approach. (…) The results will feed into a set of standardised guidelines, including a common template that will facilitate the elaboration of business plans. [The PPIF] comprises a proven and standardised methodology for business case development in which development of business planning and the creation public-private funding opportunities go hand in hand. (…) In sum, PPIF provides the methodology for:*

- *the assessment of the 'investment readiness' and the guidance of innovations in terms of financing (…);*
- *the individual assistance by the task leader on the acquisition of finance"* .

To this end, BRIGAID has developed two frameworks: the Business Development Programme and the PPIF (discussed in Chapter 3 and 4, respectively). Together, these approaches address the above mentioned goals.

In addition, an opportunity is investigated to commercialize the Innovation Sharing Platform (now called Climate Innovation Window) by means of the integration of a Funding Platform. The business case and corresponding feasibility of such a Funding Platform are discussed in Chapter 5.

Chapters 3, 4 and 5 combined thus describe the entire process of the approach and guidance of developing viable and fundable Business Plans, introducing the innovators to the world of funding, providing the means and individual assistance in finding suitable funding schemes and options, and the results of the business case for the Funding Platform. Together, this approach contributes to the market- and investment-readiness of BRIGAID innovators, which improves their chances of successfully implementing their climate adaptation innovations, and thus contributing to a greater disaster resilience in Europe and beyond.

This document outlines the process and methodology to transform BRIGAID innovators into business-wise entrepreneurs and describes the guidance of these entrepreneurs to acquire funding. This deliverable consists of different parts:

- A clear description of the interlocking processes that make up the BRIGAD Business Development Programme and PPIF. This update contains plans for finalisation in the last months of the BRIGAID project;
- A description of the proven and standardised Business Development Programme (Chapter 3);
- An overview of public and private finance opportunities for BRIGAID innovations, including a Funding Approach to support innovators in identifying and pursuing suitable funding options (the PPIF, Chapter 4); and
- Investigation and evaluation of the potential business case for the Funding Platform (Chapter 5).

The following sections will tackle these subjects in order.

2 Process Overview

The process from invention to fundable business entails many challenging aspects which BRIGAID aims to guide the innovators through. The rest of this document will elaborate further on this process as envisioned by BRIGAID. Roughly, this process consists of 3 parts: establishing a strong business strategy and business plan (**Business Development Programme**), receiving guidance to the world of funding (**PPIF**) and entering a potential networking channel for finding investors (**Funding Platform**). The process can be defined by the following steps, which will be discussed in the corresponding sections of this document.

The Business Development Programme (Chapter 3)

1. Intake and Quick Scan to assess market-readiness
2. Assessment and development of the business case, including business model canvas and market analysis (see Deliverable 6.2 for a further elaboration on the MAF+)
3. Creation of a draft Business Plan

The Public-Private Investment and Financing model (PPIF) (Chapter 4)

4. Assessment of investment-readiness of the Business Plan, accompanied by a Go or No-Go advice
5. Getting introduced to the world of finance and funding
6. Applying the possible funding option to the innovators own situation, by means of a Funding Scan and potentially followed up by preparing a funding application

Funding Platform (Chapter 5)

7. Investigation of the business case for the Funding Platform (as integrated and commercial aspect of the CIW)

Since developing a Business Plan and finding funding options differs from case to case, this process entails personalised advice. Because of this, as stated in the project proposal, the process cannot be completely autonomous for innovators. It will, however, give innovators the necessary tools to make the work they *can* do as valuable, easy-to-use and efficient as possible. The following sections will discuss the timeline, current state and future developments for this deliverable.

2.1 Final developments of processes

As well as being implemented, these processes continue to be developed. This section therefore describes what activities are still planned in the coming months, along with an approximate timeline. These activities will be described in more details in the sections that follow it.

As previously stated, there is a sequential order in the different aspects of this deliverable (i.e., the PPIF following upon the Business Development Programme). This leads to the timeline shown below with blue concerning the Business Development Programme, green the PPIF and orange the Funding Platform. This timeline shows a rough overview of the activities of 2019, as well as the plan for the remainder of BRIGAID in 2020:

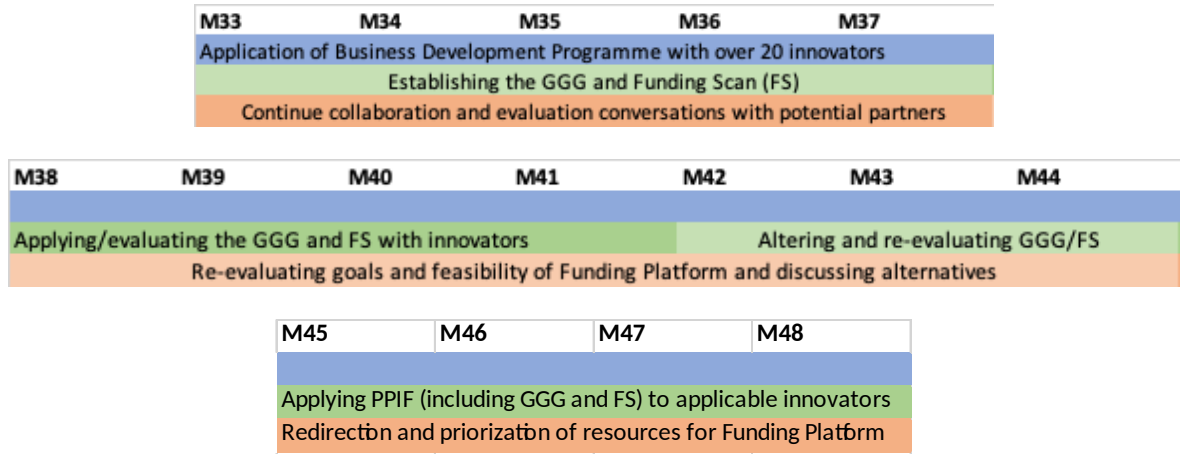


Figure 3: Timeline of the recent activities and remainder of D6.3

Business Development Programme

The first and second business development cycle have been completed, and the third business development cycle is currently in progress. However, experience has pointed out that a very strict adherence to these cycles is not beneficial, as the levels of progression vary heavily between innovators. Therefore the progression through the process takes a variable amount of time. As such, the Business Development Programme continues throughout the rest of the BRIGAID project, mostly concentrated around the business development cycles, but with possibilities for entry outside those time windows.

PPIF

So far, the amount of innovators have been involved in the PPIF has been limited. The main reason for this is that the PPIF follows organically from the Business Development Programme (i.e., the result of the Business Development Programme is the innovator's business plan, which provides the start for the PPIF.) At the time of writing, five innovators had fully completed the Business Development Programme, including the creation of a finalized business plan.

For the remaining time period within the project, we adopt the following approach:

- Innovators who have completed their Business Plan will be introduced to the PPIF.
- Those innovators who express their interest will be guided through the investment-readiness assessment, introduction to funding and finance, and a personalised Funding Scan (Stage 1 until 3 - see Chapter 4).
- If, based on the results of the Funding Scan, a funding opportunity has been identified, the innovator receives tailored support in the application process, including preparatory activities (assessment of criteria, feasibility and alignment) and assistance in the application (formalities, review) (Stage 4).
- Either following Stage 3 or Stage 4, an evaluation takes place to conclude the Funding Approach.

It is worth mentioning that not every innovator has a need for, or interest in, pursuing a strategy for attaining public or private funding. It is therefore to be expected that not all innovators who finish the Business Development Programme will also decide to participate in the PPIF. The methodology described in the section on the PPIF will therefore only be applied to those innovators that express an interest. This will allow for a more effective application of resources to those innovators with a specific need. However, this does imply that the goal of 20 to 30 innovators originally proposed to go through the PPIF process will almost certainly not be reached, as that is also the number of innovators that participate in the Business Development Programme, and only a subset of them will actually enter and complete the PPIF.

Funding Platform

The possibilities for the development of the Funding Platform have been explored in collaboration with L'Orangerie Studio (now Yes Off Course), Icatalist and ICRE8, as discussed in chapter 5 of this deliverable. As it became clear that a Funding Platform as a commercially viable aspect of the Climate Innovation Window is not feasible, additional activities have been undertaken to explore and pursue alternatives. A route that is currently being explored – again in collaboration with multiple BRIGAID partners of WP6 and WP7 – is continuation of the BRIGAID project as a viable and fundable organisation in itself.

3 Business Development Programme

As stated in the introductory chapter, the development of a solid business strategy and a good Business Plan is crucial for firm survival. The process of elaborating a Business Plan enables innovators to identify risks and create mitigation and adaptation matters before these risks become reality, enables them to identify whether there's a market need before investing a lot of capital and time in the business and enables them to decide on a viable financial strategy so that they have sufficient capital. Other aspects of a Business Plan are the evaluation of the team's competencies and structure, a competitor analysis, and a description of dissemination and marketing measures; all aspects concerning the previously mentioned reasons why start-ups tend to fail. Many of the reasons why start-ups fail can thus be identified with a good Business Plan to either improve their business or innovation so that they do not fall into the pitfalls themselves, or to end the development of the business before too much has been invested. The BRIGAID Business Development Programme enables BRIGAID innovators to devise a business strategy and draft a good Business Plan, by guiding them and providing the tools to do so, including the Market Analysis Framework (MAF+). At the end of the Business Development Programme, TFC evaluates the Business Plans to see if they indeed have enough potential for the innovations to develop further.

This chapter describes and demonstrates this proven and standardised business strategy development approach, which expands on and incorporates the work from D6.2 (the earlier mentioned Market Analysis Framework; or MAF+).

As communicated with the innovators themselves, the Business Development Programme helps innovators turn their technologies into marketable products and services. In broad terms, this is done by:

- Enabling innovators to identify and analyse target markets for their innovations;
- Assessing whether a clear market need for the innovation exists;
- Preparing innovators to strategically communicate with their target market; and
- Facilitating the development of a suitable and sustainable business model.

3.1 Overview and time requirement of the process

The Business Development Programme consists of six different steps from initial meeting to having an evaluated Business Plan and a wrap-up session. Completing the six steps of the Business Development Programme does require some time and effort from the innovator themselves, so it is important that they are committed to this process. The six steps of the process are:

1. **Intake**: Innovators must complete an initial questionnaire of eight multiple choice questions to assess if Work Package 6 can indeed provide them with additional value, and a first indication of the market potential of the innovation.

   Estimated time commitment: 0.5 hours max.

2. **Quick Scan**: Innovators must take part in a short telephone interview with WP6 partners. The aim is to assess the current state of their existing Business Plan, which will be built on in the next steps.

   Estimated time commitment: 1 hour max.

   Note: A result may be that the innovator has to do more preparation before the next phase can begin.

3. **Business Plan intake and workshop**: Innovators participate in a face-to-face session with WP6 partners. WP6 partners will carry out an in-depth analysis of the existing Business Plan, provide detailed feedback on how existing elements can be improved, and identify missing aspects to develop.

   Estimated time commitment: 12 hours over 2 consecutive working days.

4. **MAF+ (Deliverable 6.2)**: The next step will be a 6-8 week collaborative process where innovators will be guided through the MAF+ exercises. The aim here is to explore the different components of the Business Plan in more detail and provide tools to further develop them.

   Estimated time commitment: 1-2 hour phone call fortnightly (for the 6-8 week period) plus 2-4 hours preparation/information collection (desk research); total commitment of 12-24 hours over 6-8 weeks.

5. **Follow-up**: Drawing on the work completed in the prior steps and guidance provided by WP6, innovators will be ready to write a complete Business Plan. WP6 will evaluate this Business Plan with three possible outcomes:

i. The Business Plan is incomplete, and the innovator should improve it based on WP6 feedback;
ii. The Business Plan is market- and investor-ready and needs no additional work; or
iii. The Business Plan is complete, but the innovation is judged to have insufficient market potential. The innovator is advised to cease further developing the innovation in its current form.

Estimated time commitment: Case-specific, ranging from 0 to 40 hours.

6. **Wrap-up**: A final half-day session taking place back-to-back with one of the general BRIGAID meetings. This session has the aim of summarising the lessons and outputs, introducing the innovator to the world of funding, and laying the foundations for WP7's marketing communication activities and the funding scan.

   Estimated time commitment: 4 hours.

During these six steps, innovators will have the guidance and tools to devise a solid business strategy and elaborate a high quality Business Plan reflecting the quality of their innovation. At the end of these six steps, each innovator will know the quality of their innovation due to the evaluation of their Business Plan and will know whether to continue development (a go/no-go advice). Each of these six steps will be elaborated upon in the following sections.

3.2 Intake and Quick Scan

The first step of the Business Development Programme is the Intake, which is meant as a selection tool to assess whether the innovators are suitable for this approach (i.e. that they will benefit from it) and whether they have the required time commitment for the approach. The intake consists of eight questions and provides the first insight into the target customer and market of the innovation. Initially, in the first selection cycle there were no separate intake questions for innovators that were interested to participate in the BRIGAID test cycle. From this process we learned that the innovators selected for the general first cycle were not necessarily the ones who would be most suitable / benefit the most from the Business Development work package. For example, some of the initial innovators that joined the work package were still at a very early stage of commercialization – i.e., they were still associated to an academic institute and had not yet formed a business entity. In our experience, this meant that market analysis exercises and writing up a business plan could be a bridge too far for their developmental stage, and did not meet the kind of support that was most useful for them.

In order to make sure that the Business Development work package was offered to those innovators that could benefit the most, the Business Development Intake questions were included in the second and third general stocktaking questionnaire. Through this, we could select on beforehand those innovators that had advanced somewhat further in the business and commercialisation process. Typically, this would be start-up companies at TRL 5-7, in the stage of technological pilots and demonstrations. In this phase, the innovators already have some experience with running a business, but can still benefit a lot from the support that our work package offers: a clear and structured explanation of the different aspects of business development, an objective evaluation of

their business with respect to these aspects, and hands on assistance on making their business case and commercialisation approach stronger.

The first step after selecting suitable innovators for the Business Development work package is the Quick Scan, which is assessed during a (Skype) call between TFC and the innovator. The Quick Scan is a set of 47 yes/no questions (included in Appendix A) which aims to identify the current state of the contents of a Business Plan. It checks which parts are present and provides a score based on four different subjects: Strategy, Technology, Social, and Financing. The Strategy subject checks whether the innovator has paid attention to the market opportunities, long term strategy and organizational structure of the company. The Technology subject checks how far the technology has been developed towards a market ready product in terms of prototyping, patenting and validating. The Social aspects of the Quick scan cover the attention paid to evaluation of environmental impacts, creation of legitimacy among stakeholders and collaboration with potential partners. The Financing section of the scan determines whether the required financial forecasts have been made and what the current financial state of the company is.

The Quick Scan only checks if the contents are there and is thus not an evaluation of the quality of these contents. The results of the Quick Scan are summarised and presented in the form of a spider diagram; an example of a possible outcome is shown below:

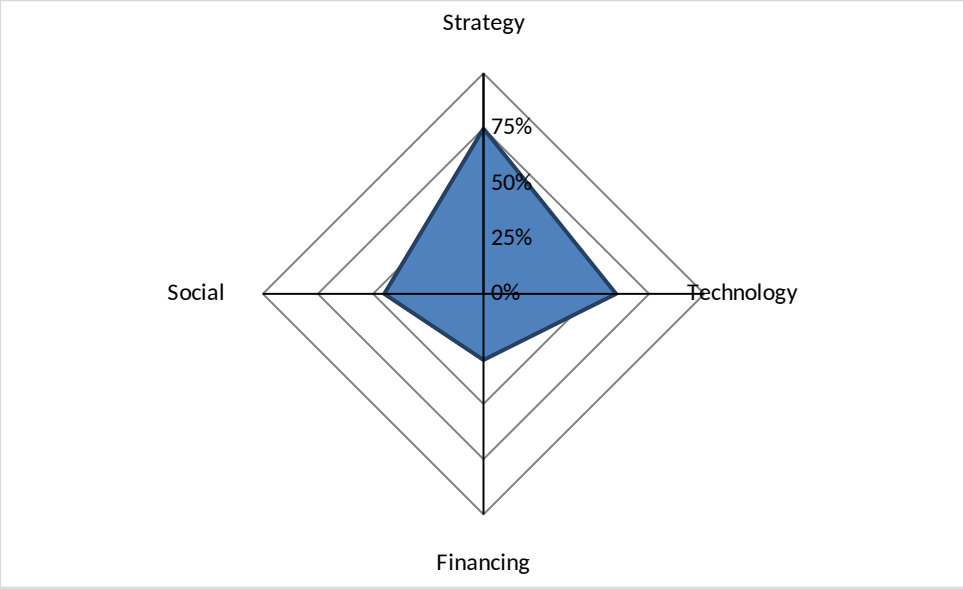


Figure 4: Example of possible Quick Scan results representation

The Quick Scan was first used at the Frontrunner Workshop in Leuven on November 16th 2016, where four frontrunners (the Water Vapour GNSS Monitor, Flip Flap Cofferdam, InfoDROUGHT and Fire Risk Monitor) answered these questions. The Quick Scan has been adapted based on feedback from the Frontrunner Workshop and based on feedback on the 'Business Plan 101', a document describing the required contents of a Business Plan and tips on how to write them, which innovators receive along with the evaluation report of their Quick Scan. The Business Plan 101 will be described in more detail in the next section and is included as Appendix B. The feedback on the Quick Scan was

overwhelmingly positive and provided recognizable results according to the frontrunners. The Quick Scan has now been finalised and used with over 20 innovators, to positive response. Innovators receive their answers and the graph, accompanied by a report, briefly explaining our evaluation with a summary and tips on missing parts.

3.3 Business Plan Workshop

While the Quick Scan gives an indication of the current state of the contents of a Business Plan and shows the innovators that there are many more aspects to a successful innovation than just technological aspects, it does not yet help innovators to create a high quality Business Plan. The Business Plan Workshop is the first activity to help with this. To be able to maximize the effect of these sessions, it is important that the innovators are familiar with the different aspects and the terminology of a Business Plan. Initially, the planned approach was to only supply innovators with a version of the Business Plan 101 that described the areas in which they were lacking, with a full version of the Business Plan 101 available to them online. However, experience has shown that most innovators did see the benefit of reviewing the entire document, so we have reverted to sending the complete document. The Business Plan 101 is based on several much-used methodologies, and has integrated these in the different sections of the Business Plan. The various methodologies used include (but are not limited to):

- Porter's Five Forces model
- The S-Curve model
- Boschma's proximity model
- The Business Model Canvas
- The Lean Model Canvas
- Rogers' theory on Diffusion of Innovation
- The Technological Innovation Systems approach
- Mahoney's Resource Based View perspective
- Teece's Dynamic Capabilities perspective
- Common investment indicators such as ROI and NPV
- The World Bank's disaster resilience indicators
- Millar and Hall's Social Return On Investment approach

References of these methodologies are included in the Business Plan 101 document in Appendix B. These methodologies are combined with our expertise on developing business cases and integrated into the different sections of the Business Plan 101. This means that not every section relates to literature and that some sections relate to different methodologies. The Business Plan 101 is structured in the same way as the Quick Scan: there are chapters on Strategy, Technology, Social and Financial. By including content on social innovations, social acceptance, environmental impact and disaster resilience indicators, the Business Plan 101 is tailored to suit environmental innovations.

After sending the innovators this document, so that they are more familiar with the contents of a Business Plan, the Business Plan Workshop sessions are planned. These sessions will go into much

more detail concerning the activities of the innovators and will form a first version of a Business Plan, give an evaluation of that Business Plan and provide guidance on improving the Business Plan by use of a workshop. See Appendix F for an outline of the workshop sessions. The first session consists of an interview with the innovators concerning all of the aspects mentioned in the Business Plan 101. By having this exchange in a face-to-face interview session instead of a digit intake process, TFC has the opportunity to go into much more detail to truly get the underlying rationale behind strategic decisions and to explain the contents of the Business Plan further. The result can be seen as a first version, albeit not a formalised one, of a Business Plan. TFC will score each part of this conceptual Business Plan as if it were a regular Business Plan, based on the following indicators:

- General, which rates the overall description of the innovation in terms of relevance and effect;
- Impact, which rates the environmental impact the innovation makes in disaster resilience;
- Team, which rates the competencies and organizational structure of the core team;
- Partners, which rates the quality of the possible partnerships in terms of relevance and balance;
- Long Term Ambition, which rates the quality of long term planning and setting of realistic goals;
- Social acceptance, which rates the current situation in social resistance and activities to create legitimacy;
- Market analysis, which rates the analysis of the target users and potential competitors and substitutes;
- Business model, which rates the viability of the cost and revenue streams and the strategy of market introduction;
- Technology assessment, which rates the novelty and potential of the technology; and
- Financial viability, which rates the quality and argumentation of the financial forecasts.

Each of these indicators are divided into different sub-indicators, each of which are scored ranging from 1 to 5, with 1 representing a ‘Weak’ description of the sub-indicator, and 5 representing an ‘Excellent’ description and argumentation of the Business Plan section. The scores of these sub-indicators are combined into the general indicators as shown above. As an example of the inner workings of the above mentioned methodology, the “General” indicator consists of a weighted average of the scores for the Business Plan sections: ‘Innovation Description’, ‘Relevance’ & ‘Expected results’. For example, a 1-point description of ‘Relevance’ is described as ‘Relevance unclear, only contains technical information’ whereas a 5-point can be seen as ‘Concise, with clearly explained technical aspects and a clearly argued relevance and aim’.

During the second session, TFC presents this evaluation to the innovators and explains the different scores, giving feedback on how to improve them along the way. Innovators will get a chance to further clarify parts of the Business Plan and will be advised in how to present or write down the

parts in such a manner that the most important information is clear right away. An example of a possible outcome is shown in the figure below.

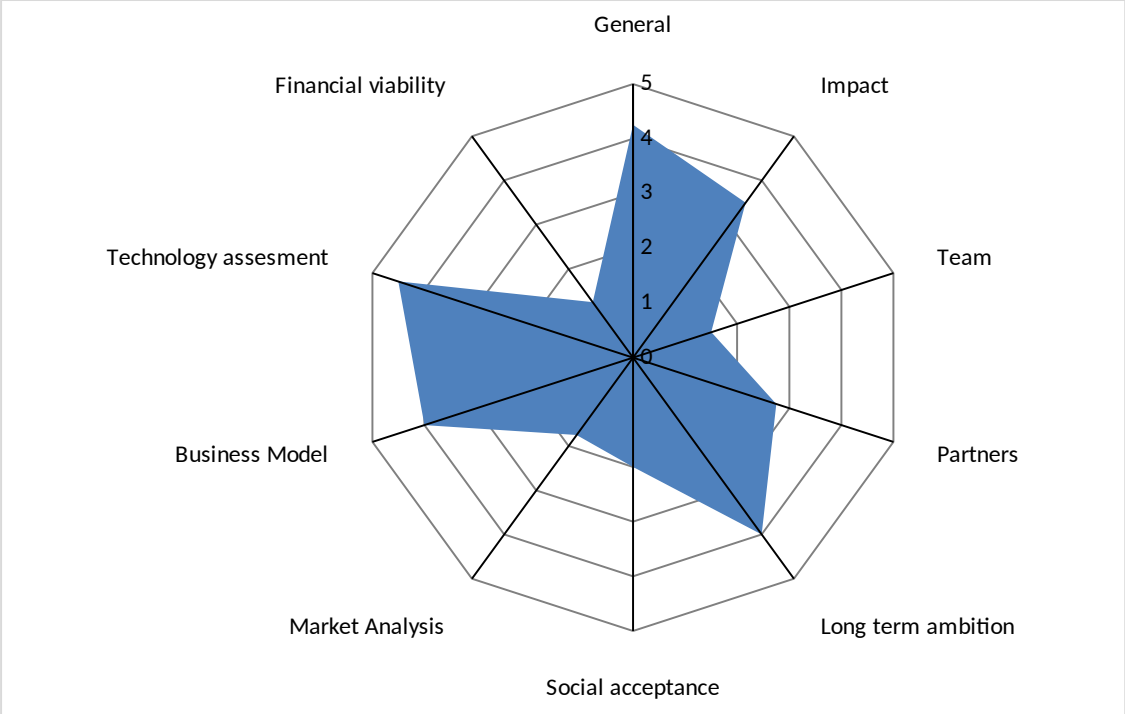


Figure 5: Example of possible scorecard as a result of the Business Plan intake

Many of the different aspects evaluated are easily forgotten or overlooked by those that do not have much experience in business planning, especially when trying to get funding. As shown, the technological aspect of the innovation is only 10% of what eventually determines whether you are able to receive funding and are able to successfully launch a profitable business. In our experience, many investors have indicated that the people who present the idea are at least as important as the idea itself (shown by the indicator 'Team') for instance. There are a few indicators that are exclusive to environmental innovations. The 'impact' indicator is based on the climate resilience indicators by the World Bank (World Bank, 2013) the relevance and expected results parts of the 'general' indicator are based on the environmental results, and the creation of legitimacy is also especially important with mitigation/prevention measures or large constructions (such as dams).

This process (up to and including the workshops) has been fully completed by 22 different innovators. After personally explaining and discussing the different aspects and their respective scores, we also provide the innovators with a written report, so they can come back the evaluation whenever they like. We have received positive feedback on this approach: the innovators tend to recognize our evaluation and appreciate this type of summary and presentation of their business and the stronger and weaker points that they currently have. It helps to visualize their focus points also gives them a baseline for internal evaluation and strategic processes.

The second part of this session concerns the business model workshop. The innovators will learn how to use the Business Model Canvas, a framework that helps innovators better define their target

customers, their value propositions for these customers, their revenue streams and more. The Business Model Canvas is shown in figure 6 below:

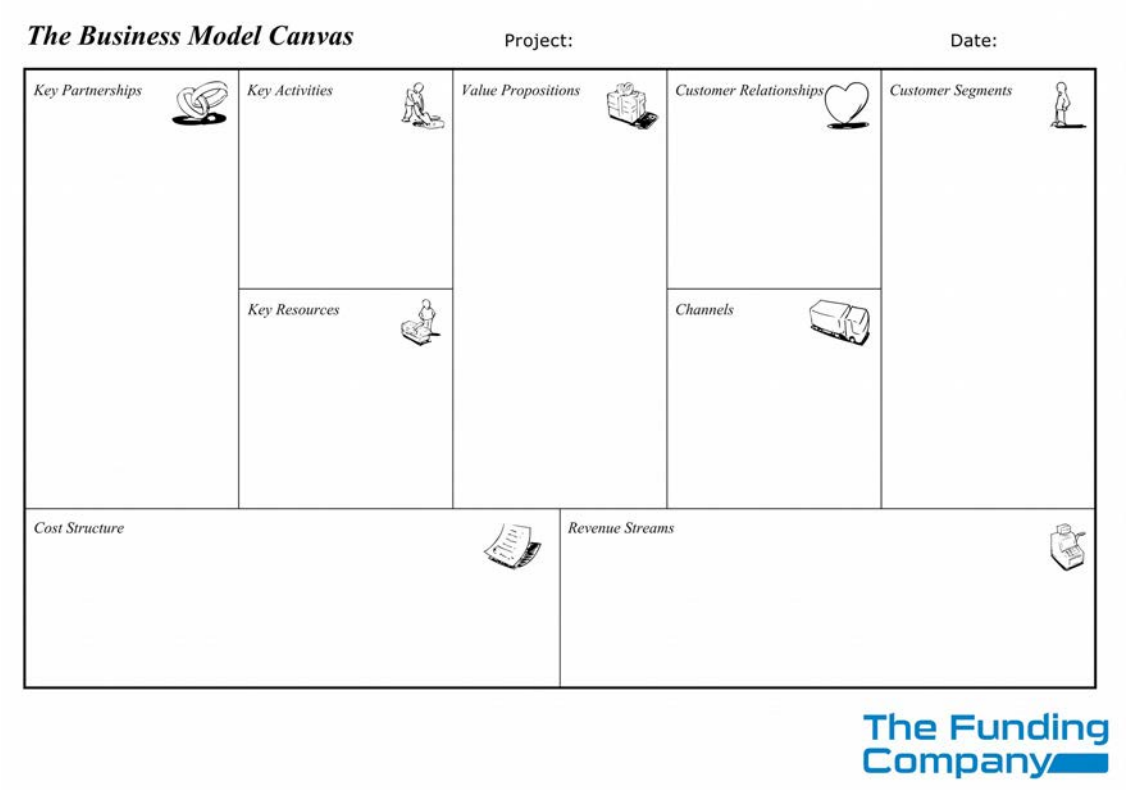


Figure 6: The Business Model Canvas, as used by TFC (Adapted from Osterwalder & Pigneur (2009))

During the workshop, TFC explains why the Business Model Canvas can help them defining these different aspects, how these should interpret them and how the different parts of the Business Model Canvas can be used to improve their Business Plan. For instance, having a clear list of the Value Propositions that an innovation can offer, will help in determining who all of the competitors are; these competitors are not just the technological competitors, but everyone that provides the same value. In such a way, the Business Model Canvas is very helpful in improving the Business Plan. The Business Model Canvas created is also the starting point for the MAF+, the online tool developed by Ecologic Institute, which is the next step of the Business Development Programme.

At the end of the Business Plan Intake and Workshop sessions, innovators thus have their first Business Plan, have a better understanding of the value and contents of such a Business Plan, have an evaluation and with that an overview of their strengths and weaknesses, and have had advice how to improve the weak parts of their Business Plan. They have also worked with the first tool they can use themselves to improve and evaluate parts of their Business Plan in the form of the Business Model Canvas. The next step of the Business Development Programme will provide the innovators with even more tools to do so.

3.4 MAF+ and Follow-up

The following step in the Business Development Programme is the Market Analysis Framework (MAF+), which provides the innovators with a set of online tools to devise a business strategy and improve their Business Plan and guides them in how to use these tools. The MAF+ is a separate deliverable of the BRIGAID programme (Deliverable 6.2) and is explained in much greater detail in its own document. The MAF+ starts with the Business Model Canvas discussed in section 3.2 and ends with an updated version of their Business Model Canvas using lessons learned and tools obtained during the MAF+ process. This new and updated Business Model Canvas is the entry point for the follow-up. By means of a call, the innovator will explain the new Business Model Canvas with the rationale behind it.

This step marks the completion of the MAF+ and the progression into the creation of a Business Plan document. During a teleconference, TFC explains the process of writing a business plan. The innovators will receive a Business Plan Template (Appendix C), accompanied by the Business Plan 101 that gives explanations to the different sections (Appendix B). All of the parts of this blank Business Plan were also discussed in the Business Plan Intake session, and many aspects are addressed during the MAF+ exercises as well. This means that the innovator already has the basis to complete the whole Business Plan Template. The innovators work on their Business Plan independently. They can either choose to complete the full business plan, or have intermediate feedback sessions with TFC. Once a full draft has been completed, TFC evaluates it using their standardized scoring method used in the 2-day session of the Business Development Workshop. This marks the completion the Business Plan draft and the progression into the PPIF. As will be discussed below, the assessment of the Business Plan includes an analysis of the current investment-readiness, accompanied by a Go or No-Go advice (see Chapter 4).

3.5 Business Plan 101 & Business Plan Template: update and upgrade

In 2018, the Business Plan 101 (Appendix B) as well as the Business Plan Template (Appendix C) were updated and improved based on feedback from innovators and input that we received from investors. In addition to an overall upgrade in design and lay-out, this included a better connection between the two documents – in some cases terminology was used in the template whereas explanation for this was lacking in the Business Plan 101 document. Furthermore, feedback and experience from the innovators learned that it was sometimes difficult to connect the business plan to the earlier stages of the work package, i.e. the workshop sessions and the MAF+ exercises. Therefore, we included references to the relevant MAF+ exercises where appropriate. Another experience was that the set-up of the template led innovators to simply answer the questions, rather than really creating their own business plan. Therefore, we included a general introduction to the innovators to further explain how they should the template to their best benefit.

Recurring feedback that we received from several innovators was the novelty and difficulty of the financial aspects of the business plan. During the workshops and MAF+ exercises, the main focus lies

on the company's business strategy, target market and business model. Especially the innovators in a rather early stage of business development, without direct experience with financial budgets, struggled with these parts in the business plan. To provide support for these aspects, we developed a supporting Financials Template, that guides in the innovators in completing this part.

To improve both documents in terms of "investor readiness" we acquired input from a large group of investors, stating which aspects of a business plan they pay most attention to and which they find most important when evaluating a business plan for potential investment opportunities. One of these aspects was a stronger focus on the team, including commitment and incentives of the (management) team members towards the company's success. In addition, the commercialisation strategy, financial composition and overall business model were important aspects and were therefore further extended and amplified in the Business Plan 101 and Business Plan Template documents. These insights were also incorporated into the business development workshop sessions and evaluation, and form the basis of the investment-readiness assessment of the PPIF.

3.6 Wrap-up and progression into the PPIF

After finalising their Business Plan, the innovator has the option for two directions:

1. Wrap-up the Business Development Programme; or

2. Progression into the PPIF

Figure 7. The positioning of the PPIF relative to the Business Development Programme

Wrap-up sessions are organised back-to-back with BRIGAID project meetings to minimize the time investments and travel expenses of all parties involved. This session will continue the 'story' of the PPIF, to further explain how different public and private actors have different interests and thus will invest for different reasons. The message (whether it's a pitch or an investment memo) to these parties therefore changes based on who the innovators are asking to invest. The aim for this session is to work together with WP7 concerning pitches and how to reach end-users (and in this case, public or private funding parties). The session also elaborates on the process of attaining public or private funds, such as what a grant application entails or how you will meet investors.

The session also provides an option for the innovators that have completed the Business Development Programme to discuss their Business Plans and the hardships or lessons learned with each other and can give a pitch to each other. This makes the innovators themselves even more comfortable with the business aspects of their Business Plan and creates stronger connection between the innovators, which can help them in the future.

The wrap-up session, as the name implies, also wraps up the individual guidance and personal interaction with the BRIGAID innovators from the side of TFC and the Ecologic Institute. During this guidance, innovators have:

- Learned which aspects are involved in creating a viable and fundable Business Plan;
- Conducted a market analysis for their innovation;
- Created their own Business Plan – directly applying those new insights;

- Had their Business Plan evaluated so that the innovators know the quality of their innovation and if they should continue to invest in it*;
- Been introduced to the world of funding and have learned to understand investors*;
- Gotten an overview of different funding schemes and European public funding options suitable for BRIGAID innovations in general*;
- Had the most suitable funding options identified for them*; and
- Been aided in how to communicate with potential funders to make sure their message has the maximum effect*.

**Applies when innovators have completed the PPIF and Funding Approach programme.*

With this wrap-up session, the innovators have thus learned everything necessary to be able to successfully bridge the gap between invention and a successful business and innovation, while having gotten access to the tools to help them.

Update on the wrap-up sessions

A wrap-up session was organised and held at the general BRIGAID meeting in Lisbon (May 2018). This session included innovators who were partners within BRIGAID. For the second and third cycle, innovators were enrolled who were not part of the consortium. As a consequence, for the vast majority of these innovators, making a foreign trip was an investment that was too much to ask from them, both in terms of time and money. Hence, each innovator received a tailor-made conclusion of the business development programme and PPIF. As an alternative to the traditional wrap-up session, several events back-to-back with the project meetings, which have focussed on getting the innovators to engage end users directly. These included workshops, pitches and fairs in Mafra, Cartagena, Bucharest and Tirana.

3.7 Programme evaluation and concluding remarks

By using a standardised scoring mechanism and overall explanatory documents based on different proven methodologies and specifically tailored for environmental innovations, the Business Development Programme guides the innovators to develop their business strategy and elaborate their Business Plans in such a way that makes them ‘investment ready’.

So far, we have received positive feedback from the innovators that have been involved in the programme. Amongst others, they mention that the individual support is very meaningful, that the results from the workshop (e.g., spider graph) is very useful in visualising their current position and help prioritize their future goals and actions, and that MAF+ exercises are very helpful in getting necessary information and insights in a structured and well-guided manner. In a survey that was held under 7 innovators, 100% found the MAF+ exercises very or extremely useful and would recommend the BRIGAID Business Development Programme to other innovators. Also 7/7 agreed that they better understand the strengths and weaknesses of their business and how to deal with them, and that they now incorporate user needs into their product and business development process to a great extent.

As such, the Business Development Programme builds the business capacity of innovators, widening their range of vision to consider business development aspects and providing an estimation of market potential for their innovation. It also provides practical outputs, including a complete Business Plan reviewed by experts and the means to update this Business Plan independently in the future.

The application of the Business Development Programme has now been fully completed with five innovators, resulting in their personal business plans. In addition, over 20 innovators have entered the 'pipeline' by participating in the quick scan, of which 20 were engaged in the Business Development workshop session and have done or are doing the MAF+ exercises. Feedback from these innovators was used to further adapt and improve these approaches. The (investment-ready) Business Plans can be used for the next part of this platform: exploring and getting access to public and private funding opportunities.

4 PPIF

As shown in the introductory chapter, having insufficient funds is the 2nd most occurring reason why start-ups fail. The most important part of acquiring funding, having a high quality Business Plan, has been achieved in the previous part, the Business Development Programme. This chapter describes the next part of the BRIGAID Business Development and Financing work package, where innovators are guided in the acquisition of funding.

Aside from the Business Plan, one of the key aspects of acquiring funds is to be able to understand the perspective of the investor, whether it is a public or private investor, and to get an overview of the different categories of investors. Only by understanding the interests and perspectives of your preferred investors, are you able to convince them to invest in your innovation; something which holds true for both public and private investors. Innovators furthermore need to understand the different kinds of funding schemes (such as grants or equity investments) and they should have an understanding of funding options that are suitable for them.

To this end, TFC has developed the Public-Private Investment and Financing model, which is a process and methodology to provide assistance for innovators in obtaining public and private funding after establishing their business plan. It includes the Funding Approach and accompanying background documents on the world of funding.

The first step in the PPIF methodology is the assessment of investment-readiness of the innovators' business plan. This is essentially the required basis before identifying or pursuing any investment or finance opportunities. Based on a Go or No-Go advice, the next part is entered, which is called the Funding Approach.

The Funding Approach comprises the main element of the PPIF and provides a standardised methodology to support innovators in the world of funding and finance, based on proven scientific methods and years of experience in the field. As each innovation is unique, this needs to be applied individually for each innovation. The Funding Approach provides personalised guidance to innovators to help them identify and prepare for funding and financing opportunities. It includes

assessment of business cases and then an assessment to identify appropriate financing or funding streams. It also includes two reference documents: Investment and Financing for BRIGAID Innovations: An Introduction (Appendix D) and the Government Grants Guide (Appendix E), both tailored to start-up innovators in the climate adaptation sector. The Government Grants Guide includes a Funding Scan tool that the innovators can use to distinguish with grants may or may not be suitable for them.

The Funding Approach is complementary to the Business Development Programme. It begins when innovators conclude the Business Development Programme, and follows these consecutive stages:

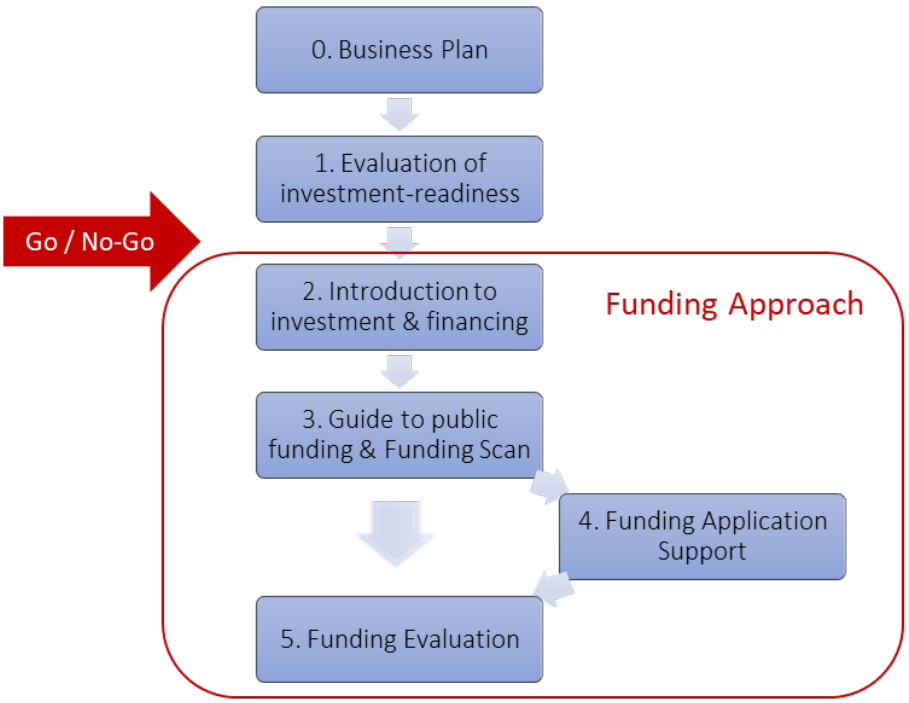


Figure 8. Outline of the different stages of the PPIF framework, including the Funding Approach

1. **Evaluation of investment-readiness**: The Business Plan (created in the Business Development Programme, Ch3) is analysed and evaluated by TFC. This provides the innovator with insight into their strong and weak points. The analysis involves an investment-readiness assessment, resulting in a Go / No-Go advice. The result is discussed during a telco.

   Estimated time commitment (for the innovator): 1 hour max.

7. **Introduction to Investment & Financing**: Innovators receive an introduction to the world of Funding and Finance. This is provided by the Investment and Financing for BRIGAID Innovations: An Introduction background document (Appendix D) and explains the rise of social investors and provides a categorisation of types of investors. It also explains that the

world of funding revolves around interests and helps innovators to understand the different perspectives of the investors.

Estimated time commitment: 1-2 hours max.

8. **Guide to public funding & Funding scan**: Following a general introduction into funding and finance, concrete options are explored for public funding opportunities. This is supported by the Government Grants Guide (Appendix E), which provides information and insight into different kinds of generally used and applicable public funding schemes for BRIGAID innovators. It helps them by showing which funding schemes exists and which are most suitable for their situation. This part also includes a Funding Scan, which gives the innovator direct support in identifying which grants may be worth applying for and which are not. The Funding Scan is guided and evaluated during a telco.

   Estimated time commitment: 2-4 hours max.

9. **Funding Application Support**: In the case that a specific grant or other funding opportunity has been identified as suitable to the innovator, they may choose to apply. The preparation to the application process (i.e., feasibility and alignment of the goals) as well as the application process itself (i.e., writing and submission of the proposal) is supported by TFC.

   Estimated time commitment: depends on a case-by-case basis. 1-2 hour calls will be held to discuss the process, at least during the preparation phase and the application phase. The preparation, writing, and submission itself may take several days to several weeks.

10. **Funding Evaluation**: In the final stage, we evaluate the funding-readiness of the innovator's business case, and reflect on the potential funding roadmap for their future goals.

    Estimated time commitment: 1-2 hours phone call.

The aim of this process is to prepare the innovators for interacting with investors and funding agencies. The following sections will elaborate more on the different stages of the PPIF.

4.1 Evaluation of investment-readiness

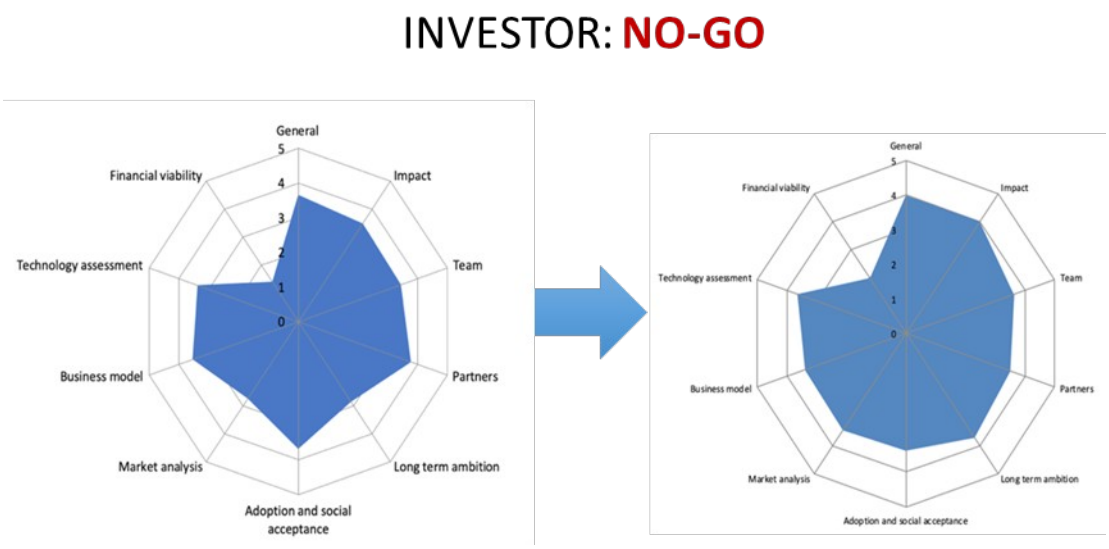


Figure 9. An example of the investment-readiness analysis .The spider graph on the left represents the situation during the Business Development workshops, the one on the right represents the situation after completion of the business plan. Based on the final situation, an investor Go or No-Go advice is given.

During the Business Development Workshops, the innovator is first taken through all the different aspects that should be present in a viable and fundable business plan. At the start of the second day, we provide them with a spider graph that shows them their current score on these 10 different categories. At the start of the Funding Approach, this evaluation is repeated, based on the Business Plan (draft) that the innovator has created. An example is shown below.

This double analysis has several benefits and values to the innovator. First of all, it shows them a direct and tangible result of their progress throughout the Business Development Programme. It also gives them a clearly communicated insight into their strong and weak points. It illustrates which aspects are and which are not yet strong enough to qualify for investment. For each innovator, the threshold that should be pursued is a score for each category of 3 or higher. This can be clearly observed from the spider graph.

In addition to a general evaluation per category, the business plan is analysed to directly assess the investment-readiness of the presented business plan. This results in a binary GO or NO-GO (see Figure).

The Go / No-Go result for investors is based on information directly gathered from and discussed with VC investors. Based on this enquiry, specific aspects of a business plan were highlighted that are seen as crucial for the investor's perspective and that are the major issues that guide them in their Go / No-Go decision whether or not to investor in an innovator. This includes, amongst others, a strong focus on the team, alignment with user needs and a bullet-proof business model. As can be appreciated from the Figure above, a score of 3 or higher on 9 out of 10 categories may still not be sufficient if one of the essential aspects, such as the Financials, are not up to the expected and required level.

4.2 Introduction in Funding & Finance

The background document Investment and Financing for BRIGAID Innovations: An Introduction (Appendix D) gives innovators an insight in the world of funding. It contains a condensed version of an extensive research by TFC, which includes but is not limited to collaborations (including brainstorms and presentations) with several Dutch NGO's such as PPPLab and Kenniscentrum Sport. It also describes the rise of social entrepreneurship and social investors to show that not everything in the investment climate purely revolves around money, based on academic literature. Most importantly, it provides an overview of different public and private funding mechanisms for the innovators and some European funds applicable for BRIGAID innovators. This is an important guideline for the funding process, which will be continued in the funding sessions. It is not comprehensive however, since there are many sources of funding, which do not all apply to every innovation. For this reason, every innovator will proceed with the funding scan specified for their business. The complete current version of this guide document can be found in Appendix D. The essential concepts and purposes of the guide are outlined here.

One of the goals of the Introduction to Funding & Finance is to make the innovators understand how different investors think and what their interests are. Only by adapting a Business Plan and pitch to the target audience, will an innovator be able to attract funding. To do so, you need to understand what matters to your audience, something that is important for both public and private funding options. To that aim, the background document describes a recent shift in economics from a purely financial point of view to a more stakeholder based approach. This movement drastically increased the amount of social enterprises and made Corporate Social Responsibility a common practice in many large firms. This movement not only affected the number of social entrepreneurs but also

influenced many governments to invest more socially responsibly. This ultimately gave rise to a new category of private investors, which held a midpoint between the Socially focused Government or NGO and the traditional financially focused banks and investors. These new investors can be called

Prioirity of Funder	Social Return on Investment		Financial Return on investment
	Just Impact	Impact first/ Impact & Profit	Profit first/ Just profit
Receiver of Funding	Public Sector/ Charity	PPP/ Social Enterprise	Traditional Business
Examples of Possible Funders	Philanthropist, Government, NGO	Government, Impact Investor	Traditional Bank and Investor

the 'Impact Investors' or Social investors, which consider both the social impact and financial risks of their investments, before committing. A broad overview of the different categories of funders is shown in figure 7.

Figure 10: Overview of different funders and their priorities

As previously mentioned, research has shown that, next to having a good Business Plan, shortages in funding is one of the most daunting challenges a start-up faces, and one of the most common causes of failure. This is amplified in technology intensive start-ups, which often represent higher risks to their potential investors, and social start-ups (including environmental start-ups), which often appear to represent a lower possible return on investment. Therefore, many social entrepreneurs rely on grants and donations as their main source of funding, which is hard to sustain for a longer period of time.

This problem can be negated by employing a rigid long-term strategy for funding, for which the Business Development Programme described in Chapter 3 of this deliverable provides a solid groundwork. For instance, a donation can help an innovator start up their business, but to rely solely on donations is not a sustainable financing scheme, since you cannot be certain of its continuation. It is thus important for innovators to have reliable sources of funding while taking advantage of the one-shot options such as grants. Figure 11 connects this strategic groundwork to the different categories of sources of funding, ranging from public grants to private equity funds. It shows an overview of these different funding options, based on the general risk tolerance from the investors and how sustainable the revenue stream is, which is the culmination of the document found in Appendix D. The complete guidance document found in Appendix D will serve as the basis for the innovators to step into the world of (social) funding.

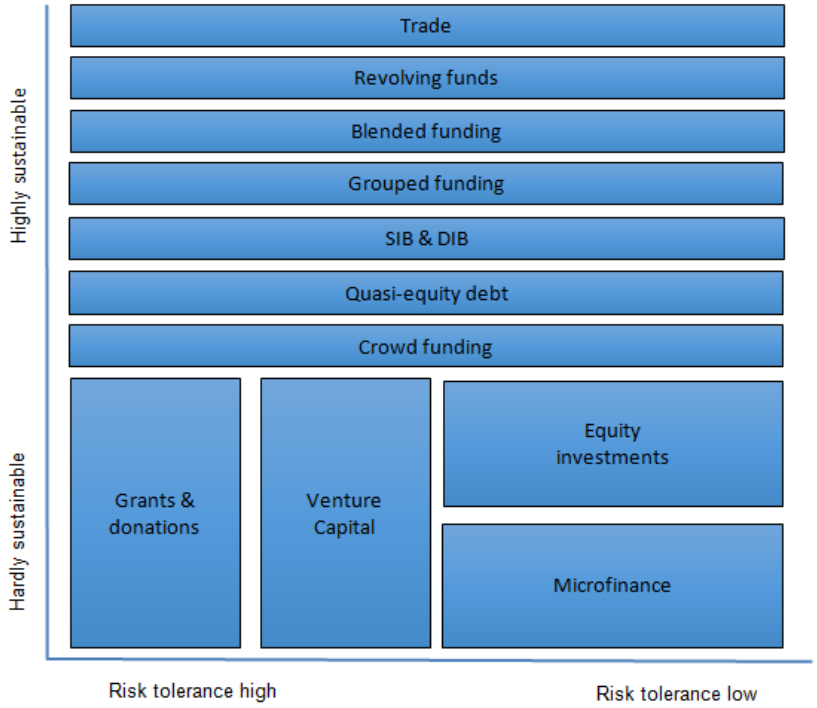


Figure 11: Different types of funds and finance arranged relative to risk and sustainability.

After innovators are familiar with the world of funding, types of investors, and different funding schemes as presented in the Introduction to Public-Private Investment & Financing, they need to focus on sources of funding. The following section will address different options specifically focusing on public funding (grants / subsidies).

4.3 Guide to public funding & Funding Scan

4.3.1 Grants and grant application processes in Europe

Aside from having an overview of the most relevant financing schemes and a general idea of the different types of investors, BRGAID innovators can profit by knowing which public funding options are suitable for BRIGAID innovations in general. Within BRIGAID, TFC has developed a Government Grants Guide (see Appendix E) for BRIGAID innovators, presenting an overview of several public European funding schemes that are relevant for BRIGAID innovators in general. In addition, the Government Grants Guide includes a Funding Scan tool. The Funding Scan illustrates the relevance and feasibility of the different grants for each particular innovator and/or innovation. The scan has been developed such that the innovator can use it independently. However, all innovators are offered personal support to complete the scan and identify which grants are or are not (potentially) interesting and suitable to their case.

Within Europe, there are different funding resources available for BRIGAID innovators (see figure below for overview), such as grant schemes from the European Structural Investment Fund (ESIF) programme and the H2020 programme. These resources are a part of the European 2020 strategy. These schemes serve as an illustration of the broad range of funding options that are available

within Europe. This overview is meant to illustrate the need for clarification on the specifics of each available funding scheme in order to find which funding scheme is most appropriate for each innovation. One must keep in mind that this list cannot be considered a comprehensive overview of the available funding schemes within Europe.

Figure 12: focus areas of European public funding options

Throughout Europe, certain tendencies in public funding can be distinguished. Generally speaking, funding schemes in western European countries are aimed at R&D developments, often specifically targeting SME's. Eastern European grants generally aim at improving social cohesion and decreasing economic disparities. A quick glance overview of this can be seen in the figure below. Furthermore, most European funding schemes can be categorized in terms of their Technology Readiness Level (TRL) focus. TRL's are defined levels ranging from 1 to 9, representing the development phase a technological innovation is in. TRL 1 represents very early fundamental and conceptual research, whereas TRL 9 represents a nearly market ready product developing a market uptake strategy.

Something that can be difficult to distinguish if you are not familiar in the world of public funding is which grants schemes and other funding opportunities are suitable to a specific innovator or innovation. The pyramid scheme below illustrates the “funding landscape” and how it can be perceived using 3 different axes: 1) Impact, 2) Complexity, and 3) TRL.

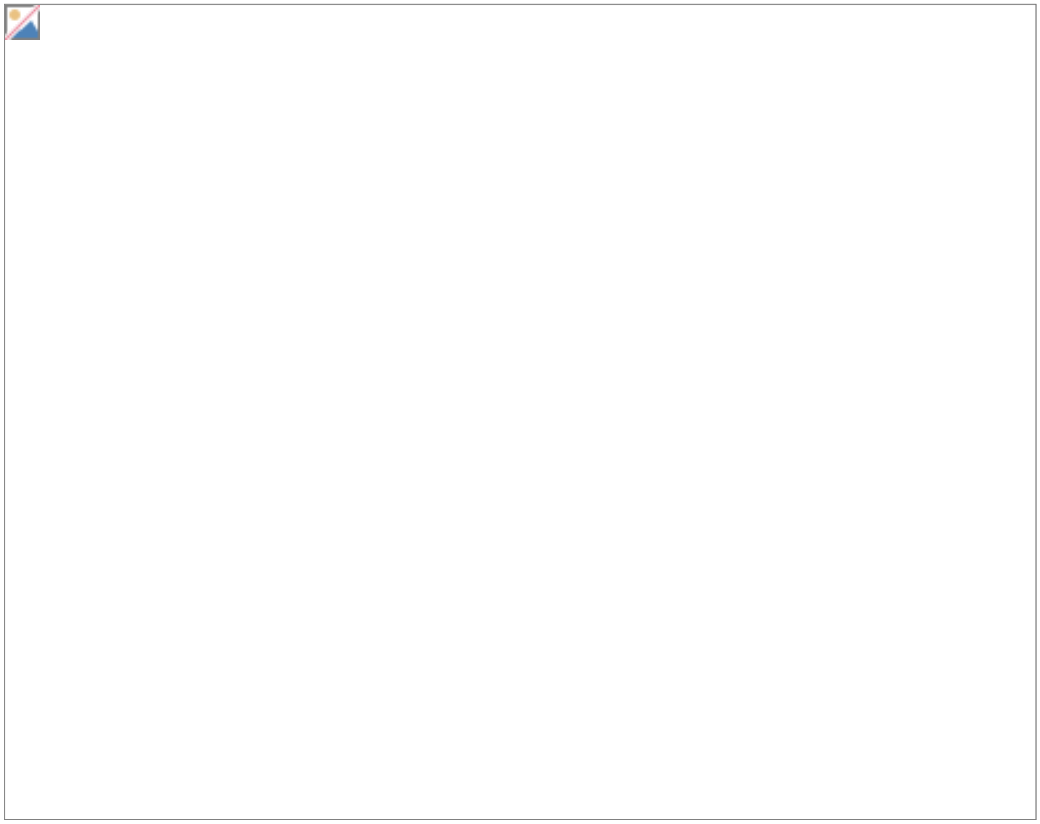


Figure 13: Funding pyramid, including examples of Dutch and European public funding opportunities.

First of all, the activities applied for in grant proposal should match the TRL of the grant scheme. For example, Horizon 2020 grant schemes such as SME Instrument Phase 2 (now EIC Accelerator pilot) and FTI require a TRL of 6 or higher. For many innovators, these grants may seem attractive because of the large sum of money that can be applied for, but at the same time it will be a waste of effort to apply for this funding when the prototypes have not been properly tested (in a lab environment) yet. This brings us to the other 2 axes: whilst the impact of such European grants may be great (successful applications may receive a few million euros!), the complexity of the application – as well as the compliance activities – are heavy as well. As such, these three axes should always be considered when opting for a specific funding option.

There are many different public and private funding options available for innovators. Even when focusing purely on the European public funding options, there are many sources of funding. TFC has made a shortlist of those options which it deems most suitable for innovators of the BRIGAID programme; options where most likely most of the innovations have the necessary requirements and links with the goals of the programmes. This shortlist is:

1) The Horizon 2020 SME instrument;
2) Fast Track to Innovation;

3) Eurostars;
4) Local ERDF funds; and
5) LIFE.

These instruments will be discussed in further detail in the text below. As stated, one must keep in mind that these programmes will not all be suitable for each of the innovations in the BRIGAID programme. To that end, TFC will perform a Funding Scan for each innovator that has completed the Business Development Programme, to identify which funding options are most suitable for them. This Funding Scan will include many options beyond the five schemes listed below, which merely serve as illustration for the intricacies involved in selecting an appropriate funding scheme. As an overview, a table has been created with a summary of the relevant aspects that need to be considered when selecting a funding scheme. The text below elaborates on that. Discerning features are for whom they are applicable and the different success rates of the funding options presented.

Table 1: Overview of Funding Instruments

Instrument	For whom?	Success rate	Important notes
H2020	European consortia that focus on research and innovation activities.	8-10 percent	You need to have a consortium that exists of at least 3 partners from 3 different countries.
LIFE	The funding instrument LIFE programme offers support for environment and climate action. (1) public bodies, (2) private commercial organisations and (3) private non-commercial organisations (including NGOs).	Around 20 percent	Anyone registered in the EU can make a proposal for LIFE funding and become what is referred to as a coordinating beneficiary. International collaboration is not required, but it will enhance the success rate as the impact on the European Union is important.
SME instrument	Close-to-market and scale-up projects of a single SME or a consortium of SMEs established in EU Member States or Horizon 2020 associated countries.	5-10 percent	The recommended TRL level for a SME instrument project is level 6. A very selective instrument. Only excellent proposals will receive funding.
Fast Track to innovation (FTI)	FTI is meant for the market uptake of disruptive innovations. It is available for ideas from consortia of innovators of all types and sizes from across Europe.	5-10 percent	Participation from industry in the consortium is mandatory A clear Business Plan is very important
ERDF	The money is mainly intended for small and medium size businesses.	This is different in every EU country and regions	The purpose of ERDF funding is to reduce the differences between the developed and less

			developed EU regions. European countries receive ERDF money to invest in programmes.
Eurostars	Small and medium size businesses that are focused on research and development activities and work together with other organisations in the EU or Eurostars associate countries.	Around 30 percent	The eligibility criteria can be different within the participating countries.

The Horizon 2020 SME Instrument

Small and Medium-sized Enterprises (SME's) that are EU-based or established in a country associated to Horizon 2020 can now get EU funding and support for innovation projects that will help them grow and expand their activities into other countries – in Europe and beyond. The SME instrument will have a bottom up approach. This means that innovators from different industry areas can apply for funding, including innovators that are focused on climate resilience. The SME instrument supports close-to-market activities, with the aim to give a strong boost to breakthrough innovation. Therefore, the instrument is aimed at technologies which are at TRL 6 or higher. Highly innovative SMEs with a clear commercial ambition and a potential for high growth and internationalisation are the prime target. These SME's can apply as a single entity, or apply with multiple SME's in a consortium.

The SME instrument consists of 3 phases:

Phase 1: Feasibility assessment (optional)

Concerns exploring and assessing the technical feasibility and commercial potential of a breakthrough innovation that a company wants to exploit and commercialize. Activities funded could be: risk assessment, design or market studies, intellectual property exploration; the ultimate goal is to put a new product, service or process in the market, possibly through an innovative application of existing technologies, methodologies, or business processes. The project should be aligned to the business strategy, helping internal growth or targeting a transnational business opportunity. The duration of the project typically has a duration of 6 months.

Phase 2: Innovation project

Concerns innovation projects underpinned by a sound and strategic Business Plan (potentially elaborated and partially funded through phase 1 of the SME Instrument). The project has a duration of 12 to 24 months.

Phase 3: Commercialisation (no funding)

The Phase 3 SME grant only concerns non-financial support in commercializing the innovation developed fully during SME phase 2.

Since the SME instrument has a broad focus, many SME would be eligible to apply. However, the SME instrument is a highly coveted and very selective instrument. The SME instrument generally has

a success rate of less than 10% and an intensive application process. Because of this, not every SME within the BRIGAID programme will be at a favourable position to apply for this instrument. The Funding Scan will help innovators clarify whether their innovation has potential to attain SME funding (European Commission, 2017[b,c]).

Fast Track to Innovation

Fast Track to Innovation (FTI) provides funding for close-to-market, business-driven projects and is open to proposals in any area of technology or application. This means a bottom up approach. FTI should promote transdisciplinary and cross-sector cooperation. The aim is to reduce time from idea to market, stimulate the participation of first-time applicants to EU research funding, and increase private sector investment in research and innovation. The maximum duration of the project is three years; within this period the market introduction has to be done.

The FTI pilot supports projects undertaking innovation from the demonstration stage through to market uptake, including stages such as piloting, test-beds, systems validation in real world/working conditions, validation of business models, pre-normative research, and standard-setting. It targets relatively mature new technologies, concepts, processes and business models that need a last development step to reach the market and achieve wider deployment. To this end, if a proposal involves technological innovation, the consortium must declare that the technology or the technologies concerned are at least at Technology Readiness Level (TRL) 6; technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies). The indicative EU contribution per action is expected to be between €1 million and €2 million; in duly justified cases, an EU contribution of up to €3 million can be considered.

The FTI supports a wide range of different projects that include, but are not limited to Climate action, environment, resource efficiency and public-private partnerships. As with the SME instrument, success rates for the FTI instrument are relatively low. In order to have a chance of being successful in applying for FTI funding the innovation needs to be in a late stage of development with a focus on Business Plan development and market uptake strategy. The FTI instrument will be suitable to a select group of BRIGAID innovators that are in a late stage of technological development and have developed a strong business proposition with high potential for large market uptake. The Funding Scan will provide the innovators with an indication of whether their Business Plan fits the preferred FTI description (European Commission, 2017[e]).

Eurostars

Eurostars supports international innovative projects led by research and development- performing small- and medium-sized enterprises (R&D-performing SMEs). Eurostars has been developed to meet the specific needs of SMEs. It is an ideal first step in international cooperation, enabling small businesses to combine and share expertise and benefit from working beyond national borders.

In order to be eligible for a Eurostars grant; The project coordinator has to be an R&D-intensive SME from a European country; there have to be at least 2 organisations from at least 2 Eurostar countries involved with the project; There has to be a balanced consortium. No organization or country bears more than 75% of the costs; The project needs to have a civil application;

Eurostars applications can be filed by Innovators that are still in a stage of experimental development, or TRL 4-5. Success rates on the Eurostars instrument are around 30%, making it a more easily attainable funding scheme than the previous two. However, eligibility criteria for the Eurostars scheme are narrower, which results in many BRIGAID innovators most likely not being eligible for participation in the scheme. As Eurostars consortia must consist of partnerships across international borders, and the eligibility criteria vary between European countries, checking the eligibility of a consortium for the Eurostars scheme can be complex. The Funding Scan will aid innovators in testing whether their innovation consortium is eligible and well suited for applying for a Eurostars grant (Eurostars, 2017).

Local ERDF Fund

The European Regional Development Fund (ERDF) is a framework programme that is organised in different sub-programmes on European regional level. For example, in the Netherlands the ERDF is distributed via EFRO (Dutch translation of ERDF) in the four regions East, West, South and North and in Germany ERDF money is distributed via Baden Wurttemberg, Bayern, Berlin, Brandenburg, Bremen, Hamburg, Hessen, Mecklenburg-Vorpommern, Niedersachsen, Nordrhein-Westfalen, Rheinland-Pfalz, Saarland, Sachsen, Sachsen-Anhalt, Schleswig Holstein, Thüringen. Grants are available for projects that are focused on innovation, generally with a bias towards small and medium sized businesses. The overall aim of the program is to reinforce economic, social and territorial cohesion. ERDF project need to be concerned with one of the following activities: Local development; Energy; Environment; Industry; Innovation; New technologies; SME Policy.

As these ERDF funds are managed by local governments across Europe, policies and laws regarding their distribution can vary wildly between, and even within, countries. Whether the BRIGAID innovators are eligible for these funds therefore varies greatly on a case by case basis, based on the focus area and geographical location of the innovator. The Funding Scan will aid innovators in discovering the funding potential of their innovation in their respective regions (European Commission, 2017[d]).

LIFE

LIFE is the EU's financial instrument supporting environmental, nature conservation and climate action projects throughout the EU. LIFE distinguishes 5 types of projects: traditional, integral, technical assistance, capacity building and preparatory. Each type of project has different conditions.

Traditional projects

These projects focus on one specific natural/environmental/climate problem with project costs of 1 million.

- There is monitoring of the effect of a project;
- Demonstrable added value for Europe.
- Cooperation with relevant partners from your own country and / or Europe.
- There is no support available from other European schemes than LIFE;
- Of the total project budget 60% LIFE funding is available, 75% for priority species and habitats.

Integral projects (IP)

Integrated projects are designed as a catalyst for an integral and strategic plan for addressing the environmental or climate problems of a vast geographical area: (multi) regional or (inter)nationally. The focus is on coordination and ensure commitment of the relevant parties. These are large projects with € 8-12 million grant, with a duration of 4-8 years.

Technical Assistance projects

Projects intended for the preparation of an integral project. An IP must be submitted the following year and the maximum grant is € 100.000 per project.

Capacity building projects

Projects intended to give additional support to member states that are new in the EU, have a lower than average gross domestic product and / or otherwise lag behind with submitting LIFE projects.

Preparatory projects

These projects address specific needs for the development and implementation of Union environmental or climate policy and legislation. The specific topics are indicated in the application guide.

Since the LIFE funding scheme is specifically aimed at environmental and climate action projects, it will most likely be well suited to BRIGAID innovators. LIFE does however, emphasize projects with large budgets and consortia, preferably with an international collaboration. Therefore, not every innovator will be able or willing to conform to these requirements (European Commission, 2017[a]).

4.3.2 Funding Scan

Although the funding schemes that are explained in section 4.2 can be relevant for nearly all BRIGAID innovators, each innovation is different and thus different funding options are suitable for different innovators, as the innovators will learn in the previous steps of the program. To truly enable innovators to acquire the necessary funding and provide individual assistance, TFC performs a funding scan to identify the most suitable public and private funding options for them. The funding scan will also provide tips on the focus and interests points of those funding options, and will thus help innovators in their acquisition of finance. The funding scan itself will be executed based on the available Business Plan and additional information gathered in a call by the funding specialists within TFC. An additional call is required since some of the aspects of an innovation which are essential identifying suitable funding schemes are a bit different from the aspects that make good Business Plan. The funding scan itself will be adapted based on feedback from innovators and lessons learned during the execution of the scan.

Some of the key aspects which are important in identifying suitable funding options are:

- **Themes and sectors**

While the BRIGAID innovations are all focused on disaster resilience, many have additional themes that are suitable for different funding options. For instance, some have an agricultural aspect, while others are much more aligned to water management. Extracting these subthemes is an important step to identify relevant funding options.

- **Technological Readiness Level**

The Technological Readiness Level is a broad description of the maturity of the technology and an indication of the position on the timeline to commercialization of the innovation. While many innovators usually start to think about funding and a Business Plan when they are already at TRL 8 or 9 (system complete and qualified, or even already operational), the BRIGAID programme (with the Business Development Programme) shows that having a good Business Plan is important in a much earlier stage. Because of this, there is quite a big range in TRL amongst the different BRIGAID innovators. Some funding schemes are suitable technological development, whilst other are tailored for the development of a prototype. The TRL is thus an important factor in identifying suitable grants or funding options.

- **Partnerships**

Some grants require a collaboration, where a well-balanced and organised consortium is an essential aspect of the application. The consortium should be composed of organisations having excellent understanding of the topic at hand as well as the needs the topic aims to target. Cooperation between the consortium partners must be at high level and intensive, reinforcing the topic progressively and in common understanding of complementarity between the partners. The type of companies in the collaboration can also dictate which grants are suitable (for instance, some need a commercial partner and a knowledge institution).

- **Scope**

The scope of the innovation, geographically speaking, is also a key aspect in identifying relevant public funding options. Some regions have additional funding available to help further develop that region, while other public funding options are national or otherwise regional (such as the Danube Transnational Programme). Demarcating the scope of the innovation is therefore essential in identifying suitable funding options.

The funding scan will provide the innovators an overview of the funding options most suitable for them and where their priorities and focus lie.

So far, we have discussed funding options with several innovators. Again, these funding opportunities are most relevant for start-up companies (TRL 5-7), who already have some experience with (public) funding. In particular the H2020 SME instrument is a very interesting funding instrument for start-ups and/or scale-ups. An advantage of this instrument is that by writing the application, the innovators are automatically ‘forced’ to think about and structure their business model and business plan. This is especially the case for SME-instrument Phase 2, for which the application form basically represents a business plan for commercialisation of an innovation. A strong disadvantage of this instrument however is the very low success rate. During the Business Development workshop sessions and follow-up period, we were able to give the innovators some valuable insights and direct feedback on these funding opportunities and how best to approach them.

Since at this point the first batch of innovators has gone through the whole work package and finished their business plan, we will use the coming period to assess their interest in a funding scan

and associated funding support, and set up an approach that best fits their situation. This may vary between different innovators, given their development stage and financial position.

Apart from support in the field of funding, we have noticed that starting innovators could also benefit greatly from support related to deals with (their first) customers as well as strategic partnerships. This is something to consider for potential follow-up initiatives from the BRIGAID project.

4.4 Funding Application Support

When the Funding Scan results in the identification of one (or more) public funding opportunity(ies) that seems beneficial for the innovator, the funding application support will guide them in the application process. This consists of 2 parts: first, the preparation phase, in which the feasibility and suitability of the funding application is analysed. If this results in a positive outcome (a “Go” advice), then secondly, the innovator is guided in the preparation of the application itself.

Preparation phase

The Funding Scan provides the core basis to assess the match between an innovator and their project versus a funding scheme and can be seen as a first-stage matching filter. In preparation of the application, a more thorough analysis will be carried out to analyse this match. This includes a feasibility check, in which all criteria that are posed by the funding agency are matched against the position of the applicant (innovator). Apart from “black-and-white” criteria, the suitability of the project with the funding scheme will be evaluated. Here, the goals of the funding scheme are aligned with, a.o., the content, TRL, consortium and (long term) goals of the project. Moreover, the aforementioned “Impact” and “Investment” axes are taken into account. Based on these three components, a Go or No-Go advice will be presented.

The innovator is directly and actively involved throughout the process. Naturally, they have the final say in whether or not to pursue into the application phase.

Application phase

Following a positive (“Go”) outcome of the preparation phase, the innovator can start the application process. BRIGAID support may consists of assistance in the formalities – i.e., getting the essential documents and annexes in place – and practicalities, such as using the electronic portal. In addition, the draft application is reviewed and feedback provided to improve the compliance and quality of the proposal.

BRIGAID offers a guiding role here, whilst the innovator takes ownership of the application.

4.5 Evaluation & Wrap-up session

Following completion of either stage 3 or stage 4, the PPIF will be concluded and evaluated by a call. Here, the Funding Approach will be evaluated by the innovator, discussing lessons learned. In addition, next steps for the innovator are identified, such as reaching out to potential investors, setting up a funding roadmap, finding partners for a consortium or preparing a pitch deck.

As depicted in Figure 7, the end of the PPIF flows back into the wrap-up session for the Business Development Programme (see Section 3.5).

4.6 Concluding remarks

This chapter has focussed on describing the approach of introducing innovators to the world of funding through the PPIF. The main element of this is the Funding Approach, a standardised process that provides personalised support to innovators to understand the worlds of finance and public funding, building on the innovations Business Plan developed in the activities described in chapter 3 as an entry point. The PPIF includes background documents (Introduction to Public-Private Investment & Financing and the Government Grants Guide), which support the Funding Approach stage 2 and 3. With that knowledge and the tools provided, innovators are now able to decide on the best suitable funding schemes and funding options for their specific situation and have had advice and training on the necessary skills on approaching different investors and applying for the different funding options.

5 Funding Platform business case

Up to this point, the actions described in this deliverable should lead innovators towards creating a high-quality business plan, understanding the world of funding and being able to identify the most suitable funding schemes and funding options for them. One difficult aspect of acquiring funding however, is to identify and approach relevant and reliable investors. Not all investors have an interest in environmental innovations and not all investors have the best interest of the business at heart. On the other side, investors themselves can often find it hard to identify relevant investment opportunities and evaluating their quality is a time-consuming process. In order to tackle this challenge from both the investors as the innovators perspective, we have investigated options have been explored to deliver a platform that will connect these sides of the market.

This section describes the business case that has been investigated for this initiative and gives an overview of the insights this has given us. It will also outline the challenges that have been identified and discuss the implications of these challenges for the best course of action for the final months of the BRIGAID project period. Ultimately, based on our research into the business case for a Funding Platform, we do not believe that it should be proceeded with in its initailly proposed form. In this chapter, we justify this decision with evidence and propose an alteration of the concept to better fit the goals of BRIGAID.

Initial proposal for a Funding Platform

The PPIF provides insight in the landscape of funding for innovators, aiding them in their search for funding. The initial vision for Funding Platform was to build on this with a tool that further eases this search for sources of funding. Ideally, this tool would have structurally provided the innovators' access to funding by providing structured guidance to define the type of funding they require and identify potential investors. Also ideally, the tool would outlast the project period of BRIGAID. For this purpose the consortium originally proposed an expansion and commercialisation of the Climate Innovation Window. This proposed 'Funding Platform' aimed to help solve the issues discussed above and help create a sustainable method for disaster resilience innovators to attract investors

and obtain funding. In 2018, the first steps in exploring the viability of this idea were undertaken, and a preliminary business case for this idea was developed.

In the first phases of the investigation of the Funding Platform, focus was on five areas:

- Defining the goals, and identifying the opportunities and critical challenges of the platform,
- Evaluating the viability of the platform in relation to the competition,
- Exploring the wishes of stakeholders for the platform,
- Developing a business case to formally describe the above problems, and
- Exploring the practical feasibility of implementation and possible collaborations.

This first section will provide an overview of the first three steps of research and exploration. This culminated in a short business case, which is described further in section 5.2. Finally the recently discussed practical investigations of feasibility and possible collaborations are discussed in section 5.3, along with the conclusions drawn from these investigations, and their implications for actions during rest of the BRIGAID project period.

5.1 Prior research

First of all, we defined the core goal the platform should fulfill. As described in the initial project proposal, a well-functioning platform should serve to close the gap between investors and innovators involved in the market for climate adaptation and disaster risk reduction solutions and give structural guidance and support in doing this, outlasting the BRIGAID project period. In order to achieve these goals, the platform would need to be valuable and useful to both the innovators and the investors, and develop a sustainable income source for itself at the same time. In order to serve the innovators, the platform should give the innovators exposure to sources of funding that they would otherwise have trouble reaching. However, in order to allow for this, investors should benefit from the platform as well, by being presented with innovators that are of sufficient quality and that provide opportunities and value to the investor beyond those that he or she will have easy access to through their own channels.

Though only broadly defined here, these goals are considered a minimum requirement for the platform to be successful, because providing value to these two classes of users is necessary in order for it to start creating the desired impact. This requirement does introduce some challenges that need to be tackled. First of all, any solution that is suggested that offers this value should be built to outlast the BRIGAID project period. This requires the platform to be financially self-sustaining. Related to this, the platform should make sure to fill a niche, that provides value that is not already offered by existing platforms, specifically providing benefit to the innovators that fall within the scope of BRIGAID. This is required, not only to achieve the core goals of the platform, but also to ensure financial viability. It speaks to reason to obtain this unique value from the core value that the BRIGAID market analysis and business development support currently offers innovators. However, this value is heavily reliant on the professional support that innovators currently receive from the BRIGAID partners - which is currently not accounted for after the end of the project.

The following paragraphs show the results of the competitor analysis that was performed in order to find the gaps where the Funding Platform might add unique value; the feedback gathered from potential platform users, both on the side of the investor and the innovator; key insights from

conversations with potential partners to discuss alternative methods of exploitation and the details of implementation; and finally an evaluation of the business case for the Funding Platform.

5.1.1 Competitor analysis

In order to discover the unique value that a BRIGAID Funding Platform might offer we have performed a competitor analysis, mapping out the existing parties in this field, and analysing their respective target audiences, business models and core values. The results of the competitor analysis are shown in Table 2 below. This analysis has pointed out that the BRIGAID Funding Platform, as it is envisioned currently, might offer a unique proposition that other platforms do not currently offer. However, the viability of this value proposition remains in question, as will be elaborated on below. The platforms in this selection are considered the most significant of competitors, either for their prominence in the field of entrepreneurial finance as a whole, or because of their specific focus on a similar target as the BRIGAID Funding Platform. We analysed on a set of features that are expressive in distinguishing the differences between the platforms.

From this analysis a few categories can be established, representing the distinct approaches that these platforms take. First of all, SEEDRS, WeFunder and SeedInvest are based on Equity Crowdfunding. As the word implies, these are based on gathering small investments from a large group of investors. This is a relatively new model of finance, which democratizes the funding process and allows a large group of people who would not previously have been considered possible investors to invest in start-ups. However, this is a very distinctly different approach from what the BRIGAID Funding Platform is targeting, and is definitely not suited for all innovators. First of all, this approach lacks some of the core benefits of traditional investors, which often bring their own business expertise and guidance to the innovators. It also distributes equity over a large group of people so the innovator cannot easily select investors that align with their vision. Naturally, this approach to funding also allows for less control over the trustworthiness of investors. So while this might be suitable for some entrepreneurs, it is not a end-all solution and leaves room for a solution like the BRIGAID Funding Platform.

Table 2: Funding Platform Competitor analysis

Platform	Start-up quality assurance	Network size	Funding approach	Platform Focus	Industry Focus
SEEDRS	Pass-Fail system	Large	Equity Crowdfunding	Investment facilitation	None
WeFunder	Only legal requirements	Large	Equity Crowdfunding	Investment facilitation	None
SeedInvest	Strict Pass-Fail system (1% pass)	Large	Equity Crowdfunding	Investment facilitation	None
Angellist	Pass-Fail system	Very large	Equity Fund investing	Fund investments / management	None
Gust	Only legal-requirements	Very Large	Accredited investors	Portfolio / Asset management	None
EIPP	Pass-Fail system (~ 50% pass)	Limited	Accredited investors	'Shop window' innovator presentation	EU Projects
Climate-KIC Investor marketplace	Selection and full training process	Limited	Accredited investors	Matchmaking and networking	Climate Change Mitigation
WaterWindow		Limited	No Funding Focus	Problem – Solution matching, focus on End Users	Water solutions.
BRIGAID Funding Platform	High quality in depth analysis	Small	Accredited investors	In-depth investor / innovator matchmaking	Disaster Resilience Innovation

A platform like Angellist offers a similar value proposition, except that they take a middle-man position, where they cover the portfolio management of funds, and small-scale investors can invest in these funds. As with the equity-crowdfunding, and perhaps even more so, these investments are

based on low commitment and short term investment from small-scale investors, and therefore lack the same benefits that an investor can often provide.

Gust is a highly popular platform that takes a slightly different approach. This platform focuses on accredited investors that have a larger funding budget than Crowdfunders. However, as opposed to the other platforms, this platform does not offer any screening of the innovators on the platform, beyond the legal requirements. Partly due to this, the platform has positioned itself less as a marketplace for investors to find relevant innovators, and more as a platform for managing communication and managing the portfolio after the funding decision has been made. In this sense it is also quite distinctly different from what BRIGAID would aim to offer, considering that this is a software based approach, instead of a connecting platform.

Finally, the two remaining main competitors that have been identified can be classified as smaller-scale, but have a target market that is much closer to the one targeted by the potential BRIGAID Funding Platofrm. The European Investment Project Portal (EIPP) is a European Commission initiative that allows projects that have applied for public funding from the EC to display their project along with supporting information regarding their financing, in the hope of attracting external financiers. This is closer to the vision for the BRIGAID platform, though the focus of the EIPP is more project based, and less innovator based. The EIPP platform mainly aims at projects which have previously applied for funding from the European Commission, both succesfully and unsuccessfully. Because of this, many of the projects on the platform are large investment projects, and not innovative start-ups, seeking to finance their business, this offers a point of divergence where BRIGAID could offer a value that is less well served by the EIPP currently.

The Climate-KIC Investor Marketplace is even closer to what BRIGAID envisions for the Funding Platform. Startups on this platform have gone through an extensive support program offered by Climate-KIC, and are all Climate focused, mostly with a focus on Climate change mitigation. This gives the platform an edge over most other funding platforms, in which little to no resources are invested into the quality of the startups presented. In this sense, the Investor Marketplace is not unlike the BRIGAID Funding Platform. However, Climate-KIC has a large and well connected group of investors connected to their platform, which cannot currently be matched by BRIGAID. For this reason, among others, we consider directly competing with the Climate-KIC Investor Marketplace undesirable. The BRIGAID Funding Platform distinguishes itself from this marketplace by focusing on Climate Change Adaptation and Disaster Risk Reduction, indicating that the platforms might prove complementary, rather than competitive.

A final platform that was evaluated which could be considered a competitor to the BRIGAID funding platform is WaterWindow. Similarly to the Climate-KIC and EIPP platforms, this is a sectorally specific platform, focused on water solutions. However, where the Funding Platform aims primarily to connect innovators with investors, WaterWindow primarily aims to connect Innovators with end-users. They achieve this by allowing potential end-users to post problems, to which the innovators can suggest their innovations as solutions. In this sense, WaterWindow is more closely a competitor to the Climate Innovation Window, rather than the Funding Platform. However, because of the tight interconnectedness between the CIW and the Funding Platform, WaterWindow is still an important competitor to consider.

It stands to reason that the EIPP and the Investor Marketplace, as well as WaterWindow, might prove not to be competitors, but fruitful partners to the BRIGAID Funding Platform. This seems sensible for a few reasons. The respective goals of these three initiatives are very well aligned. All of them aim to improve the valorisation process of innovative concepts that serve the common good. Furthermore, these three platforms have a slightly different, but potentially complementary focus. And since these three platforms all have a limited network size, and possibly quite a large overlap in the target audience in these networks, all platforms might benefit from integrating these separate networks, to increase the significance of the established community. For this reason, many of the further efforts in exploring the idea of a Funding Platform were focussed around contacting these entities for exploration of potential collaborations, as well as for gaining more information and learnings from their experiences in establishing these platforms. A further discussion of these ideas and a report on first conversations for possible collaboration is described in section 5.3.

All in all, this competitor analysis shows that the Funding Platform might occupy a space that has not been filled yet, however, some questions remain regarding the viability of this niche. The first companies listed in this competitor analysis all have a very broad focus. This allows them to be self-sustaining, with a wide customer base. However, this is unreasonable to expect from the niche that BRIGAID Platform serves. The smaller platforms (EIPP and Climate-KIC) are more comparable to the approach of BRIGAID, but are both run by large organizations (the EC and Climate-KIC respectively) that invest in the operation of the platform. Because of this, creating a self-sustaining Funding Platform focused on the niche served by BRIGAID might not be financially sustainable, and might require a shift of approach towards a partnership in order to achieve viability. The details of this will be discussed in sections 5.1.3 and 5.2.

5.1.2 User need evaluation

In order to ensure proper adoption of the platform, the wishes of the platform users, both innovators and investors, should be taken into account. For this reason, we have begun research to evaluate these needs. While this has proven to be valuable in further specifying the features of the platform to best suit the needs of the potential users, it is still unclear whether the target market is large enough to justify the launch of a separate platform, as mentioned above.

We have been able to improve the potential value that the platform will offer to investors by adapting the details of our innovator analysis to the wishes of investors. As mentioned before, in order to provide value to the investor, the platform should offer them access to startups of sufficient quality that they would not easily be able to access through their regular means. However, the specification of what a ‘quality’ startup is for the investor is not necessarily straightforward. The first version of the innovator scorecard, outlined in Section 3 of this deliverable, was based on the expertise of TFC and their experience in the funding world, aiming to provide innovators with optimal funding readiness and thereby also qualifying them for interested investors. However, this rating approach has now been further optimized by taking into account the preferences of 70 investors. These investors have been surveyed by a close partner of TFC, who, similarly to WP6’s activities in BRIGAID aids entrepreneurs in terms of their funding readiness. The survey was initially conducted to optimise these activities. In this survey, the list of criteria used to judge innovators was presented to investors, who could rank these metrics based on their importance to them in their investment decision, as well as point out the criteria that, were considered a ‘hard prerequisite’ in order to be considered for funding. They were also given an opportunity to name any criteria they

felt was missing from the list. Insight into this data and results has given TFC an opportunity to optimize the weights of the metrics used for innovators, as well as the addition of a few metrics, ensuring a valuable quality metric.

From the side of the innovator we have gathered valuable feedback regarding their potential uses of the platform. These showed an interest in the platform with a wider field of application outside of simply asking for investments, but also reaching potential end-users or other supporting organizations. These insights were gathered, among other places, during a brainstorm session at the BRIGAID conference in Cartagena (October 2018). In this session, close to 20 participants were divided into smaller brainstorming groups, where the uncertainties regarding the platform were discussed on the basis of six questions shown in the figure below.

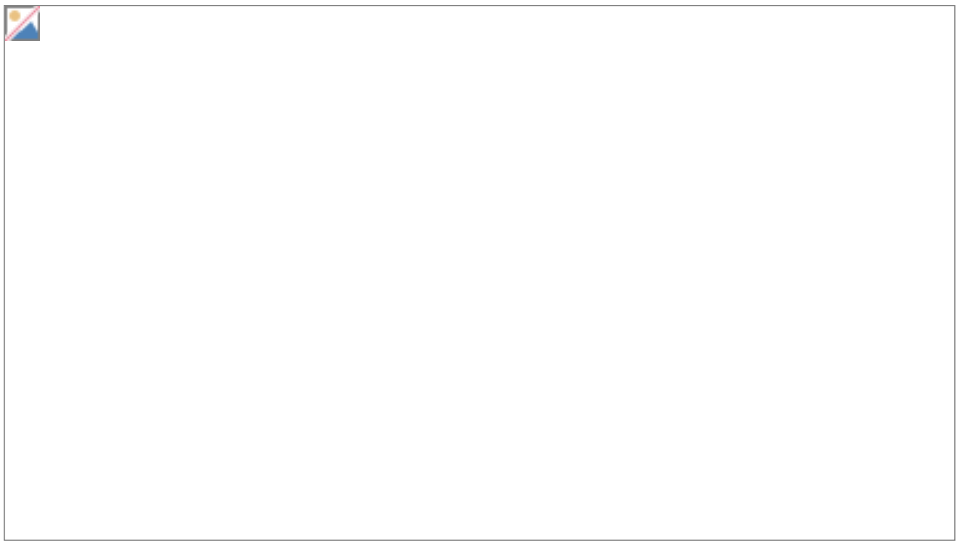


Figure 14: Questions for user feedback

The session proved fruitful regarding the feedback from innovators. The innovators were receptive to the idea, but emphasized a few common issues that would potentially impact the usability of the platform to them. First of all, many of them emphasized that the platform would only be valuable if it could instill a certain level of trust regarding the investors. Especially when it concerned confidential data regarding their companies that would be presented on the platform. Secondly, the innovators expressed they would be reluctant to pay for such a service, except if they could be guaranteed that this would result in high-quality leads for financing. Lastly, a major insight that was emphasized by the innovators was that such a platform should allow them to distinguish between the different types of investors. Many of them expressed a reluctance to indiscriminately present their company to any investor, stating that to many of them, the vision of the investor is much more important than just the specifics of the investment deal. They expressed interest in a platform that would match them to specific investors that would fit well with their needs, based on qualitative criteria beyond the financials. They also expressed that the platform might help not only with traditional investments, but also with other sources of funding. Suggestions in this realm inlcuded attracting launching customers, that take more of a end-user/investor-hybrid role, as well as giving insight in the channels through which an innovator might be able to attain funding through public financing schemes. This insight makes an integration with the CIW seem all the more sensible, considering that that is already its goal.

With these undertaken steps we have gained valuable insights on the qualitative needs for the platform from the side of the innovator, and to a slightly lesser extent, from the investor as well. However, quantitatively, the market need for the platform is still unclear and elusive. The results we have gathered from the research done so far have allowed us to optimize the development of the features of the platform to the needs of the user. However, as of yet, it has been difficult to gauge the size of the market that might be reached through such a platform. It does seem that creating a large network just from BRIGAID might be difficult. This can be deduced from looking at the moderate success a platform like the EIPP has been able to attain in attracting investors, even though the starting network of the EC is much larger.[2] Furthermore, interviews with representatives of the EIPP, as well as the Climate-KIC Investor Marketplace, have pointed out that in both these cases, the investor market that is reached, does not lead to a financially sustainable platform. While the respective platforms, to some extent, serve their purpose in terms of providing valuable connections between innovators and investors, they are not (yet) monetised in any sustainable way, and need continuous supporting activities and resources. These insights cast some doubts on the assumption that the platform can be established as a financially viable initiative, which will be elaborated on further in section 5.3. The next section will outline some of the alternative possibilities of monetisation in the context of a preliminary business case.

5.2 Preliminary Business case and core uncertainties

Within BRIGAID, we considered the Funding Platform to be an innovation in itself. Therefore, in order to develop a business case, the business development approach was applied in part to help in the development of the concept, and to make sure that all aspects have been taken into account. This section gives a brief overview of what this approach has resulted in, as well as highlight some of the core uncertainties that this approach has yielded informing the steps to be taken in the near future. As part of the business development approach, a Business Model Canvas has been completed providing an overview of the possibilities for value propositions, customer segments and key activities, as well as possible revenue models that should be explored in a more in-depth market analysis. The Business Model Canvas was established during an internal session at TFC, mirroring the structure of the workshops as described in section 3 of this deliverable. This Business Model Canvas is shown in Figure 11. This canvas served as a starting point for the further development of the business case. While many of the potential customer segments identified in this canvas have been ruled out by subsequent research, this served as a good starting point in identifying all possible options of commercialization.

Though this gave us insight in the possible structures for monetisation along with their value propositions, appropriate channels, required acitivities and resources. For the sake of focus and brevity in this deliverable, in the following sections we will discuss what we consider to be the most significant of these structures. For the same reason, these will be discussed in two sections, the first concerning the value and customer segments, corresponding to the right side of the canvas, the second concerning cost and revenue, roughly corresponding to the left side.

2 EIPP Evaluation (https://ec.europa.eu/info/sites/info/files/economy-finance/efsi_evaluation_-_final_report.pdf)

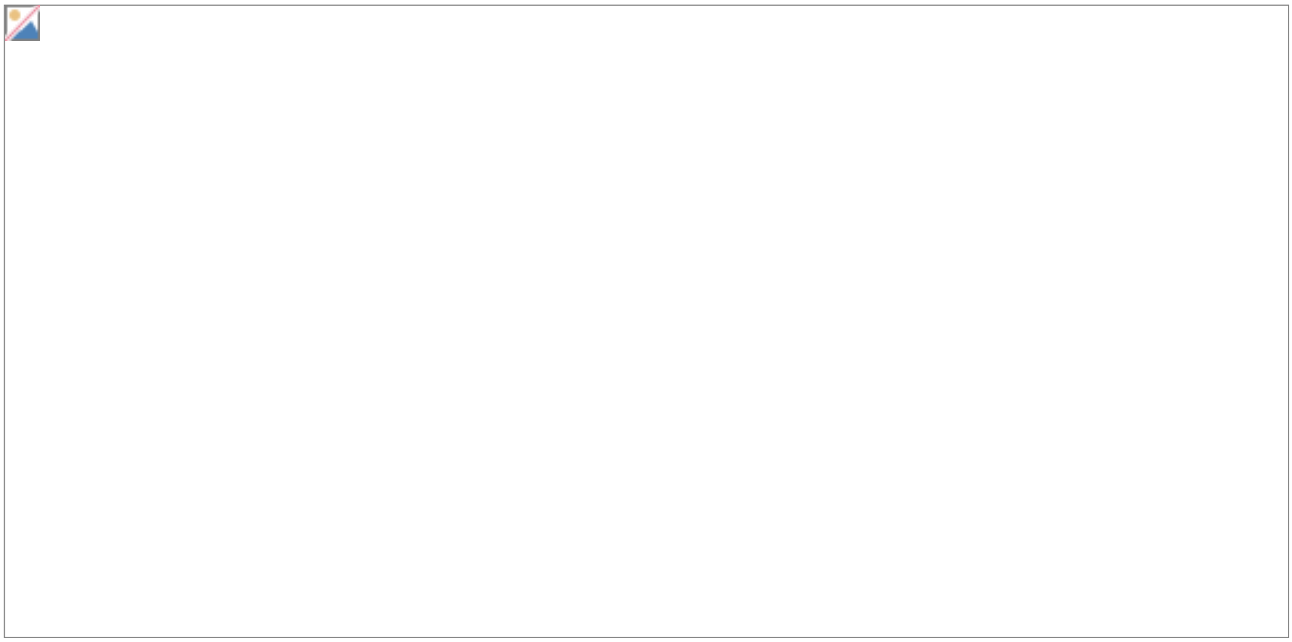


Figure 15: Initial Business Model Canvas

5.2.1 Target customers and value proposition

The proposed funding platform should offer a mutual benefit for both entrepreneurs and investors, as well as potential interested third parties in order to ensure an optimal user base. In the previous chapter some details were discussed as to how insights were gained in optimally serving these user bases. However, ideally, to make sure that the platform will outlast BRIGAID in its impact, these users should not only be willing to use the platform, but also generate revenue streams to offset any costs associated to the operation, maintenance and further promotion of the platform.

Therefore, outside of just searching for users, thought needs to be put in who the potential *paying customers* could be. Naturally, these could come from two sources; the innovators and the investors. Our early analyses and interview sessions with innovators have shown that most do not seem receptive to the idea of being charged for being featured on the platform. Similarly, investors have stated that actively searching out innovators on a platform based on a description does not generally align with their approach to investing, which is reflected in an evaluation report on the EIPP, which aims to offer a similar value.[3] Other possibilities for monetization have therefore been explored, including the gathering of data to be of value for research institutes, as well as financing the platform through advertisements. However, considering the relatively low volume of traffic the website would be expected to generate, these income sources should be considered secondary at best.

Because of this, the platform will require additional advantages that could be considered worth monetization, beyond being a simple shopwindow for innovators and investors. As mentioned in the section above on competitors, BRIGAID offers some unique advantages to its target customers that are not present in its competitors.

3 EIPP Evaluation (https://ec.europa.eu/info/sites/info/files/economy-finance/efsi_evaluation_-_final_report.pdf)

One of the initial advantages of the BRIGAID Funding Platform is the aforementioned business case analysis that will be performed on all the participating start-ups on the platform, as long as the BRIGAID project is running. This analysis offers a highly detailed qualitative overview of the strengths and weaknesses of the start-ups, shown in ten different indicators. As mentioned earlier, this is important in providing additional value to the investors, since this allows them access to information that they would not otherwise have, as opposed to just showing them a list of innovators, which they could attain by numerous other means.

A second advantage is the sectoral specificity of the platform. This will make sure that the investors attracted to the BRIGAID platform will already be inclined to focus on climate adaptation start-ups, increasing the chances of finding successful matches. The second benefit of this segmentation is that it gives the platform a certain authority and reliability when it comes to judging the quality of these start-ups. Already, BRIGAID has a good reputation within this industry, which gives the platform an edge since investors will be more inclined to trust the evaluation of the start-ups.

A core uncertainty that stems from these advantages, is the continuation beyond the end of the BRIGAID project period. The support innovators receive currently will not be financially sustainable after the end of BRIGAID, diminishing the value of the featured innovators on the platform to investors. WP6 has worked on standardizing many of the methods used for the business development, such as the MAF+, PPIF and Business Development Approach. This already allows for a more efficient procedure of support and evaluaton, but performing the development support and evaluation does still require much human input, and will always remain a trade-off between effort and quality. Therefore, in order to ensure financial viability of the platform considerations should be made in terms of a monetization strategy that takes this trade-off into account. This will be discussed in the following section.

5.2.2 Revenue model and cost structure

The core value proposition that might be offered by the BRIGAID Funding Platform is in the form of detailed information on the quality and investor readiness of the innovators. The currently envisioned revenue model for this value will be to charge investors a fee for these detailed information packages they request from an innovator. This would constitute a unique value to them since this will offer them an off the shelf independent analysis of the company, rated on criteria important to them.

A second value that the BRIGAID platform can offer, based on feedback from innvators and investors alike, is matchmaking based on investor and innovator preference. This matchmaking would be based on a, yet to be specified, list of criteria for the investor as specified by the innovator and vice-versa. Conversations with innovators and investors have indicated that this might be an important value to offer in order to provide a unique advantage as an investment platform. As opposed to having to spend time looking through a platform in order to find a potential investment opportunity, this would give them a zero-effort reliable and customized recommendation service.

Concerning the cost structure of the platform, it is clear that it will consist of an initial investment for the development of the platform functionality. Besides this initial investment, the most significant resource that will have to be accounted for is the ongoing business plan development support and analysis for the start-ups. As mentioned, it seems unsustainable to continue the current level of support, based solely on the contribution of investors willing to pay for access to the information. It

therefore seems unavoidable to create a slimmed down version of the current support that could serve as a Minimum Viable Product, to be sustained after the BRIGAID project ends.

A potential version this might take is a standardised intake questionaire that should be filled out in order to be featured on the platform, creating a low-cost initial evaluation. This could then be expanded by offering charged extended business support to the innovators, and offering tiered packages of information and evaluation to interested investors, to cover the costs of these expanded business support activities.

While the abovementioned strategies would allow for potential sources of value for both investors and innovators, it still begs the question if this value is large enough to warrant the expected costs involved in creating that value. The next section will elaborate on some of the recent insights into this viability, the conversations with potential partners, and their implications for the next steps.

5.3 Recent activities and future work

In this section the most recent activities that have been undertaken in validating the assumptions will be described, along with the implications of this for the future of the Funding Platform.

As discussed in the sections above, there are clear indicators that collaboration with existing initiatives is critical, for two main reasons: 1) to identify possible options for collaboration; and 2) to learn from their experiences in establishing their respective platforms.

In the past year, contact has been established with Climate-KIC, regarding their Investor Marketplace, and with representatives of the European Commission regarding the EIPP. These early conversations were fruitful, in the sense that they provided much information regarding the experiences of the organizations on the establishment of their respective platforms. However, they did give a sobering perspective on the feasibility such a platform from an initiative like BRIGAID.

The Climate-KIC investor marketplace is still in a very early phase, having only gone live earlier in 2018. This marketplace offers a very similar value proposition to what BRIGAID would be able to offer. However, Climate-KIC reserves the platform for innovations that have gone through their programme, granting a high level of quality control, that is financed by sources outside of the platform. Furthermore, Climate-KIC complements the offering of the platform with a hands-on approach of organising live networking and speed-dating events with investors and entrepreneurs. While this has allowed them to establish strong network of investors engaged with the platform, they did acknowledge that achieving this requires substantial and ongoing investments. Likewise, Climate-KIC confirmed that their platform does not currently have any form of monetisation, and while that is an option they might explore in the future, they did not imagine it paying for itself and did not foresee a future in which the platform would stand on its own without the live activities involved to build the community.

Similarly, within the EIPP, representatives confirmed our belief that building and maintaining the network of investors required for the platform to function requires ongoing investment. As with Climate-KIC, they also mentioned organising events, which are not monetized, and therefore impose a significant cost on the organization, including covering travel expenses for the attendees throughout Europe. Even with these investments, they reported a difficulty in attracting traffic to the

platform and while moderately succesful, the impact of the platform is not yet at the level it was originally envisioned, as was also established in their external evaluation[4].

Both these cases share the clear similarity that the platforms are backed by large and well-funded organizations, that view the platform as a minor contributor to an overall strategy of community building with investors. This allows them to invest in the platforms and surrounding activities, as they serve the goals of a larger strategy, without having to be financially sustainable in and off themselves.

Starting in December 2018 conversations have taken place within the consortium regarding the actual implementation of a first version of the Funding Platform. These initially resulted in a mutual agreement regarding the structure of the platform, and a basic outline for the development work plan. The first conversation with the partners responsible for the web development of the Climate Innovation Window concluded in agreement that the most sensible way forward is to integrate the Funding Platform into the existing structure of the CIW. The broadly defined minimum requirements of the funding platform were discussed with the initial idea of implementing these in early 2019. This version would consist of a shielded section of the CIW, on which innovators can submit their funding requests. This basic first instance of the platform would function as a beta version to help in gathering more feedback and aid in the conversations for possible collaborations. However, after obtaining the additional insights described above, and reconvening with the relevant partners, these plans have been re-evaluated, and the development has been halted. The reasoning behind this, and the alternative plans discussed will be described below.

5.3.1 Implications and future work

As should be made clear by the description above of the conversations with the EIPP and Climate-KIC Investor Marketplace it seems that a self-sustaining platform for connecting investors and innovators is very hard to establish or sustain. While these parties can be seen of examples that these platforms are possible, they only operate because they are tied into a larger strategy, of which the platform is only a minor part. In this sense, it aligns with our early observations from research described in Section 5.1 and 5.2, that in order to provide a substantial value to investors, the platform should offer more than just a shop window demonstrating potential investees. As we established there, one of these values could be to provide a high level of quality control among the innovators, to take work out of the hands of the investors. However, it seems, based on early feedback, that this benefit will never be able to cover for its own costs, as a detailed level of support requires significant investments in terms of personnel-hours. This has therefore lead us to conclude that a platform as originally proposed is not feasible, and can only be kept operational if it is part of a larger organization that already performs these quality control activities, as is the case for Climate-KIC.

Based on this insight, and because of the wish among BRIGAID partners to develop a sustainable impact from the BRIGAID Programme, the re-evaluation of the Funding Platform has led us to explore the possibility of a broader continuation of the BRIGAID impact. This would take the form of a ‘spin-off’ organisation that encompasses the whole of the business development aspects of BRIGAID, as well as the communities of innovation and marketing assistance delivered by Work Package 7. This will allow the established structures within BRIGAID to provide a bigger impact by

4 EIPP Evaluation (https://ec.europa.eu/info/sites/info/files/economy-finance/efsi_evaluation_-_final_report.pdf)

contributing to other projects. This initiative might include the Funding Platform in an altered form as a constituent part, though not as its primary source of income, which has proven to be unsustainable.

Because of this envisioned alteration to the plans, an amendment to the original Grant Agreement is now pending approval. This would allow the redirection of resources from the Funding Platform to the broader continuation of the BRIGAID Business Development Programme (including the MAF+), the PPIF, Communities of Innovation, and Marketing support.

6 Overall concluding remarks

The aim of this deliverable is to provide *"a report on development of PPIF including a synthesis of the funding applications, and a business case for commercializing the ISP"*, with the PPIF itself providing the methodology for *"the assessment of the 'investment readiness' and the guidance of innovations in terms of business planning and financing"* and *"the individual assistance by the task leader on the acquisition of finance"*.

This document has reported on three different originally proposed solutions: 1) The Business Development Programme, 2) the PPIF and Funding Approach and 3) an evaluation of the business case for a Funding Platform. Together, these three different solutions guide innovators in:

- Creating a high-quality Business Plan;
- Getting an evaluation of that Business Plan which indicates their 'investment readiness';
- Helping them understand the perspective of (different types of) investors;
- Providing them with multiple relevant funding schemes, public European funding options and individual public and private funding options; and
- Bringing them into contact with suitable and trustworthy investors through the Funding Platform.

While the funding platform is likely not feasible, the evaluation of the business case has proven valuable, and the proposed amendment to the Grant Agreement would help redirecting the resources towards a path that is considered more promising. With that, we hope to meet the goals set for this deliverable and tackle the challenge which caused the need for this deliverable: increasing the odds of those innovations that increase resilience to natural disasters as a result of climate change, to successfully enter and stay in the market, so that these solutions will be adopted by governments and end-users alike.

7 References

Austin et al, 2006
Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: same, different, or both? Entrepreneurship theory and practice, 30(1), 1-22.

BRIGAID, 2017
BRIdging the GAp illustration. Retrieved from http://brigaid.eu/new_our-mission/

CB Insights, 2014
CB Insights, *The Top 20 Reasons Start-ups Fail*, available online at: https://www.cbinsights.com/blog/start-up-failure-reasons-top/ (2014)

Certo & Miller, 2008
Certo, S. T., & Miller, T. (2008). Social entrepreneurship: Key issues and concepts. Business horizons, 51(4), 267-271.

European Commission, 2017[a]
LIFE. Retrieved from http://ec.europa.eu/environment/life/funding/life2017/

European Commission, 2017[b]
SME Instrument. Retrieved from https://ec.europa.eu/easme/en/horizons-2020-sme-instrument

European Commission, 2017[c]
Horizon 2020. Retrieved from https://ec.europa.eu/programmes/horizon2020/

European Commission, 2017[d]
European Regional Development Fund. Retrieved from http://ec.europa.eu/regional_policy/en/funding/erdf/

European Commission, 2017[e]
Fast Track to Innovation. Retrieved from https://ec.europa.eu/easme/en/fast-track-innovation-fti

Eurostars, 2017
4 easy steps on the road to Eurostars. Retrieved from https://www.eurostars-eureka.eu/downloads/guidelines/participants/2014-2020

Forbes, 2014
Forbes, *Why start-ups fail, according to their founders*, available online at: http://fortune.com/2014/09/25/why-start-ups-fail-according-to-their-founders/ (2014)

Grimaldi et al, 2011
Grimaldi, R.; Kenney, M.; Siegeld, D.S.; Wright, M.; *30 years after Bayh–Dole: Reassessing academic entrepreneurship*; Research Policy 40 (2011) 1045– 1057

Ortín-Ángel and Vendrell-Herrero, 2014
Ortín-Ángel, P.; Vendrell-Herrero, F.; *University spin-offs vs. other NTBFs: Total factor productivity Differences at outset and evolution*; Technovation 34 (2014) 101–112

RvO, 2017
LIFE. Retrieved from https://www.rvo.nl/subsidies-regelingen/life

Wennberg et al, 2011
Wennberg, K.; Wiklund, J.; Wright, M.; *The effectiveness of university knowledge spill overs: Performance differences between university spinoffs and corporate spinoffs*; Research Policy 40 (2011) 1128– 1143

World Bank, 2013
World Bank, 2013. *Building Resilience: Integrating climate and disaster risk into development. Lessons from World Bank Group experience.* The World Bank, Washington DC.

Appendix A: Quick Scan questions

A clear organizational structure has been established and formalized

Short and long term goals have been determined, and a strategy has been formed to achieve these goals

Key success factors have been discerned and a timescale for the actions to achieve them has been created

The target customers have been discerned and described

The target market has been discerned and described

The current competitors have been discerned and described

Substituting or rival technologies and innovations have been discerned and described

Mechanisms to maintain profits of the innovation (appropriation regimes) have been discerned and described

Unique Selling Points (USPs) of your innovation have been described

A dissemination plan to reach customers has been formalized

A feedback mechanism with the customers has been discerned and described

The revenue stream has been discerned and described

The cost structure has been discerned and described

The price structure of the innovation has been discerned and described

Barriers for introducing the innovation to the market have been identified

A plan and timescale for introducing the innovation to the market have been formalized

Patents have been applied for

Patents have been granted

A presentation, demonstration or explanation of the technology or innovation has been given outside of the company

A description of the technology has been formalized

The novelty or radicalness of the technology has been discerned and described

The technology has been tested in-house

The technology has been tested at key partners

The technology has been tested at customers

A prototype has been created

Technological risks have been discerned and described

A technological roadmap has been formalized

A revenue forecast has been formalized

A profit forecast has been formalized

A funding scheme has been formalized

A financial budget has been formalized

The Net Present Value (NPV) of the project has been calculated

The financial Return on Investment (ROI) has been calculated

The social ROI has been discerned and described

Specific and relevant subsidy programs have been discerned

There is enough capital for the development of the project

There is enough capital for the testing of the project

There is enough capital for the commercialization of the project

There is enough capital for the scaling up of the project

There is enough capital to incrementally improve and update the project after launch

The required additional assets (such as personnel and expertise) have been discerned and described

The required partners have been discerned and described

Collaboration with these partners has been formalized

The environmental relevance has been discerned

Steps to create legitimacy and an analysis of public acceptance have been formalized

The expected environmental results have been discerned

The impact of the innovation on the occurrence of hazards, exposure, and vulnerability have been discerned

Appendix B: Business Plan 101 (v2.0)

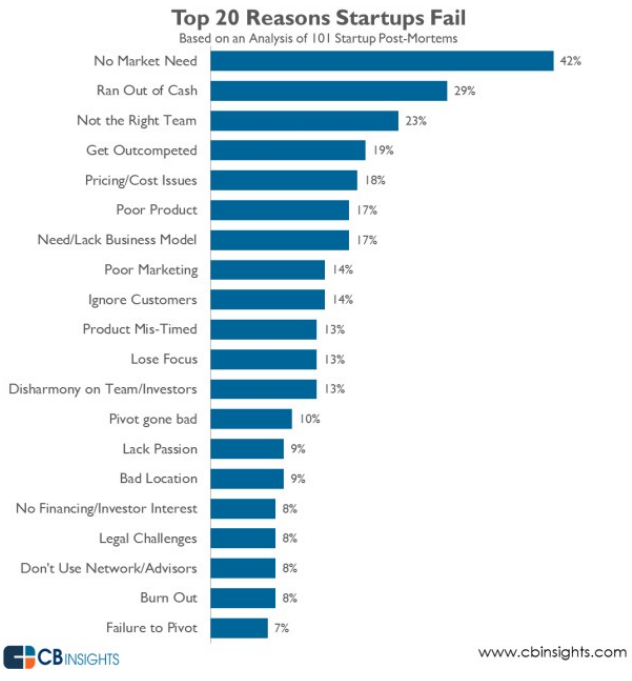
Introduction

Creating an innovation is a difficult task. Inventing a new technology, creating new combinations of existing technologies, finding different uses for a technology, or creating new markets costs a lot of time, determination and investments and requires expertise, creativity and much dedication. To be able to successfully launch and sustain an innovation, however, the technology itself isn't sufficient; you also need a good business plan. But what is a business plan, and why is it important? This document functions as a 'business plan 101', to explain why it's needed, and what it entails. It also provides useful tips and tricks for writing the business plan.

Importance

As good business plan is essential for the success of an innovation and survival of a firm. Not only will a business plan force you to make choices on strategy, marketing and financial aspects that will determine, along with the technological aspect, the success of the innovation, but it is also required to get the necessary funding to survive. This may seem strange, since it seems like we live in the Golden Age of startups, where there are more start-ups than in the years before. The Kauffman Index of Startup Activity, the leading startup index for the US, rose in 2016 to a level of 0.38 (Kauffman, 2016). This indicates that their broadest measure of startup activity is now above the U.S. historical average from the last twenty years. Forbes even stated that "a new era for entrepreneurs and startups has begun" (Forbes, 2013).

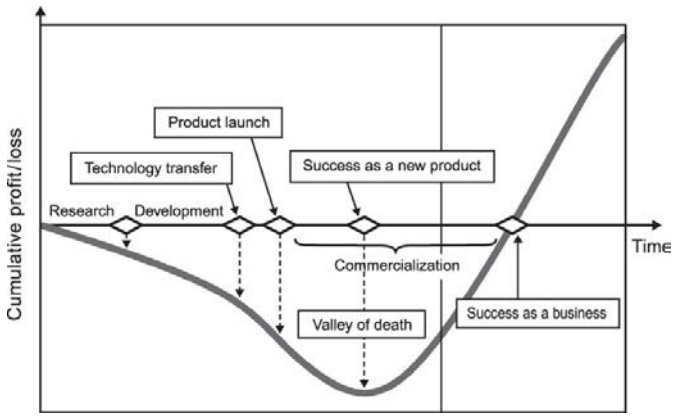
However, it is no secret that the vast majority of the startups fail. According to Forbes, this number is as high as 90% (Forbes, 2014). Scientific research, such as research by Grimaldi et al (2011), Wennberg et al (2011) and Ortín-Ángel and Vendrell-Herrero (2014) show that of these firms, those based on new technology (New Technology Based Firms), have even higher death rates. This is especially



true for firms based on academic research, due to the novelty and radicalness of their technology.

CB Insights analyzed 101 startups, to find out why they failed. The results, shown in the graph on the right, show that the 8 of the top 10 reasons (everything aside from a poor product and a lack of funds) can be anticipated on and prevented by developing a good business plan. The lack of funds, the #2 reason on the list, can be tackled by developing a good investment memo and having the right support or guidance to do so.

Funding is especially important in the long run. A common term amongst startups is the 'valley of death' as shown in the figure on the right. While most startups can obtain funding for testing and developing their prototype, funding is hard to obtain during a commercialization, when results are still little and finances are low. It is therefore of utmost importance that there is a funding strategy in the early development stages of a new firm.



The 'Valley of Death' (Osawa and Miyazaki, 2006)

The Business Plan

Business plan, business case, business strategy, business model… these terms are very common as entrepreneurial terminology, but it can be confusing what they mean. For a start-up, especially in the case of a New Technology Based Firm, the business plan and business case overlap. A business plan is a broad strategy for the company itself: what are the goals to achieve and how will you reach them, when will the company make profits, and what is your overall strategy? Basically, it is a guide on how to develop and grow your company. A

business case is a financial analysis of one specific case. For instance, is it wise to invest in company X, or should we develop product Y? Since a New Technology Based Firm deals with one product, and can in itself be seen as a “case” for investors, it has a lot of overlap with a business plan. These two are therefore usually combined into one document with New Technology Based Firms, with the more strategic questions originating from the business plan and the more financial questions (such as the Return On Investment, for instance) originating from the business case. The business strategy and business model are both part of the business plan. The strategy entails what your target market is and who your targets customers are, and how to reach them for instance. The business model entails how you will profit from your innovation.

This document will aid in creating such an extensive business plan. It will describe the required contents of such a document and will provide tips and tricks on how to determine these contents. Broadly speaking, a business plan can be divided into four sections: 1) a section with contents concerning the business strategy; 2) a section with contents concerning the technological aspects of the innovation; 3) a section with financial aspects including the business model; and 4) a section concerning the social aspects of the innovation.

Lastly, this document features a list of references and sources. Many of the contents of the business plan are based different literature. These sources are not references in-text, but can function as additional reading material.

Strategy

Organisational Structure

It is important for a start-up to have a clear organisational structure with well-defined responsibilities and corresponding tasks. Primarily, there should be at least someone responsible for the technology and development, someone responsible for the financial aspects and someone responsible for the management and PR – the entrepreneur and ‘face of the company’.

For investors, the team behind the innovations is one of the first things they will look at, and is a crucial contribution to their trust in the future success of the company. Important features that should be present within the organisation are of course technical and enterpreneurial

expertise, but also the level of commitment to the company, perseverence, and the incentive of team members to make the innovation succeed.

Goals and strategy

Both short and long-term goals are important when starting a company. Long-term goals will prevent a start-up from ‘muddling through’ and not creating a sustainable business model. A lack of short-term goals, however, can cause a focus on company growth and the neglecting of profits, causing many start-ups to go bankrupt. The rule of thumb is to be patient for growth, but impatient for profit.

However, goals without a strategy on how to achieve them is like an empty promise to investors. A well-formulated strategy on how these goals are achievable is therefore a requirement. Also consider what exit strategies are possible, and what the preferred exit strategy would be for yourself and the investor.

Success factors and timescale

Having clear goals is important, but to truly be able to achieve them the identification of the key success factors is required. When are the goals actually achieved and what are the bottlenecks? This asks for an operationalisation of the goals, so that they can be measured. Along with this, a timescale of the actions and milestones for these success factors – and ultimately the goals – is an integral part of this. In other words, a SMART (Specific, Measurable, Attainable, Realistic, Timely) goals and success factors contribute to a clear strategy.

User needs analysis

Your innovation will only succeed if there is an unmet user need that it addresses. This can be either a problem which needs to be solved, or an opportunity of a brand new type of product which will address unmet and generally unknown needs.

The most innovative companies in the world are so successful because they have a very clear understanding of these unmet needs, even when the customers themselves are still unaware of those needs. Analysing these needs can be done by performing surveys or panels using potential customers, but you will only receive information about the unmet needs which the users have already identified themselves. Carefully analysing trends in

purchasing behaviour, technological advancements and – perhaps most important – how customers use their product in new ways, can provide valuable information about user needs.

Target customer identification

It is very important to have a clear picture of who your customers are. Although this may sound easy, it can often be difficult to identify who exactly will pay for the innovation, and who will be using it. Narrowing down is the key here. For instance, “auto users” is not sufficient as target customers if you are trying to sell a car. What age group are you focusing on? What region are you active in? If you are selling electric cars, your type of customer is very different from when you are trying to sell a diesel SUV for instance. A few easy things to consider when you are trying to determine the target customers are:

- Is your innovation easy to use?
- Is your innovation expensive?
- Is your innovation a status symbol?
- Is your innovation sensitive to particular groups?
- How is your innovation different from existing products?

For each of these questions, the follow-up question should be “so who would be keen to buy it then’’? Gadgets and complex products are often targeted at a younger demographic for instance. For innovations with a societal benefit, things are a bit more difficult. There is a good chance that the government is your direct customer (when the innovation is a dam, for instance) and thus the one that will be paying for the innovation. The end user, however, are the inhabitants of the region that is protected by the dam. Those are then your target customers, since you need to address the needs of these people. If they find your innovation too complex, or they do not want to have it in their backyard, the government will not buy your product. If you convince the end users, they will in turn appeal to their government to buy the innovation. Or the other way around: you need to convince the government that your innovation is what the people want and need.

Target market identification

Your innovation can be technologically brilliant, but if there is no market for it, your company will not survive. It is therefore important to identify and analyse the target market before too many expenses are made. Important aspects of this analysis are:

- the number of active players in the market (potential future competitors);
- the financial feasibility of the market or 'saturation' of the market (is the market growing in number of sales, is it stagnant, or is it declining);
- the technological development within the market or the 'maturity' of the market (how long until your innovation is no longer technologically relevant); and
- the size and commercial possibilities of the market.

Usually, a market analysis consists of the TAM (Total Available Market), which is the total market demand for a certain product or service, the SAM (Serviceable Available Market), which is the portion of the TAM that is suitable for your solution (including the geographical scope), and the SOM (Serviceable Obtainable Market), which is the portion of the SAM that you can realistically capture with your solution. An outcome of this analysis could be that the market you are targeting is just not suitable. An option is to identify a more feasible target market and then adapt your innovation to suit the newly targeted market. Presentation of your target market should be backed up by good argumentation and relevant sources.

Current competitors identification

To be able to ultimately convince your potential customers to buy your product, you need to have a good overview of the current active players in the market. Whose product will you try to make obsolete and which of the current companies or institutions will not be happy with the introduction of your innovation? It is easy to just think of technological competitors, but your competitors could be broader than that. For instance, a self-driving car will not only have other car (parts) manufacturers as competition, but taxi drivers as well. Electric cars are not only competing with other cars, but also with companies involved in the petrol infrastructure.

Analysing these companies can give a better understanding of the difficulty of entering the market, the amount of rivalry in the market, and the current standards within the market. It also shows where your product needs to excel if it wants to penetrate the market. Important things to know about your competitors are not only their products, but also their size, their

resources (including their expertise and personnel), the amount of customers they have, the loyalty of their customers, and the partnerships they have.

Substitutes/rival identification

No idea is completely unique and no opportunity stays hidden. This means that if you have a great idea or technological breakthrough which is exactly what people are waiting for, chances are very high that other are working on a technological breakthrough or innovation to tend to the people's unmet needs as well. Having a good overview of your rivals (i.e. competitors working on a comparable or competitive technology) is important to be able to give a good estimation of your chances of successfully enter the market.

Investors will want to know this before they feel confident in investing in your company. The overview of the rivals also concerns another risk that investors will want to know: what are the potential substitute products or technologies? In other words: when will your product of technology be rendered obsolete? What are the technological threats?

Unique Selling Points

To be able to convince your potential customers that they should buy your product, it should be obvious to them that your product is better than the alternatives. You therefore need clear Unique Selling Points (USPs) which indicate the perceived relative advantage compared to the competitor's products or the current situation. Keep in mind that this does not merely include the technological advantages, but also:

- the complexity of the product (an easy-to-use, well designed product will be advantageous);
- the compatibility with current infrastructure and lifestyle;
- the visibility of the product (this includes design and easy brand recognition);
- and the trialability of the products (can people test it out for themselves first or is it a big investment which they cannot undo).

Unfair advantage

The unfair advantages of your company are assets that cannot be easily copied or bought. This could entail a certain technology, a network, or skills and expertise of certain employees. These unique assets gives your company an edge over the competitors.

Additional assets

It is unlikely that a company has all the required resources and assets for the launch of their product. Having a clear overview of which assets and resources are required is therefore an important part of successfully developing and launching an innovation. Examples are the requirement of capital, skilled labour, particular expertise or skills, software, machines, particular materials, communication and sales channels, and supplier channels. The next step is to determine whether these assets and resources can be acquired in-house, bought, or if a partnership is required.

Partner identification

If there is a clear overview of the required additional assets, chances are that not all of them can be bought or acquired in-house. Even if they can be bought, a strategic partnership may be a better (and cheaper) solution. A clear overview of potential partners, what they can offer, what you can offer them and what would be the ideal form and terms of partnership is important to make the best choice in requiring the required assets. A description of their financial position and, especially in the case of international partnerships, their ethical and legal status and profile is also of importance. Keep in mind that while searching for partners, it is important to have a match on a cognitive, social, geographical, cultural, and institutional level. There is an ideal match if two companies are not too similar, but certainly not too different from each other.

Market barriers

The analysis of competitors gives an indication of possible market entry barriers such as the requirement of capital, the knowledge intensity or the presence of alliances (such as with blu-ray or HD-DVD), but there can also be legal, ethical or other social barriers to enter the market. It is important to get a clear overview of these barriers, so that successful market entry can be possible.

Market introduction plan

When market entry barriers are known, a plan on how to overcome these and how to be able to enter the market can be formalised. Such a plan includes a timescale with concrete actions, milestones and deadlines.

Dissemination plan

To be able to sell your product, you need to reach your potential customers. To be able to do so, a choice has to be made on the contents of the communication, the target of the communication and the medium of the communication. The contents will also influence the frequency and medium of the communication. If you want to send out quick status updates when you are working on a software platform, you will need to do that more frequently and through digital means. If you want to show a prototype of a product, it can be shown only once (you can't risk showing a defective product) and it needs to happen physically. Broadly speaking, the medium can be divided into mass communication, communication with target groups, or personal communication; the form of it through third parties, face-to-face or digitally. Keep in mind that different digital platforms are used for different types of content; a Facebook update has a different effect than a press release.

Reaching the right target with your communication and dissemination measures is integral to its success. Do you want to reach 'lead users' for beta testing and prototyping purposes? Do you want to reach the group that buys new gadgets and technologies (the 'innovators')? Or are you focusing on the group that is slower with the purchase of new products? If you're trying to reach a specific demographic or community, will you try to find and reach opinion leaders in that community or will you send mass communication to try and reach most of the community yourself? You can send out the same message only once, so it is imperative that you send out the right message, through the right channel, to the right people.

Customer feedback mechanisms

An innovation will only be successful if it addresses needs of customers or end users. Since it is very difficult to find new unmet needs or to find trends in customer behaviour, it's important to get much customer feedback, but during development as well as after the initial launch. Feedback mechanisms should therefore be in place. This can for instance be done though online forums, surveys, and test panels. Just as with the dissemination measures, it is import to decide who you want to reach through which medium, and to know what exactly you need to find out.

Technology

Technology description

A description of the technology lets investors know what they are investing in. The challenge is to keep it as short as possible, while still painting the complete picture. It should not be overly technical, but it clearly needs to describe what the technology does, what is different or new about it and why it is relevant and thus addresses an unmet user need.

Novelty and radicalness

As an extent of the technological description, a description of the novelty or radicalness of the innovation is important for investors before they feel confident enough to invest in the innovation. Novelty describes how new and unique the technology is, and in what way it is based on scientific findings. Radicalness indicates the compatibility with current infrastructure. A completely radical technology is not just a new technology that can potentially open up a new market, but it also disturbs the status quo and the way of doing things. Usually with completely radical innovations, new infrastructure and legislation is required, and new stakeholders will arise because of it. Completely radical technologies are very rare however, and it is not always advantageous to have a radical technology. The risks of such a technology not being successful are very high and the required time of development before it is market ready is also quite high. However, the rewards when it succeeds are very high as well. The radicalness of the technology is therefore an important factor in determining which type of investor will be willing to invest.

Technological Roadmap

Most likely, the majority of the time building the company will concern the technological development of the innovation. A clear overview of tasks, milestones and deliverables of this technological development is therefore very important for potential investors. A common way to map this process is though the use of Gantt charts. Important in such a roadmap that there is a clear overview of the different dependencies such as when task C cannot start if task A and B have not finished yet. A healthy development plan has several parallel tasks and not too many dependencies.

Technological Risks

Every technological development comes with risks. Having risks is not a bad thing, but having no clear overview of the possible risks or of the severity and mitigation measures of these risks is. Each risk should be described, the chance of it happening should be indicated

(low, medium high) the potential effects should be described, the severity should be indicated (low, medium high), the proposed risk-mitigation measures should be described and the chance of success of these mitigation measures should be indicated (low, medium, high).

Appropriation regimes

Having a clear overview of your competitors, rivals and future substitutions for your product enables you to determine your appropriation regimes. In other words, how will you make sure you reap the profits of the investments in the technological development? If your product can be replicated within half a year, investors will not want to invest in your product. How will you protect your innovation then? There are a few options for this: having a patent is the strongest protection, but also the most expensive. Furthermore, it is not always possible to apply for a patent (if the technology has already been publicly demonstrated or described for example). Being the very first with a completely new technology can be a protection mechanism, especially when the technology and product are very complex. The requirement of unique assets or resources are also ways to protect the innovation and to make sure that it is not easily replicable. In some cases, secrecy can be a powerful tool (such as Coca-Cola keeping their recipe a secret), but that can be very difficult with technological products and impossible with software. Having a clear overview of your protection mechanisms is essential for investors to feel confident to invest in your company.

Financial

Revenue stream

One of the most important questions an investor will ask you is: how will you make money? It is very important to describe your revenue stream; will people have to pay a monthly fee? Will they buy the product in a store? Will they pay per use? Are there add-ons they can buy later on? Different types of end users can pay for your innovation in different ways. It is important to describe the revenue stream per type of customer.

Cost Structure

An overview of the cost structure is required to be able to determine if your company will be profitable in the end. All of the costs and their type (i.e. fixed or variable, single or

continuous) should be clearly described. A part of this is having an overview of all the resources you need, including personnel and machinery.

Price Structure

If the costs are known and the revenue streams are discerned and described, it is possible to determine the price of the product. It is important that there are enough profits to account for any unforeseen expenses, and to be able to eventually expand the company, improve the product after launch and to start working or something new when the product is a success. On the other hand, you need to strategically position yourself among competitors, rivals and possible substitutes in terms of pricing. Nobody will buy an expensive product from a newcomer, but a price that is too low could lead to the idea that your product is not of high quality.

Revenue forecast

As an extension of the revenue stream, a revenue forecast is important to be able to finally be able to make a profit forecast and a complete financial budget. A revenue forecast requires you to make a well argued (preferably by using market analyses) estimation of the number of products you are going to sell, and when the revenues will be received. When estimating the number of products you are going to sell, it is helpful to think about the scope of your customers. For instance, in the first year you could focus on a geographical area where you are familiar, expanding to the rest of the country the year after if the product is a success.

Profit forecast

With the revenue forecast, and an overview of the cost structure and price structure, it is possible to make a profit forecast. An important part of the profit forecast is to determine which of the costs will increase when you are starting to produce more products, and when there is a need to grow and expand as a company.

Financing scheme

Since there are no revenues when developing the technology and establishing the firm, funding is required to be able to cover the costs. It is therefore important to have a well-argued funding scheme. What are the preferred sources of funding and why are these

applicable to your company? Different types of investors and sources of funding have different profiles, with their own interests, behaviour, benefits and downsides. Finding the source of funding that fits your company and needs can be difficult, but it is important to be critical on this aspect since a lack of funding is one of the most occurring reasons why start-ups fail.

Financial budget

With revenue forecasts, profit forecasts and a funding scheme, an official financial budget can be made. This entails a balance sheet for the development years and two years after product launch, an operating budget for the same period, a liquidity budget for the same period and an investment budget.

Shareholders and equity

Consider the current financial structure of your company. Who are the different shareholders and how is equity divided amongst them? The level and distribution of equity of the management team provides information on the risk that the team members are willing to take with their company. To investors, this is valuable information, since it gives insight into the stakes that the team has concerning succesful development of the company.

Return On Investment

The Return on Investment (ROI) is one of the most common metrics used to determine the value of a company for an investor. The ROI indicates the benefits that an investor can expect when investing in your company. The ROI is calculated as follows: . In other words, the relative profits to the total costs of building the company. The ROI is a percentage which should be calculated per year starting from product launch.

For example, if the costs of starting the company is € 200, and the profits are € 325, the ROI is . Usually, the ROI of a start-up lies between 25% and 45% in the first few years. Aside from an overall ROI, an ROI should be calculated per investor according to the terms of investment. For instance, in the previous example an investor invested € 125 for 50% of the profits. The ROI for him or her is .

Net Present Value

The Net Present Value (NPV) is another common metric used by investors. Whereas the ROI measures the efficiency of an investment, the NPV measures future cash flow of an investment and incorporates time as a factor. One of the main rationales behind the NPV is that money decreases in value over time. This could be due to inflation or due to interests, for instance. For example, in the latter case, if you pay 10% interest each year, your earnings need to increase by 10% each year to break even. In that case € 1000 profits in year 1 equal € 1100 profits the year after and so on. Or, the other way around, € 1000 profits is only worth € 909.10 if it's earned a year later. This percentage is called the 'discount rate'. If you do not have an interest rate or other discount rate, a standard of 10% is used.

The NPV is then calculated as the combined adjusted cash flows minus the initial investment. In the example above, with a cash flow of € 1000 per year and a discount rate of 10%, the adjusted cash flow is for the first year, and for the second year. If the initial investment was € 1500, the NPV over two years is . The calculation of the NPV is then: with C_t as the cash inflow during year t, C_0 as the investment costs, r as the discount rate and t as the number of years.

Social

Environmental relevance

For innovations with an environmental aspect, it is of utmost importance that the environmental relevance is clearly defined. What environmental problem will the innovation address, and why is it relevant? Including the geographical boundaries of the innovation is also important, since not all environmental are relevant in all geographical locations.

Public acceptance

The success of innovations can be influenced by public acceptance, especially concerning social innovations. If people have a negative image of your innovation, even if it is based on wrong ideas or false statements, they are much less likely to buy your innovation and so are governments. A bad image can be caused by the NIMBY (Not In My Back Yard) effect, an ethical opposition, opinions of certain opinion leaders such as Greenpeace, or the general resistance to change that all people have. Mapping these possible resistances is important before you introduce your innovation to the public. That way, methods of creating legitimacy and thus raising public acceptance of the innovation can be developed.

The overview of possible public resistances, an estimation of the public acceptance and the strategy on creating legitimacy are therefore all part of a good (social) business plan.

Expected results

If your innovation has a societal effect, it is very important to describe the expected results, with enough sources to back those estimations up. If you cannot convince people that your innovation will yield these results, people will not buy or adopt your innovation and investors will not feel confident enough to invest in your innovation.

Impact

The World Bank has discerned three different impact categories when concerning climate related disaster resilience: the occurrence of natural disasters (caused by climate change), the exposure of buildings and people to those disasters (worsened by poor planning, for instance), and the vulnerability of materials and societies. An innovation concerning disaster resilience should have a clear description of its effect on these three categories, so that the impact of the innovation on disaster resilience is apparent to governments and investors.

Social Return On Investment

The Social Return On Investment (SROI) is an adaptation of the ROI so that it includes social impact factors. In the calculation of the SROI, the gains are replaced by the social impact value. In other words, . The difficulty here lies in determining the social impact value. Creating a healthier lifestyle will decrease health care expenditures for instance; the decrease in costs can be seen as social impact value. If your company creates 100 new jobs, the wages earned of these jobs can be seen as social impact value. If your innovation prevents the destruction of a village, the material costs of that village can be seen as the social impact value. The SROI is important for social innovations, which are not primarily made to create a profit. To be able to compare the effectiveness between them, and to see if they’re worth investing them, the SROI is a helpful metric for investors.

Sources and references

Boschma, R.; *Proximity and Innovation: A Critical Assessment*, Regional Studies Volume 39, 2005 - Issue 1

CB Insights, *The Top 20 Reasons Startups Fail*, available online at: https://www.cbinsights.com/blog/startup-failure-reasons-top/ (2014)

Christensen, C.; Raynor, M.; *The innovator's solution: Creating and sustaining successful growth*. Harvard Business Review Press, 2013

Forbes, *A New Era For Entrepreneurs And Startups Has Begun*, available online at: http://www.forbes.com/sites/martinzwilling/2013/12/25/a-new-era-for-entrepreneurs-and-startups-has-begun/ (2013)

Forbes, *Why startups fail, according to their founders,* available online at: http://fortune.com/2014/09/25/why-startups-fail-according-to-their-founders/ (2014)

Geels, F.W.; *Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study*, Research policy 31.8 (2002): 1257-1274.

Grimaldi, R.; Kenney, M.; Siegeld,D.S.; Wright, M.; *30 years after Bayh–Dole: Reassessing academic entrepreneurship*; Research Policy 40 (2011) 1045– 1057

Gulati, R.; *Alliances and Networks*, Strategic Management Journal, Vol. 19, 293–317 (1998)

Hekkert, M.; Ossebaard, M.; *De innovatiemotor*, Koninklijke van Gorcum B.V., 2010

Kauffmann, *The Kauffman Index, Startup Activity, National Trends 2016*, available online at: http://www.kauffman.org/~/media/kauffman_org/microsites/kauffman_index/startup_activity_2016/kauffman_index_startup_activity_national_trends_2016.pdf (2016)

Mahoney, J.T.; Pandian, J.R.; *The resource-based view within the conversation of strategic management*, Strategic management journal 13.5 (1992): 363-380.

Millar, R.; Hall, K.; *Social Return on Investment (SROI) and Performance Measurement: The opportunities and barriers for social enterprises in health and social care*, Public Management Review Volume 15, 2013 - Issue 6, pp. 923-941

Ortín-Ángel, P.; Vendrell-Herrero, F.; *University spin-offs vs. other NTBFs: Total factor productivity Differences at outset and evolution*; Technovation 34 (2014) 101–112

Osawa, Y.; Miyazaki, K.; *An empirical analysis of the valley of death: Large-scale R&D project performance in a Japanese diversified company*; Asian Journal of Technology Innovation 14 (2006) 93-116

Porter, M.E.; *How Competitive Forces Shape Strategy*, Harvard business review 57(2), January 1979

Porter, M.E.; *The Competitive Advantage of Nations*, New York: Free Press, 1990.

Rogers, E.M.; *The Diffusion of Innovations*, Free Press; 5th edition, 2003

Teece, D.J.; Pisano, G.; Shuen, A.; *Dynamic Capabilities and Strategic Management*, Strategic Management Journal, Vol. 18, No. 7 (Aug., 1997), pp. 509-533

Tidd, J.; Bessant, J.; Pavitt, K.; *Managing Innovation: Integrating Technological, Market and Organizational Change*, Wiley; 3 edition, 2005

Utterback, J.M.; *Mastering the Dynamics of Innovation*, Harvard Business Review Press; 2nd edition, 1996

Wennberg, K.; Wiklund, J.; Wright, M.; *The effectiveness of university knowledge spillovers: Performance differences between university spinoffs and corporate spinoffs*; Research Policy 40 (2011) 1128– 1143

World Bank, 2013. *Building Resilience: Integrating climate and disaster risk into development. Lessons from World Bank Group experience.* The World Bank, Washington DC.

Appendix C: Business Plan Template (v2.0)

Introduction from the BRIGAID WP6 Team

This document will become your Business Plan. A Business Plan should, in the end, be a logical and cohesive story explaining what your innovation and company is, what your goals are, how you are going to get there and why this is feasible (financially, strategically and technologically). Since you have a social innovation (focusing on disaster resilience), this document should also explain why your innovation will have an impact on the climate related problems we are currently facing.

All of these questions have been posed to you before, in the Business Development sessions guided by The Funding Company. For many of these questions, input can be used from the Business Model Canvas workshop as part of those sessions, and from the MAF+ excercises. The questions with a big overlap will refer to the MAF+, but we would recommend you to go over your notes from the Business Development sessions and your MAF+ while answering the other questions below. All of the subjects mentioned here are described in the Business Plan 101 document, with tips on how to write the section. It could therefore prove to be a very valuable tool when writing your Business Plan!

Also, feel free to use schemes, figures, tables, etc. rather than just text. Often this aids in the communication of complex or large bodies of information, and it makes the document clearer and more attractive to the audience. Keep in mind that this document must be clear for non-technical audiences: potential strategic partners, investors, or perhaps even high-end clients.

As a final tip: remember that this document is for you! Try not to simply answer the questions in a minimal way, but make an interesting and cohesive story that helps you and your audience understand the innovation and the direction that your company is moving towards. The document itself can (and should) also be used by you and your team to be able to keep track of your strategy, but it can always be altered when you choose another path.

Good luck!

Business Plan <Innovation Name> Version <X>

<Date>

<Names of collaborators>

<Company Name>

General

As a tip: the answers to the three question on this section combined should be your pitch. This can help you make sure that the answers to these questions are concise, clear, and not overly technical.

1. Provide a short description of the core idea or innovation (max. 200 words).

2. Argue the practical, environmental and societal relevance of this core idea or innovation in a well backed up description of the current context.
   Use MAF+ Exercise 1: PESTEL for input regarding current context and related relevance.

3. Describe the desired and expected practical, environmental and societal results of the core idea or innovation on the described contextual situation. Please quantify these results where possible.

Strategy

1. Provide a description of the organizational structure, with a discussion of the core competencies and expertise of the individual team members. Describe who is responsible for what, including function titles (CEO, CFO, CTO, etc). Also consider the commitment, perseverance and incentives for the team members.

2. If applicable, please provide an overview of your partners, their locations, their type of organisation and their additionality (in terms of expertise, for instance).

3. If applicable, please describe the role of each of the partners (including yourself) in the consortium or collaboration.

4. Provide a description of the short and long term goals of the company with proper argumentation of their attainability.

These goals were discussed and defined during the Business Development workshop session. Please phrase these goals as SMART as possible.

5. Describe the strategy on how to reach these goals, including milestones and key success factors.

6. Please describe how you will monitor this strategy, and which control mechanisms are in place to activate in case of irregularities.

7. Please provide a strategic timeline, preferably in a Gantt chart (including your goals, milestones and actions on how to reach them).

8. Describe the investigated user needs and argue the ways in which the innovation will fulfil them.

   Use MAF+ Exercise 12: Business Model Canvas (section customer segments and value proposition) for input.

9. Describe the target customer that will be served by the innovation, and provide a proper connection to the identified user needs.

   Use MAF+ Exercise 3: Market Segmentation and Exercise 4: Attractiveness Scorecard for input.

10. Please describe the target market in terms of scale, the actors affected by your innovation, and the market size and expected growth. Please also argue why you chose this market.

    Use MAF+ Exercise 5: Market Size Estimation and Exercise 6: Market Growth Rate for input.

11. Provide a short overview of the possible competitors and (future and present) rival and substitute technologies to the innovation.

    Use MAF+ Exercise 12: Business Model Canvas, section value proposition, for evaluation of other parties that can offer the same value.

12. Describe the advantages of the innovation over its competitors, rivals and substitutes (your Unique Selling Points).

Use MAF+ Exercise 8: Porter's Five Forces, Exercise 9: Heat Map, and Exercise 11: SWOT Priority Score for input.

13. Please describe your 'unfair advantage' (i.e. an advantage that cannot be easily copied or bought; e.g. unique know-how or resources, or lead time).

14. Identify additional assets that are required for the successful introduction of the innovation, and provide a description of how these assets will be obtained, including a description of potential suppliers.

    For description of buyers and supplies, see MAF+ Exercise 8: Porter's Five Forces.

15. Describe the strategy for market introduction, based on the identified target market and short term goals. Also identify possible barriers to entry.

16. Describe the dissemination strategy. Keep in mind the defined long term goals that have been established when describing this.

17. Describe the mechanisms that have been put in place for customer feedback.

Social

1. Describe if and how the innovation affects the occurrence of natural hazards (e.g. decreases the effects of climate change)?

2. Describe if and how the innovation affects the exposure of people, buildings or the environment to disasters (e.g. barriers or improved urban planning)?

3. Please describe the requirements for customers to use the innovation (such as new knowledge, new additional devices, new infrastructure, different behaviour).

4. Please describe how recognisable the innovation is and in which way potential customers can see or use the product before purchase.

5. Describe if and how the innovation affects the vulnerability of people, buildings or the environment (e.g. improved materials for buildings, increase social cohesion or reduce poverty)?

6. Describe the position of the innovation in the public perception. Describe possible challenges and provide a sound strategy for improving legitimacy.

7. Please give an estimation of the expected social or environmental effects of the innovation by calculating the Social Return on Investment.

Technology

1. Describe the novelty of the technological aspects of the innovation.

2. Please argue the feasibility of this technology.

3. If applicable, please describe how and where a prototype has been tested and which functionality it had.

4. Provide an overview of the planned further development of the technology, and describe the risks involved. Also describe the strategies for negating these risks. Please include for all risks how high the risk, the probability and level of control is (low, medium, high, critical)

5. Please describe the Technological Distance to the Market (TDM) for this technology including the technological barriers that still exist.

6. Please provide a technology roadmap (development plan), including activities, deadlines and milestones, preferably as an excel file.

7. Argue your strategy for appropriating the technology and preventing easy replication. Please include a patent list if applicable.

Financial

1. Give a description of the core business model for the innovation. This includes the scalability, revenue model and cost structure.

Use MAF+ Exercise 7: Cost-Volume-Profit Analysis for input for cost structure.

2. Describe the plans for post-launch development or potential for new markets of the innovation.

3. Describe the price structure, based on the identified target market and the described business model.

4. Provide a detailed and well-argued forecast for the revenues, associated costs and the resulting profits for up to three years after commercialisation. Make sure these build realistically on the previous descriptions and are in line with the long term goals. If you have a financial budget (including a balance sheet and liquidity budget), please include it as an Excel file.

5. Provide a description of the financing scheme. Include a description of possible grants and your alignment with the goals set by these grants.
6. Describe the preferred exit strategy, in the case that investors will invest in your innovation.
7. Provide an overview of the distribution of equity and/or shares in your company.
8. Provide a detailed and well-argued calculation of the Return on Investment and Net Present Value the business represents to the investor.
   For calculation examples, see Business Plan 101. For Net Present Value, you can use the standard formula "NPV" in Excel.

Appendix D: Investment and Financing for BRIGAID Innovations: An Introduction Guide

1.1 Introduction

Every innovation starts with a good idea or a brilliant technology. However, these things alone will not lead a successful innovation; financial resources are needed to succeed. Obtaining these resources isn't always easy, especially when the innovation doesn't have financial profitability as its main goal, such as environmental innovations. The most important part of obtaining additional funding is a good business case, but it doesn't end there. To truly be able to get your story across, you need to understand the perspective of the investor, whether they're public or private. In the end, it's all about their interests.

Luckily for social innovators (including environmental innovators, whose environmental impact or mitigation measures can be seen as a social benefit), investors do not purely focus on financial gains when deciding whether or not to invest in your idea. While there are still investors that have financial gains as main interest, there has been a rise of social investors in the last few decades. This means that some private investors are acting more alike public funding bodies. On the other hand, the increase of public funding over the years have shifted the role from governments towards that of an investor; they need to be able to assess whether a project is good enough to spend public funds on. In that sense, public funding bodies have begun to shift more towards the perspective of private investors, becoming pseudo-private in the process.

To make sense of this, and to understand the perspective of the investors, this document illustrates the rise of "social funding" and the main sources for innovations with a strong social (including environmental) aspect to obtain the required financial resources. Firstly, the changes in economic rationales towards a social perspective are described and analysed. Secondly, this document explains what these changes mean for the behaviour of companies and investors alike and how these changes explain the rise of social entrepreneurs and social investors. Lastly, a diagram presenting an overview of frequently used financial instruments for (social) entrepreneurs is given.

1.2 Exploring the economic literature

Ever since the end of the nineteenth century authors have been thinking about the relationship between businesses and society (Jenkins, 2005). Essentially, this debate is about whether businesses should only need to focus on making profit or if they also must take various (social) stakeholders into account (Kercher, 2007). This paragraph gives an overview of the changes in economic thinking.

1.2.1 Traditional economic thinking

In economic literature Adam Smith (1723-1790) is frequently seen as the founder of what is now known as *classical economics*. In his book *The Wealth of Nations*, dated 1776, he describes economics as a science that follows natural laws and is free of human will. A central assumption of

Smith is that the pursuit of individual interests would result in the greatest public interest. According to him, free markets have the tendency to regulate themselves by means of competition, supply and demand, and self-interest. As “an invisible hand”, a free market will deliver the best outcomes for everyone (Skousen, 2016).

During the Great Depression in the twentieth century, a lot of people wondered if the invisible hand of Adam Smith was actually working. John Maynard Keynes (1883-1946) believed it didn’t and was an opponent of the *laissez-faire* attitude that Smith advocated. According to Keynesian politics the government should intervene in times of low borrowing and spending to keep the economy stable and growing (Lawson & Pesaran, 2009).

Keynesianism was very popular until the eighties but the high pressure on public finances in the eighties made the ideas of Adam Smith popular again and were the inspiration for *neoclassical economists*. The *homo economicus* is central in the neoclassical economic theory. People are seen as rational calculating species that only want a maximization of personal interests. Concepts like competition, efficiency, and profit maximization are the core aspects of this theory (Palley, 2005). A famous neoclassic economist was the Nobel Prize in Economics winner Milton Friedman (1912-2006). According to him, the maximization of profit was the primary task of enterprises. Friedman said it was this goal that leads to innovation and improves productivity. In this way, companies have great social utility (Lee, 2008).

1.2.2 A shift from individual to social interest

The resemblance between the three mentioned dominant trends in economic theory is that they all see the maximization of profits as the main goal. This traditional economic rationale is increasingly under pressure due to developments such as growing income inequality and the recent economic and financial crises. Also, the rapid climate change has changed the emphasis on short-term thinking by the homo economicus. According to Indian economist Amartya Sen (born in 1933), individuals do not only act on the basis of rational choice but also on the basis of morality. People take the value they attach to their environment into account and furthermore it is impossible for them to weigh all possible choices to choose the best option (Sen, 1977). Individuals want to take responsibility for their own economic activity, instead of leaving the collective prosperity to the invisible hand of the free market. Values such as brotherhood, social justice and ecological sustainability are leading in economic choices of today’s individual because he realizes that in our pursuit of well-being, we are fundamentally dependent on each other and on the capacity of the earth (Nussbaum & Sen, 1993). The fact that Sen in 1998 received the Nobel Prize in Economics illustrates that thinking about economics and her characteristics has changed over time.

1.3 Businesses: from maximizing profits to CSR and social enterprises

This shift in economic literature has had its effect on practice in business management and the world of finance, including the interests of investors. This shift has created an opportunity for social (including environmental) enterprises to rise and to attain private (and public) funding.

Understanding this shift in perspective is important to better understand the rationale of social investors.

Following the shift in literature, businesses were taking more and more social responsibilities due to increased globalization, a more conscious citizen, the attention of non-governmental organizations (NGOs) and changing perceptions of companies themselves (Jenkins, 2005; WBCSD, 1999). A growing number of businesses have integrated Corporate Social Responsibility (CSR) and sustainability in their company policy. Gradually more and more people pointed to the fact that corporate social responsibility is needed for the efficient functioning of the (global) market and according to a growing public, companies are more successful in the long run by taking a broader responsibility (Kercher, 2007).

Due to the increasing number of complex issues wherefore social innovation is needed, the traditional dichotomy between funders that focus on economic or social goals is thus shifting (Moore et al., 2012; Rexhepi, 2016). Not just large companies see the urgency of taking a broader responsibility by integrating CSR in their business, since social enterprises (SEs) are a fast-growing sector in the economy (Brandstetter & Lehner, 2015). The European Commission (2016) uses the term 'social enterprise' to cover the following types of business:

- Those for who the social or societal objective of the common good is the reason for the commercial activity, often in the form of a high level of social innovation.
- Those where profits are mainly reinvested with a view to achieving this social objective.
- Those where the method of organisation or ownership system reflects the enterprise's mission, using democratic or participatory principles or focusing on social justice.

The goal of SEs is not only to make money, but also to do something good for the world (Bugg-Levine et al. 2012). Another example that doesn't follow the traditional demarcation between funders that pursue social goals and those that pursue profit is a public-private-partnership (PPP). In a PPP public authorities cooperate with private businesses. Together they "aim to ensure the funding, construction, renovation, management or maintenance of infrastructure or the provision of a service through the sharing of investment risk, responsibility and reward between the parties" (Tecco, 2008).

The shift in perception is also present amongst investors. The government, angel investors and charity foundations are traditionally seen as the primary financial supporters to reach social or environmental objectives, but private investors are entering that market as well. However, there are still quite some differences between the interests and most used funding mechanisms of the different types of funders. As an innovator, it's important to understand these differences to be able to identify which type of investor is most applicable.

The first category is the one most widely associated with social investors: governments, foundations and other philanthropists. Examples of funding instruments used by these actors are grants and donations (Moore et al., 2012). These type of funders are driven by philanthropic incentives (Moore

et al., 2012; Rexhepi, 2016). The idea is that pursuing social and environmental goals will most likely mean a big risk at a financial loss and therefore are not interesting for private funders (Rexhepi, 2016).

When the risk at financial loss is lower, private investors come into play (Bugg-Levine et al., 2012). Whereas typical funders such as banks, equity investors and venture capitalists still mainly focus on maximizing profits, new types of investors have emerged who are interested in the social aspects of a businesses. Some traditional funders have also changed their interest towards a more social one (Koellner, Weber, Fenchel, &Scholz, 2005). However, private investors still want to be confident that they get return on investment, whether it's financially or socially. Therefore, private investors avoid certain investments with a high uncertainty (Tecco, 2008).

Although it is easy to measure the financial benefit of an investment, it is more difficult to find out how much social or environmental value is created. To help investors and other stakeholders to understand and manage the social, economic and environmental value of activities, the concept of Social Return on Investment (SROI) has been developed. The SROI framework monetizes social outcomes of an investment and this way reveals the economic value of social outcomes, including environmental benefits. It gives funders a more holistic perspective on the value of social projects (Koellner, et al., 2005).

In summary, investors can be classified based on their incentives and goals and it is important for innovators to find the ones most applicable for them. For some investors making a social impact is their main goal, while others are only interested in making profit. A third category wants to pursue both goals. The SROI framework helps to map the social return on investment for social funders

Priority of Funder	Social Return on Investment		Financial Return on investment
	Just Impact	Impact first/ Impact & Profit	Profit first/ Just profit
Receiver of Funding	Public Sector/ Charity	PPP/ Social Enterprise	Traditional Business
Examples of Possible Funders	Philanthropist, Government, NGO	Government, Impact Investor	Traditional Bank and Investor

decide if a development project or social business or enterprise is worth investing in.

An overview of these different kind of funders is shown in table 1, based on their priorities.

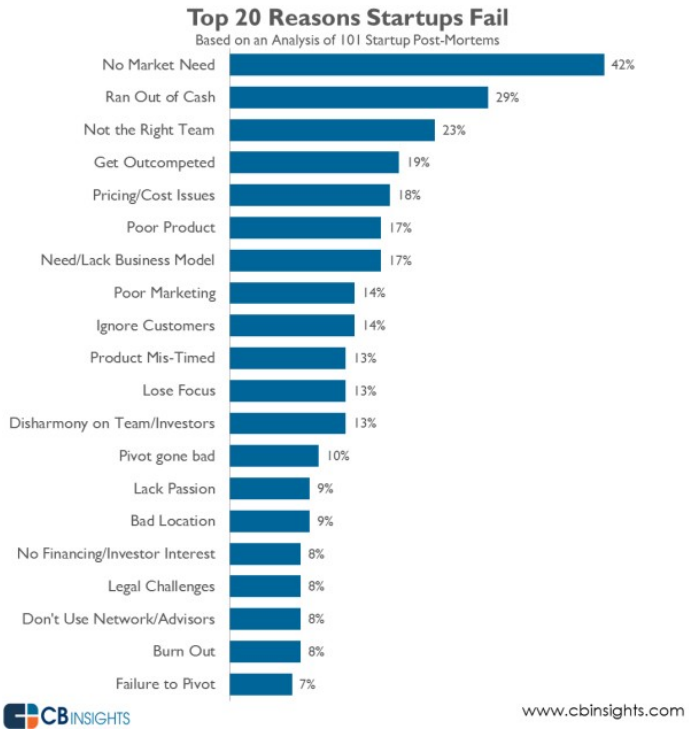
Table 1. Overview type of funders and their priorities.

1.4 Funding social finance

Although there has been a huge rise of SEs and start-ups in general, many of them are not successful in the long run. This section describes the traditional pitfalls for start-ups and explains why SEs are especially vulnerable. Afterwards, financial instruments to fund social innovation, and thus help SEs survive, are discussed and presented.

1.4.1 The financial-social return gap

According to Forbes (2014) 90% of start-ups fail. Scientific research, such as research by Grimaldi et al (2011), Wennberg et al (2011) and Ortín-Ángel & Vendrell-Herrero (2014), shows that start-ups based on new technology (New Technology Based Firms, of NTBFs), even have higher death rates. This is especially true for firms based on academic research, due to the novelty and radicalness of their technology. CB Insights (2014) analysed 101 start-ups, to find out why they failed (figure 1). The lack of funds, the number two reason on the list, can be tackled by developing a good investment plan and having the right support or guidance to do so. Funding is especially important in the long run. A common term amongst start-ups is the 'valley of death' (Osawa & Miyazaki, 2006). While



most start-ups can obtain funding for testing and developing their prototype, funding is hard to obtain during a commercialization, when results are still little, and finances are low. It is therefore of utmost importance that there is a funding strategy in the early development stages of a new firm.

Figure 1. Reasons why start-ups fail (CB Insights, 2014).

According to Moore et al. (2012) investment in innovation, and especially in social innovation, carries a higher risk in terms of ROI than investment in more established products, processes or organizations. Bugg-Levine, et al. (2012) and Moore et al. (2012) state that a lot of social enterprises merely rely on grants or donations, but this is not a sustainable business model. A lot of social enterprises therefore do not make enough money to fund themselves entirely. This results in the so-called financial-social return gap (Bugg-Levine, et al., 2012). The yields of social innovations are very valuable (protection, health, clean water, the environment), but the costs to reach these outcomes

are bigger than their monetary return. However, businesses need financial resources to start up, grow, and go to scale (Brandstetter & Lehner, 2015; Moore, Westley & Nicholls, 2012).

1.4.2 Frequently used social finance instruments

As stated, SEs need financial resources to survive. The rise of a social perspective has created relatively new funding options for social enterprises. It is important for innovators to have a sustainable business model, which means that some funding mechanisms are more important than others.

A range of traditional financial instruments are possible for social entrepreneurs. Examples according to the literature are grants, venture capital and microfinance (Bugg-Levine, et al., 2012). *Grants* are amounts of money which are mostly given by angel investors, NGOs and the government for specified purposes (Tekula, 2016). A company can also finance investments on the private market via *venture capital*. This means that capital is exchanged for company shares. While a bank requires a collateral, the venture capitalist obtains a share of the company in which it invests. For investing in a high-risk enterprise, the investor receives a relatively high yield (Bijlsma, et al., 2015). Furthermore, via *microfinance* starters or existing companies that want to (re)start a business but who cannot get a loan from the bank can get small loans (Bijlsma, Van Veldhuizen, & Vogt, 2015).

These traditional financial instruments for start-ups are especially helpful in the early stage of development. They can help enterprises to become financially viable and scale their operations (Tekula, 2016). But on the long term the abovementioned resources are not a sustainable source of money, since they do not pose recurring income (Bugg-Levine, et al., 2012). To be able to survive, innovators need a business model which has recurring and predictable sources of finance.

To achieve not only social but also a financial return, social enterprises and PPPs use “social finance” (Rexhepi, 2016). Social finance is a manner to channel private capital towards social innovation that benefits the public interest (Moore et al. 2012). Also, social finance secures its own sustainability by being profitable (Rexhepi, 2016). This is why microfinance, although it tries to deal with poverty, isn’t seen as a form of social finance. Microfinance is a form of crediting and social finance is a form of investment (Rexhepi, 2016). Rexhepi (2016) captured the place of social finance in figure 2.

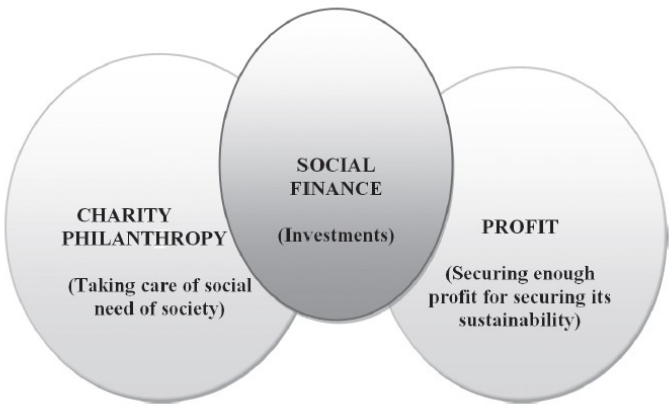


Figure 2. Different funding incentives: the role of social finance (Rexhepi, 2016)

Social finance covers a spectrum of approaches, such as impact investing, government finance and mission-related philanthropic investment (Moore, et al., 2012). Bugg-Levine, et al., 2012 have made an overview of social finance instruments that are frequently employed which usually reduce the risk for investors, making them more inclined to invest. These are:

Social Impact Bond (SIBs) and Development Impact Bond (DIBs)

SIBs are an example where a public sector agency hires a third party and only finances a project when certain outcomes are achieved. This way the government is sharing the risk with the company that is responsible for the execution of the project (Tekula, 2016). A DIB uses the same principle as an SIB but involves development agencies. DIBs have a more global focus (Brandstetter & Lehner, 2015). An impact bond model deals with the risk that public or donated money will be spent ineffectively (Rexhepi, 2016).

Crowdfunding

Crowdfunding is an alternative for obtaining finance where there are no financial intermediaries. A group or a person who wants to start a project, but has no starting capital asks a large audience for small contributions. Together, these small amounts of money of a large number of sources sum up to a large total (Bijlsma, et al., 2015; Lehner & Nicholls, 2014). Crowdfunding is a broad concept that includes different funding possibilities. Firstly, money can be donated. This is mostly the case when a project has purely philanthropic objectives. Sponsoring is also a possibility. The investor receives a non-financial reward from the social entrepreneur. Thirdly, it is possible for a social entrepreneur to loan an amount of money from an investor and pay it back with rent. Lastly, an investor can participate in the project of the social entrepreneur. The investor profits from the value increase of the social enterprise in exchange for providing the start capital. While crowdfunding can be used to fund projects with a high risk, some crowdfunding platforms will only provide the funding if the development goals are met. This makes it less suitable for high-risk enterprises, since the entrepreneurs themselves will most likely be not able to cover the costs if the development goals are not met.

Loan guarantees

A loan guarantee is the promise of one party to take over the debt obligation of a borrower if the borrower defaults. Loan guarantees are sometimes issued by charity foundations to enterprises, rather than direct funds, as an efficient way to give enterprises more-certain funding (Bugg-Levine, et al., 2012).

Quasi-equity debt

To combine the properties of equity and debt some financial instruments are developed whereby yields of the investment are dependent of the organization's financial performance (Bugg-Levine, et al., 2012). Where debts for with a set interest and payback period, the quasi-equity debt depends on

the financial performance of the organisation. If the expected financial performance discussed when providing the quasi-equity debt is not achieved, a lower (or even possibly no) financial return is paid back to the investor. This reduces the risk that enterprises have if their performances are still uncertain. Because of this, this kind of funding is very suitable for social enterprises. On the other hand, if the enterprise performs better than expected, the enterprise will have to pay a higher financial return to the investor. For the investor, this is the reward for the higher risk he or she has taken.

Grouped financing

When an enterprise has a broader portfolio, or is integrated in a PPP for instance, it can ask for grouped financing. Instead of asking funding for one project or partner, it asks funding for the parent company or the PPP. In this way, the different projects or the different partners of the PPP do not each have to find their own source of funding. It also decreases the risk for the investor, increasing the chances of convincing them to invest. After all, their risk reduces because their investment is spread out over a portfolio (PPPLab, 2016). With grouped finance the scale of a financing scheme can also increase whereby the transaction costs for the borrower (the enterprise or PPP) reduces (because they do not have to find their own funders).

Blended funding

Blended funding means the *"strategic use of development finance and philanthropic funds to mobilize private capital flows to emerging and frontier markets"* (World Economic Forum, 2015). In other words, blended finance means that innovators use the fact that they have attained public funds, such as a grant, to convince private investors to invest as well. It reduces the risk for private financiers, because a part of the risk is carried by a public organization. Private investors thus become co-financers of your enterprise instead of carrying the entire risk themselves. The public funder can guarantee to cover the first losses. Another reason why investors are more inclined to invest in an enterprise if a public body has already committed to funding the enterprise, is that the public body has already evaluated the enterprise and has thus deemed it valuable. This 'leveraging' of private resources with public funds is sometimes the reason that governments design instruments specifically for co-financing (PPPLab, 2016). These design instruments usually require a signed letter of commitment of private investors in case the funding is granted by the public body.

Revolving funds

A revolving fund is an (often public) fund which can provide financial assistance to enterprises just like a regular grant or fund. However, the repayments on the issued capital from the enterprise flow back into the fund. This makes replenishment and allocation of the fund in to a new project possible, making this type of funding a highly predictable and thus sustainable source of income since the fund cannot 'dry up'. These funds are generally made available to social enterprises or for a certain sector. A revolving fund could be an interesting funding mechanism, especially since it often provides funding on more favourable terms than commercial loans or equity (PPPLab, 2016).

1.4.3 Attributes of different funding and financing options

As discussed, because of their combination of pursuing social and economic objectives, SEs can use a wide pool of financial instruments. The different options mentioned can be confusing and it can be difficult to see which one is most suitable. Looking at the characteristics of these instruments, they differ (1) in the degree of risk they bring for the funder and (2) in the degree they generate revenues on the long run (in other words, how sustainable they are).

Based on these two characteristics, the different aforementioned funding mechanisms can arranged according to risk and sustainability (figure 3). This is not an exhaustive description, but it gives an overview of the most commonly used funding mechanisms. Funding mechanisms with a low level of sustainability (bottom of the framework) are useful to kick-start an enterprise, but an innovator needs to have a sustainable source of income, with trade (the actual selling of products and/or services) as the most sustainable and healthy source of income. As a rule of thumb: the longer the enterprise develops, the higher it should be in the diagram. It is also very wise to combine different sources of finance. The risk tolerance determines if you should attract a public funding body (high risk tolerance) or a private one (low risk tolerance).

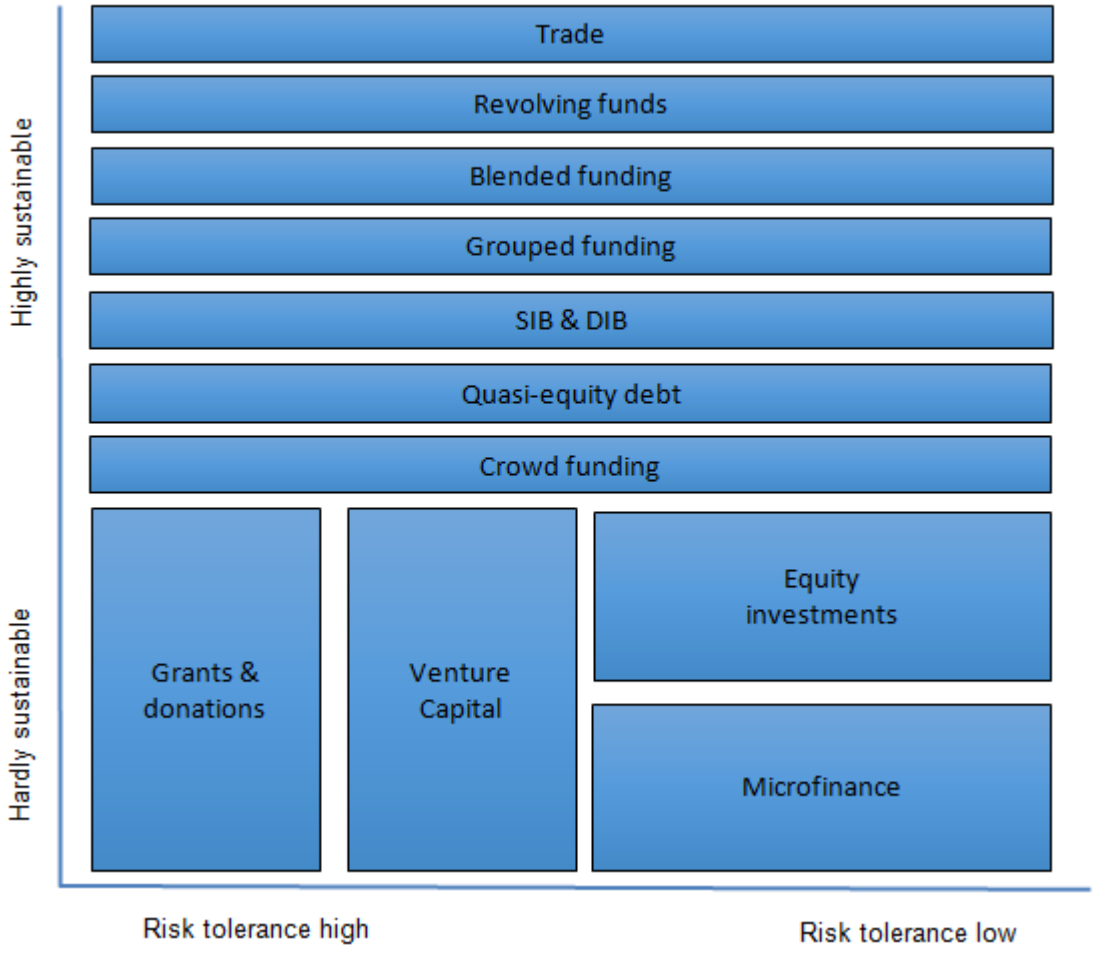


Figure 3. A diagram showing the different attributes of selection of püotential funding and financing sources for innovations

1.5 Conclusion

This document has described the perspective of investors, so that innovators have a better understanding of the different characteristics and motivations of sources of funding. Because of this, innovators can better decide where their pitch or business proposal should focus on. Additionally, this document discussed different funding mechanisms and evaluated them relative to risk and sustainability, which can be used to determine which sources of funding an innovator could and should have.

References

Bijlsma, Van Veldhuizen, & Vogt (2015). Een wereld zonder banken? Marktfinanciering en bankfinanciering in perspectief. Available online at: https://www.cpb.nl/sites/default/files/publicaties/download/cpb-policy-brief-2015-14-een-wereld-zonder-banken.pdf

Bugg-Levine, A., Kogut, B., & Kulatilaka, N. (2012). A new approach to funding social enterprises. *Harvard Business Review*, *90*(1/2), pp. 118-123.

Brandstetter, L., & Lehner, O. M. (2015). Opening the Market for Impact Investments: The Need for Adapted Portfolio Tools. *Entrepreneurship Research Journal*, *5*(2), pp. 87-107.

CB Insights (2014). *The Top 20 Reasons Start-ups Fail.* Available online at: https://www.cbinsights.com/blog/start-up-failure-reasons-top/

European Commission (2016). *Social enterprises.* Available online at: http://ec.europa.eu/growth/sectors/social-economy/enterprises_nl

Forbes (2013). *A New Era For Entrepreneurs And Start-ups Has Begun.* Available online at: http://www.forbes.com/sites/martinzwilling/2013/12/25/a-new-era-for-entrepreneurs-and-start-ups-has-begun/

Forbes (2014). *Why start-ups fail, according to their founders.* Available online at: http://fortune.com/2014/09/25/why-start-ups-fail-according-to-their-founders/

Grimaldi, R., Kenney, M., Siegeld,D.S., &Wright, M. (2011). 30 years after Bayh–Dole: Reassessing academic entrepreneurship. *Research Policy*, *40*, pp. 1045– 1057.

Jenkins, R. (2005). Globalization, corporate social responsibility and poverty. *International affairs*, *81* (3), pp. 525-540.

Kauffmann (2016). *The Kauffman Index, Start-up Activity, National Trends 2016.* Available online at: http://www.kauffman.org/~/media/kauffman_org/microsites/kauffman_index/start-up_activity_2016/kauffman_index_start-up_activity_national_trends_2016.pdf

Kercher, K. (2007). *Corporate social responsibility: Impact of globalisation and international business.* Available online at: http://epublications.bond.edu.au/cgej/4/

Koellner, T., Weber, O., Fenchel, M., &Scholz, R. (2005). Principles for sustainability rating of investment funds. *Business Strategy and the Environment*, *14*(1), pp. 54-70.

Lawson, T., & Pesaran, H. (Eds.). (2009). *Keynes' Economics (Routledge Revivals): Methodological Issues.* Routledge.

Lee, M. D. P. (2008). A review of the theories of corporate social responsibility: Its evolutionary path and the road ahead. *International journal of management reviews*, *10*(1), pp. 53-73.

Moore, M. L., Westley, F. R., & Brodhead, T. (2012). Social finance intermediaries and social innovation. *Journal of Social Entrepreneurship*, *3*(2), pp. 184-205.

Nussbaum, M., & Sen, A. (1993). *The quality of life*. Oxford University Press.

Ortín-Ángel, P., & Vendrell-Herrero, F. (2014). *University spin-offs vs. other NTBFs: Total factor productivity Differences at outset and evolution*; Technovation 34, pp. 101–112.

Osawa, Y. & Miyazaki, K. (2006). *An empirical analysis of the valley of death: Large-scale R&D project performance in a Japanese diversified company*; Asian Journal of Technology Innovation 14, pp. 93-116.

Palley, T. I. (2005). From Keynesianism to neoliberalism: Shifting paradigms in economics. *Neoliberalism: A critical reader*, pp. 20-29.

PPPLab (2016). Financing public-private partnerships.

Rexhepi, G. (2016). The architecture of social finance. *Routledge Handbook of Social and Sustainable Finance*.pp. 35-49.

Sen, A. (1977). Rational fools: A critique of the behavioural foundations of economic theory. *Philosophy and Public Affairs*, 6.

Skousen, M. (2016). *The making of modern economics: the lives and ideas of the great thinkers*. Routledge.

Tecco, N. (2008). Financially sustainable investments in developing countries water sectors: what conditions could promote private sector involvement? *International Environmental Agreements: Politics, Law and Economics*, *8*(2), pp. 129-142.

Tekula, R., & Shah, A. (2016). Funding social innovation. *Routledge Handbook of Social and Sustainable Finance*. pp. 125-136.

Wennberg, K., Wiklund, J., &Wright, M. (2011). *The effectiveness of university knowledge spillovers: Performance differences between university spinoffs and corporate spinoffs*; Research Policy 40, pp. 1128– 1143.

World Business Council for Sustainable Development (1999). *Corporate social responsibility: Meeting changing expectations*. Genève: Author.

World Economic Forum (2015). *A How-To Guide for Blended Finance*. Genève: Author.

Appendix E: Government Grants Guide and Funding Scan

Governments Grants Guide for Innovators

WP6: Business Development

The Funding Company

Content

Introduction

As an innovator in the climate resilience sector, it is vital to have a good overview of what possibilities are open to you for attaining public funding. This guide discusses several public European funding schemes that are relevant for BRIGAID innovators. Within Europe, there are a variety of funding resources available for BRIGAID innovators (see Figure 1), such as grant schemes from the European Structural Investment Fund (ESIF) programme and the H2020 programme. These resources are a part of the European 2020 strategy. These schemes serve as an illustration of the broad range of funding options that are available within Europe. One must keep in mind that this list cannot be considered a comprehensive overview of the available funding schemes within Europe.

Throughout Europe, certain tendencies in public funding can be distinguished. Generally speaking, funding schemes in western European countries are aimed at R&D developments, often specifically targeting SMEs. Eastern European grants generally aim at improving social cohesion and decreasing economic disparities. A quick glance overview of this can be seen in the figure below. Furthermore, most European funding schemes can be categorized in terms of their Technology Readiness Level (TRL) focus. TRLs are defined levels ranging from 1 to 9, representing the development phase a technological innovation is in. TRL 1 represents very early fundamental and conceptual research, whereas TRL 9 represents a (nearly) market ready product developing a market uptake strategy.

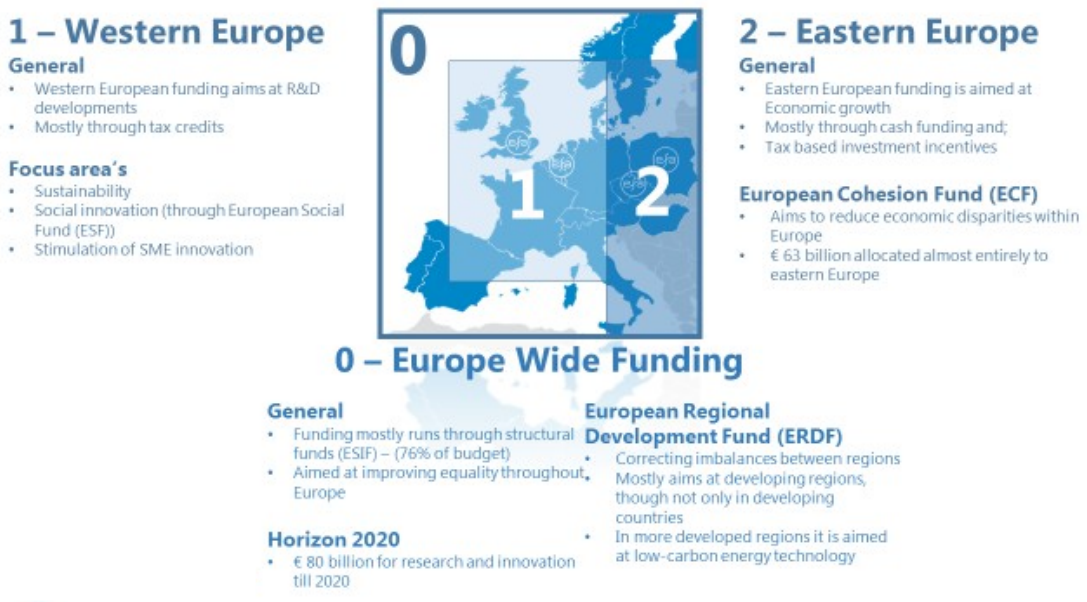


Figure 1: focus areas of European public funding options

As can be appreciated from Figure 1, a wide variety of sources of funding is available in Europe alone. TFC has made a shortlist of the options it deems most suitable for innovators in the BRIGAID programme; options where most likely most of the innovations have the necessary requirements and links with the goals of the programmes. This shortlist is:

1. The Horizon 2020 EIC Accelerator Pilot (previously SME Instrument);
2. Fast Track to Innovation;
3. Eurostars;
4. LIFE;
5. INTERREG;
6. Local ERDF funds.

These instruments will be discussed in further detail in the text below. As stated, one must keep in mind that these programmes will not all be suitable for each of the innovations in the BRIGAID programme. To that end, this document starts with a 'Funding Scan', which identifies the funding opportunities that are most relevant to your innovation. This Funding Scan will include many options beyond the five schemes listed below, which merely serve as illustration for the intricacies involved in selecting an appropriate funding scheme. As an overview, a table has been created with a summary of the relevant aspects that need to be considered when selecting a funding scheme. The text below elaborates on that. Discerning features are for whom they are applicable and the different success rates of the funding options presented.

Funding Scan

Although the funding schemes that are explained above can be relevant for nearly all BRIGAID innovators, each innovation is different and thus not every funding instrument will be relevant to your innovation. In this funding scan, the funding opportunities discussed in this document are outlined, along with the suitability to your innovation. Some of the key aspects which are important in identifying suitable funding options are:

- **Themes and sectors**

While the BRIGAID innovations are all focused on disaster resilience, you may have additional themes that are suitable for different funding options. For instance, you may have an agricultural aspect, while other innovators are much more aligned to water management. Extracting these subthemes is an important step to identify relevant funding options.

- **Technological Readiness Level**

The Technological Readiness Level is a broad description of the maturity of the technology and an indication of the position on the timeline to commercialization of the innovation. While many innovators usually start to think about funding and a Business Plan when they are already at TRL 8 or 9 (system complete and qualified, or even already operational), the BRIGAID programme (with the Business Development Programme) aids innovators of many different TRL through this process. Because of this, there is a big range in TRL amongst the different BRIGAID innovators. Some funding schemes are suitable for technological development, whilst other are tailored for scaling and market uptake. The TRL is thus an important factor in identifying suitable grants or funding options.

- **Partnerships**

Some grants require a collaboration, where a well-balanced and organised consortium is an essential aspect of the application. The consortium should be composed of organisations having excellent understanding of the topic at hand as well as the needs the topic aims to target. Cooperation between the consortium partners must be at high level and intensive, reinforcing the topic progressively and in common understanding of complementarity between the partners. The type of companies in the collaboration can also dictate which grants are suitable (for instance, some need a commercial partner and a knowledge institution).

- **Scope**

The scope of the innovation, geographically speaking, is also a key aspect in identifying relevant public funding options. Some regions have additional funding available to help further develop that region, while other public funding options are national or otherwise regional (such as the Danube Transnational Programme). Demarcating the scope of the innovation is therefore essential in identifying suitable funding options.

The funding scan will provide the innovators an overview of the funding options most suitable for them and where their priorities and focus lie. The scan itself will be evaluated and formalized as the BRIGAID programme progresses and expanded with increasing knowledge of different national and regional funding options in different BRIGAID countries.

Funding Scan Result

- **Innovator:**
- **Innovation:**
- **Themes and sectors:**
- **Technological Readiness Level:**
- **Partnerships:**

National partners:

European partners:

- **Scope:**

Grant programme	Suitable for your innovation?
Horizon 2020 & **Horizon Europe**	☐ Yes ☐No ☐Maybe
Fast Track to Innovation	☐ Yes ☐No ☐Maybe Pro: relatively high success rate compared to SME-i Con: consortium required, so multiple partners needed with a good relationship and agreements
EIC Accelerator Pilot **(SME instrument phase 2)**	☐ Yes ☐No ☐Maybe Pro: can be applied for as a single SME Con: very high competition. Typically, multiple resubmissions necessary. On average, SMEs receiving this funding have submitted 8 (!) times.
Eurostars	☐ Yes ☐No ☐Maybe Focused on R&D (TRL 3-6). Min 1 additional partner from a different Eurostars country.
LIFE	☐ Yes ☐No ☐Maybe

	Pro: sub-programme specifically targeted at Climate Change Adaptation Con: highly detailed proposal, strict guidelines.
INTERREG	☐ Yes ☐No ☐Maybe Requires international partnership.
ERDF	☐ Yes ☐No ☐Maybe

Government Grant Factsheets

1. Horizon 2020 & Horizon Europe

Horizon 2020 (H2020) is the largest and most recent of a series of "Framework Programmes for Research and Technological Development" initiated by the European Union. These framework programmes have been the primary instrument from the European Union to guide general research and innovation efforts within its member countries since the first programme was established in 1984. Horizon 2020 is the 8th framework programme, which was started in 2014, and as the name suggests, is scheduled to end in 2020.

Being a framework- (or, Umbrella-) programme, H2020 consists of a range of calls for proposals with themes aiming to solve specific challenges. Broadly, these calls are categorized in three branches:

- excellent science: primarily aimed at fundamental and scientific research;
- industrial leadership: aims to speed up development of the technologies and innovations that will underpin tomorrow's businesses; and
- tackling societal challenges: addresses major concerns shared by citizens in Europe and elsewhere.

Individual calls for proposals are published regularly on the H2020 website.[5] These calls can vary significantly in their specific requirements and goals. As a general rule, however, they will be aimed at larger projects (starting at budgets over a million euros), requiring the participation of a minimum of three partners in three EU-countries and offering a 70% funding support.

Horizon Europe

Since the H2020 framework programme is scheduled to end in 2020, its follow up programme is now being developed under the name Horizon Europe.

At this moment, not many specifics are known about the calls for the new programme. However, the budget for the programme will be €100 billion (up from €80 billion for H2020), and the European Commission is promoting a "mission based" approach for establishing the individual calls for proposals. These missions should represent tangible problems that the EU aims to solve within the 7 year period of Horizon Europe.

5 https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/h2020

While the individual missions are yet to be defined, five “mission boards” have been established to guide this process. One of these mission boards is specifically aimed at Adaptation to Climate Change, making this programme potentially highly relevant to BRIGAID entrepreneurs, such as yourself.

2. Fast Track to Innovation

Fast Track to Innovation (FTI) provides funding for close-to-market, business-driven projects and is open to proposals in any area of technology or application. This means a bottom up approach. FTI should promote transdisciplinary and cross-sector cooperation. The aim is to reduce time from idea to market, stimulate the participation of first-time applicants to EU research funding, and increase private sector investment in research and innovation. The maximum duration of the project is three years; within this period the market introduction has to be done.

The FTI pilot supports projects undertaking innovation from the demonstration stage through to market uptake, including stages such as piloting, test-beds, systems validation in real world/working conditions, validation of business models, pre-normative research, and standard-setting. It targets relatively mature new technologies, concepts, processes and business models that need a last development step to reach the market and achieve wider deployment. To this end, if a proposal involves technological innovation, the consortium must declare that the technology or the technologies concerned are at least at Technology Readiness Level (TRL) 6; technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies). The indicative EU contribution per action is expected to be between €1 million and €2 million; in duly justified cases, an EU contribution of up to €3 million can be considered.

The FTI supports a wide range of different projects that include, but are not limited to Climate action, environment, resource efficiency and public-private partnerships. As with the SME instrument, success rates for the FTI instrument are relatively low. In order to have a chance of being successful in applying for FTI funding the innovation needs to be in a late stage of development with a focus on Business Plan development and market uptake strategy. The FTI instrument will be suitable to a select group of BRIGAID innovators that are in a late stage of technological development and have developed a strong business proposition with high potential for large market uptake. The Funding Scan will provide the innovators with an indication of whether their Business Plan fits the preferred FTI description (European Commission, 2017[e]).

3. EIC Accelerator Pilot (SME Instrument)

Small and Medium-sized Enterprises (SMEs) that are EU-based or established in a country associated to Horizon 2020 can now get EU funding and support for innovation projects that will help them grow and expand their activities into other countries – in Europe and beyond. This is achieved through the EIC Accelerator Pilot, formerly known as the 'SME Instrument'. The EIC Accelerator Pilot will have a bottom up approach. This means that innovators from different industry areas can apply for funding, including innovators that are focused on climate resilience. The EIC Accelerator supports close-to-market activities, with the aim to give a strong boost to breakthrough innovation. Therefore, the instrument is aimed at technologies which are at TRL 6 or higher. Highly innovative SMEs with a clear commercial ambition and a potential for high growth and internationalisation are the prime target. These SMEs can apply as a single entity or apply with multiple SMEs in a consortium.

Previously, the SME instrument consisted of 3 phases, in which the second phase concerned the core innovation project. This has now been replaced by the EIC Accelerator. Phase 1 concerned a feasibility assessment, but this has been discontinued. Phase 3 did not entail funding, but non-financial support, which has now been integrated into the EIC Accelerator.

The EIC Accelerator concerns innovation projects underpinned by a sound and strategic Business Plan. The project should have a duration of 12 to 24 months. In particular, the instrument aims at high risk and high potential, market creating innovations by SMEs throughout Europe. The support for these projects ranges from €500.000 to €2.500.000 per project, and support 70% of the total project costs, as a general rule. This makes the EIC Accelerator one of the larger funding instruments available to SMEs.

In addition to this 'lump-sum' funding, the EIC Accelerator now also offers the opportunity of a blended funding option. When choosing this option, in addition to the normal grant, you will also be eligible for up to €15 million of equity financing. This option will be an addition to the lump-sum funding and a refusal of the equity funding option will not affect the already granted funding amount.

Since the EIC Accelerator has a broad focus, many SMEs are be eligible to apply. However, the EIC Accelerator is a highly coveted and very selective instrument. The previous SME instrument generally had a success rate of less than 10% and an intensive application process, and the

expectation is that this will not change much with the introduction of the EIC Accelerator. Because of this, not every SME within the BRIGAID programme will be at a favourable position to apply for this instrument. The Funding Scan will help innovators clarify whether their innovation has potential to attain SME funding.

4. Eurostars

Eurostars supports international innovative projects led by research and development- performing small- and medium-sized enterprises (R&D-performing SMEs). Eurostars has been developed to meet the specific needs of SMEs. It is an ideal first step in international cooperation, enabling small businesses to combine and share expertise and benefit from working beyond national borders.

In order to be eligible for a Eurostars grant:

- The project coordinator has to be an R&D-intensive SME from a European country;
- There have to be at least 2 organisations from at least 2 Eurostar countries involved in the project;
- There has to be a balanced consortium. No organization or country bears more than 75% of the costs;
- The project needs to have a civil application.

Eurostars applications can be filed by Innovators that are still in a stage of experimental development, or TRL 4-5. Success rates on the Eurostars instrument are around 30%, making it a more easily attainable funding scheme than the previous two. However, eligibility criteria for the Eurostars scheme are narrower, which results in many BRIGAID innovators most likely not being eligible for participation in the scheme. As Eurostars consortia must consist of partnerships across international borders, and the eligibility criteria vary between European countries, checking the eligibility of a consortium for the Eurostars scheme can be complex. The Funding Scan will aid innovators in testing whether their innovation consortium is eligible and well suited for applying for a Eurostars grant (Eurostars, 2017).

5. LIFE

LIFE is the EU's financial instrument supporting environmental, nature conservation and climate action projects throughout the EU. LIFE distinguishes 5 types of projects: traditional, integral, technical assistance, capacity building and preparatory. Each type of project has different conditions.

Traditional projects

These projects focus on one specific natural/environmental/climate problem with project costs of 1 million.

- There is monitoring of the effect of a project;
- Demonstrable added value for Europe;
- Cooperation with relevant partners from your own country and / or Europe;
- There is no support available from other European schemes than LIFE;
- Of the total project budget 60% LIFE funding is available, 75% for priority species and habitats.

Integral projects (IP)

Integrated projects are designed as a catalyst for an integral and strategic plan for addressing the environmental or climate problems of a vast geographical area: (multi) regional or (inter)nationally. The focus is on coordination and ensure commitment of the relevant parties. These are large projects with € 8-12 million grant, with a duration of 4-8 years.

Technical Assistance projects

Projects intended for the preparation of an integral project. An IP must be submitted the following year and the maximum grant is € 100.000 per project.

Capacity building projects

Projects intended to give additional support to member states that are new in the EU, have a lower than average gross domestic product and / or otherwise lag behind with submitting LIFE projects.

Preparatory projects

These projects address specific needs for the development and implementation of Union environmental or climate policy and legislation. The specific topics are indicated in the application guide.

Since the LIFE funding scheme is specifically aimed at environmental and climate action projects, it will most likely be well suited to BRIGAID innovators. LIFE does however, emphasize projects with large budgets and consortia, preferably with an international collaboration. Therefore, not every innovator will be able or willing to conform to these requirements (European Commission, 2017).

BRIGAID relevant call:

As explained above, the LIFE programme consists of a number of project types and themes. However, not all of them are equally relevant to the typical BRIGAID innovator. The call considered most directly relevant to most BRIGAID Innovators is *"Climate change adaptation traditional projects"*[6]. This call has the following features:

- It provides action grants for best practice, pilot and demonstration projects that contribute to increased resilience to climate change. The European Commission is particularly looking for technologies and solutions that are ready to be implemented in close-to-market conditions, at industrial or commercial scale, during the project duration;
- It provides a 55% funding support, with no predefined minimum or maximum request amount. However, projects around €1 million are considered to be standard;
- There is no formal partner requirement, though having a strong partnership will generally strengthen the application;
- The call generally has a deadline in September, and so far is recurring yearly.

6 https://ec.europa.eu/easme/en/section/life/2019-life-call-proposals-traditional-projects-climate-action

6. INTERREG

The goal of INTERREG Europe is to improve the implementation of regional development programs, particularly those covered under the European Regional Development Fund (ERDF). As the name suggests, it particularly promotes European regions to collaborate, in order to enhance knowledge sharing between regions. It supports projects in the following four themes

- Strengthen research, technological development and innovation;
- Improve the competitiveness of SMEs;
- Transition to a low-carbon economy;
- Conservation and protection of the environment and efficient handling of resources.

These general themes apply to all programmes within the INTERREG Europe programme, however, INTERREG contains a separate specification of goals and criteria for each sub-programme. In total, there are close to 80 of these regional INTERREG sub-programmes. In the Funding Scan near the start of this document you will find which of these regions are applicable to your innovation.

7. Local ERDF Fund

The European Regional Development Fund (ERDF) is a framework programme that is organised in different sub-programmes on European regional level. For example in the Netherlands the ERDF is distributed via EFRO (Dutch translation of ERDF) in the four regions East, West, South and North; and in Germany ERDF money is distributed via Baden Wurttemberg, Bayern, Berlin, Brandenburg, Bremen, Hamburg, Hessen, Mecklenburg-Vorpommern, Niedersachsen, Nordrhein-Westfalen, Rheinland-Pfalz, Saarland, Sachsen, Sachsen-Anhalt, Schleswig Holstein, Thüringen. Grants are available for projects that are focused on innovation, generally with a bias towards small and medium sized businesses. The overall aim of the program is to reinforce economic, social and territorial cohesion. ERDF project need to be concerned with one of the following activities: Local development; Energy; Environment; Industry; Innovation; New technologies; SME Policy.

As these ERDF funds are managed by local governments across Europe, policies and laws regarding their distribution can vary wildly between, and even within, countries. Whether the BRIGAID innovators are eligible for these funds therefore varies greatly on a case by case basis, based on the focus area and geographical location of the innovator. The Funding Scan will aid innovators in discovering the funding potential of their innovation in their respective regions.

Overview European grant schemes

Grant programme	What is it?	Who can apply	TRL	Funding	Deadlines 2019	Success rate	Notes	Suitable for your innovation?
Horizon 2020	Umbrella for research and innovation grants from European Commission.	Consortium of min. 3 partners from min. 3 countries	Varying, 3-7	70% funding (100% for not-for-profit organisations)	Varying	8-10%	Themed calls for European consortia that focus on research and innovation activities.	☐ Yes ☐No ☐Maybe

Fast Track to Innovation (FTI)	FTI is meant for the market uptake of disruptive innovations. It is available for ideas from consortia of innovators of all types and sizes from across Europe	Consortia consisiting of 3-5 partners from min. 3 eligible countries	6 of higher (focused on market introduction)	70% funding (100% for not-for-profit organisations) Funding approx. € 1 – 2 million (maximum € 3 mln) Project duration 12-24 mth	21-02-2019; 23-05-2019; 22-10-2019	5-10%	Possible to apply for FTI and SME instrument in parralel	☐ Yes ☐No ☐Maybe Pro: relatively high success rate compared to SME- Con: consortium required, so multip partners needed w a good relationship and agreements
EIC Accelerator Pilot (SME instrument phase 2)	Close-to-market and scale-up innovation projects by SMEs	Single SME or consortium of SMEs established in EU Member States or H2020 associated countries	6 or higher (focused on market introduction)	70% funding Funding appr. € 0.5 – 2.5 million Project duration 12-24 mth	09-01-2019; 03-04-2019; 05-06-2019; 09-10-2019	3-6%	Following the call in June 2019, a blended finance scheme will be introduced (EIC Accelerator pilot) including loans and/or investments for market introduction activities	☐ Yes ☐No ☐Maybe Pro: can be applie for as a single SM Con: very high competition. Typically, multiple resubmissions necessary. On average, SMEs

								receiving this funding have submitted 8 (!) times.
Eurostars	For collaborating R&D performing European SMEs. Eurostars is open to all projects in all technology areas and market fields, but projects must have a civilian purpose.	Min. 2 independent SMEs from min. 2 Eurostars countries (Europe, South-Africa, South-Korea, Canada)	TRL 3-6 (focused on R&D)	25-50% funding Project completed within 36 mth; market introduction within 24 mth after project	12-09-2019	25-30%	Different eligibility criteria and budgets for the different countries.	☐ Yes ☐No ☐Maybe
LIFE	LIFE is EU's financial instrument supporting environmental, nature	Any organisation registered in the EU may apply (company, public body,	TRL 5-7 (focused on pilot / demonstration)	55% funding (75% for priority species and habitats)	Environment category: Two-step application process, deadline for	10-20%	Different sub-programmes for Environment and Climate categories.	☐ Yes ☐No ☐Maybe Pro: sub-programme specifically targeted at Climate Change

	conservation and climate action projects throughout Europe.	research institute, etc).		Projects ca. € 1 million	concept note 17 or 19-06-2019 Climate category: full proposal deadline 12-09-2019		Consortium or international collaboration is not required, but will enhance the success rate, as impact within the EU is an important criterium.	Adaptation Con: highly detaile proposal, strict guidelines
INTERREG	Umbrella programme, consisting of over 80 sub-programs, each specifically aimed at consortia in specific regions.	Consortium of companies working across predefined region borders.	Varying	50-75% depending on which INTERREG program applies	Varying, depending on region	Varies between regions. Some reach up to 40%	Focus themes vary from region to region. Generally aimed at strengthening SMEs and sustainable development.	☐ Yes ☐No ☐Maybe
ERDF	Umbrella programme. In Western Europe mostly aimed at innovation and	Varying, depending on region	Varying, depending on region	Varying, depending on region	Varying, depending on region	Varying, depending on region	European Fund redistributed as grants by regional governments, as such it is highly	☐ Yes ☐No ☐Maybe

	sustainability, in Eastern Europe mostly aimed at social cohesion and equality						varying across regions.	

Sources

- EIC Accelerator Pilot (previously SME Instrument): https://ec.europa.eu/programmes/horizon2020/en/h2020-section/eic-accelerator-pilot
- Fast Track to Innovation: https://ec.europa.eu/programmes/horizon2020/en/h2020-section/fast-track-innovation-pilot
- Eurostars: https://www.eurostars-eureka.eu
- LIFE: https://ec.europa.eu/easme/en/life
- INTERREG: https://interreg.eu
- Local ERDF funds: https://ec.europa.eu/regional_policy/en/funding/erdf/

Appendix E: Questionnaires for platform validation

This document serves as a guide for an interviewer aiming to obtain further information from multiple stakeholders on their interest in and attitude towards the BRIGAID Funding Platform, as part of the further development of the Business Case. These questionnaires are divided between the different stakeholders that we could find valuable information from for the development of the platform, as mentioned in section 5.3, either on the supply side, or on the demand side.

These questionnaires will list questions to serve as a guideline for the interviewer to spark conversation, not to provide an exhaustive overview of all knowledge to be gained from the stakeholder. The interviews should be considered semi-structured, and therefore leave ample room to pursue threads off conversations that aren't encompassed by the questions mentioned below. These questions should therefor also not be considered suitable for sending over mail.

Start-ups

- Considering the current structure of the BRIGAID program, would you be willing to participate in the Business Development Approach in order to be featured on the funding platform?
- Would you be willing to meet the required time effort to participate in all parts of the Business Development program?
- If not, what would incentivize you to want to have your company listed on the Funding Platform?
- If the platform offers a sufficiently large network of investors, would you be willing to pay to be featured on the platform? How much? What would you consider a sufficient network of investors?

Investors

- Are you familiar with the BRIGAID project? What is your opinion of the project?
- What is your current process to discover new opportunities for impact investing?
- How much time and effort do you currently put into the formal analysis of these opportunities?
- Do you consider the in-depth analysis of a business plan to be a valuable measure of a start-ups potential?
- Would you be willing to outsource part of the pre-selection of start-ups?
- Would you be willing to pay for a standardized independent analysis of business cases done by a third party?
- What would trigger you to make such a payment?

- How much would you be willing to pay for such information? What factors would influence that price?

- Would you be interested in using a third-party platform for transferring funding to a start-up and managing your portfolio?

- What features would such a platform need to have in order to convince you to use it?

- Would you be interested in using a tool that automatically recommends specific opportunities based on your investment profile?

- Would you be willing to pay a once off fee for such a recommendation? What factors would influence that?

- Would you be willing to pay a subscription fee for continuous recommendations of start-ups in the climate innovation sector?

Investment platforms/EIPP

- What value do you currently offer the investors coming to your platform?

- Do you think that a more in-depth qualitative judgement of the start-ups would increase the value of your platform to your investors?

- Would you be willing to feature additional start-ups on your platform that have had this in-depth judgement of their business case?

- Would you be willing to pay for the additional value these analyses bring to your platform?

- What factors would influence this willingness?

Appendix F: Outline business development workshop sessions

BRIGAID
BRIDGING THE GAP FOR INNOVATIONS IN DISASTER RESILIENCE

BRIGAID Business Plan Workshop

The Business Plan Workshop is the second step along the BRIGAID Business Support Programme. It is a 2-day workshop where partners from The Funding Company (Zeist, The Netherlands) and Ecologic Institute (Berlin, Germany) will visit you at your premises to discuss, reflect and challenge you on the core aspects of your business idea.

Agenda

Day 1	
10:00 - 16:00 (including a 30-minute lunch break)	Interview and discussion - General aspects of the innovation (purpose, technology, expected results) - Impact (practical, environmental and social) - Team (available expertise, responsibility allocation and accountability) - Partners (available, missing and required associates and assets) - Long-term ambition (goals, strategy, timeline) - Adoption and social acceptance (legitimacy, visibility, profile) - Market analysis (market definition and segmentation, user needs, competition) - Business model (cost structure, revenue streams, entry strategy) - Technology assessment (feasibility, novelty, IP protection, risks) - Financial viability (pricing, volume, profits) *Note: Optimally, the core management team should be present - the people deciding on business strategy, business development and technological development*

Day 2	
10:00 - 11:00	Presentation and reflection of Day 1 results - Brief evaluation of the company's and innovation's status
11:00 - 15:30 (including a 30-minute lunch break)	Business Model Canvas elaboration *Note: This is a collaborative activity and apart from management, we encourage the participation of representatives from various other departments/units.*
15:30 - 16:00	Workshop wrap-up and scheduling of next steps