



Nebula

A Built4People Project

REVIEW OF THE MOST PROMISING CO- FINANCING MODELS TO FOSTER OPEN INNOVATION



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

DELIVERABLE INFORMATION

Grant agreement	101079859
Project title	New European Bauhaus Unlocked through Built4People-endorsed Local Actions
Project acronym	NEBULA
Project coordinator	Dowel Innovation
Related work package	WP4
Related task(s)	Task 4.1 – Identification of most promising co-financing models
Lead organisation	DOWEL
Contributing partner(s)	/
Due date	30 06 2023
Submission date	04 07 2023
Dissemination level	PU

Disclaimer:

This publication was funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor CINEA can be held responsible for them.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

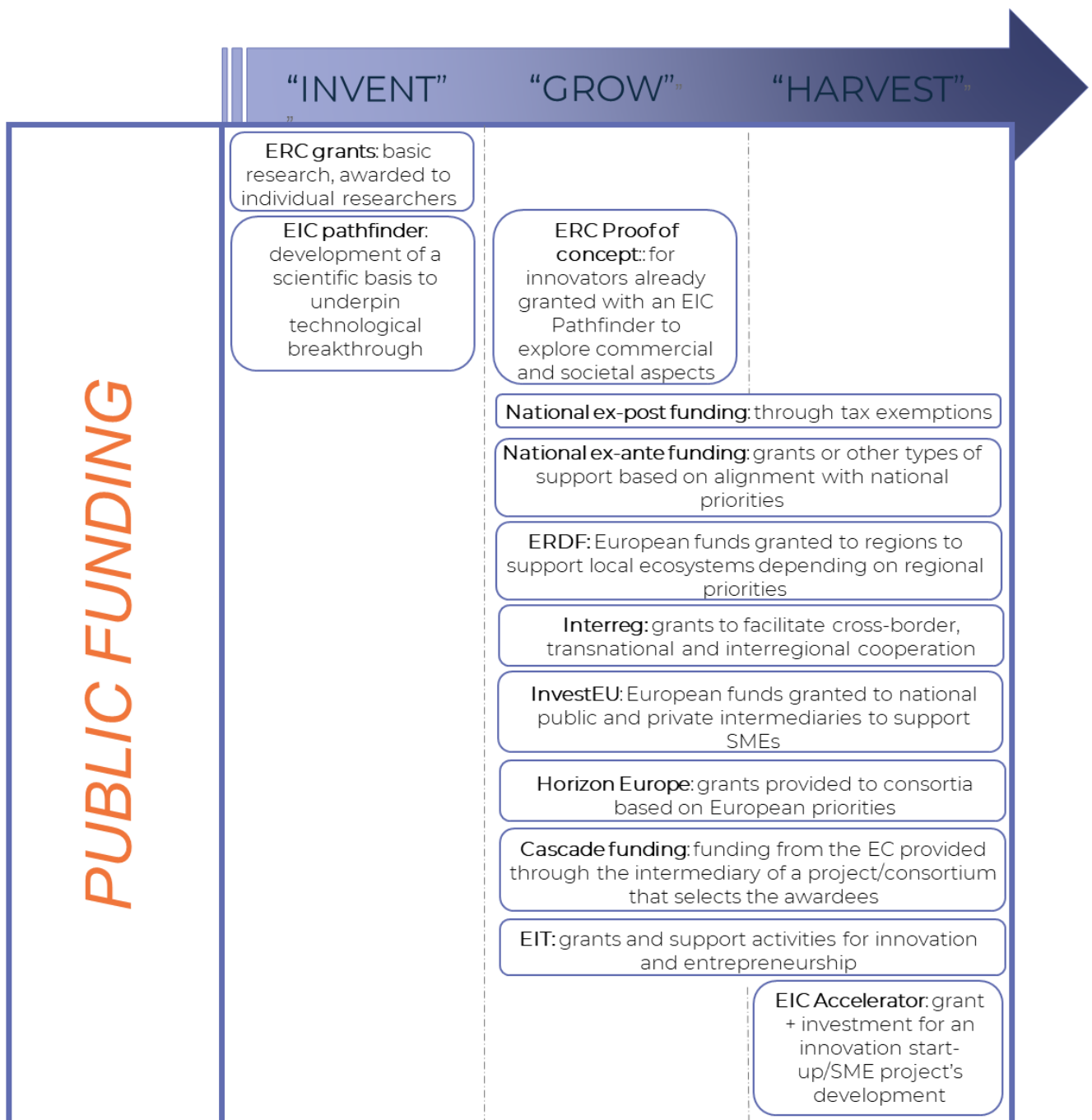
CONTENTS

Contents.....	3
List of abbreviations and acronyms	6
1 Introduction	8
1.1 Who Is this report addressed to?	8
1.2 Key stakeholders Involved	9
1.3 Types of funding and financing programmes and opportunities	10
1.4 Three critical phases of development	11
2 Co-financing models: “INVENT phase”	13
2.1 Type of support needed for this phase	13
2.2 Identification of funding options	13
2.2.1 Bootstrapping.....	14
2.2.2 Private funding	14
2.2.3 Public funding.....	17
3 Co-financing models: “GROW” phase	21
3.1 Type of support needed for this phase	21
3.2 Identification of funding options	21
3.2.1 Loans, overdrafts, repayable advances and guarantees.....	22
3.2.2 Private funding	23
3.2.3 Public funding.....	24
4 Co-financing models: “HARVEST” phase.....	31
4.1 Type of support needed for this phase	31
4.2 Identification of funding options	32
4.2.1 Private funding	32
4.2.2 Public funding.....	33
5 Examples and success cases	39
6 Recommendations.....	48
7 Conclusion and outlook	51
8 Annex 1: Summary of the major funding opportunities and their attributes....	53



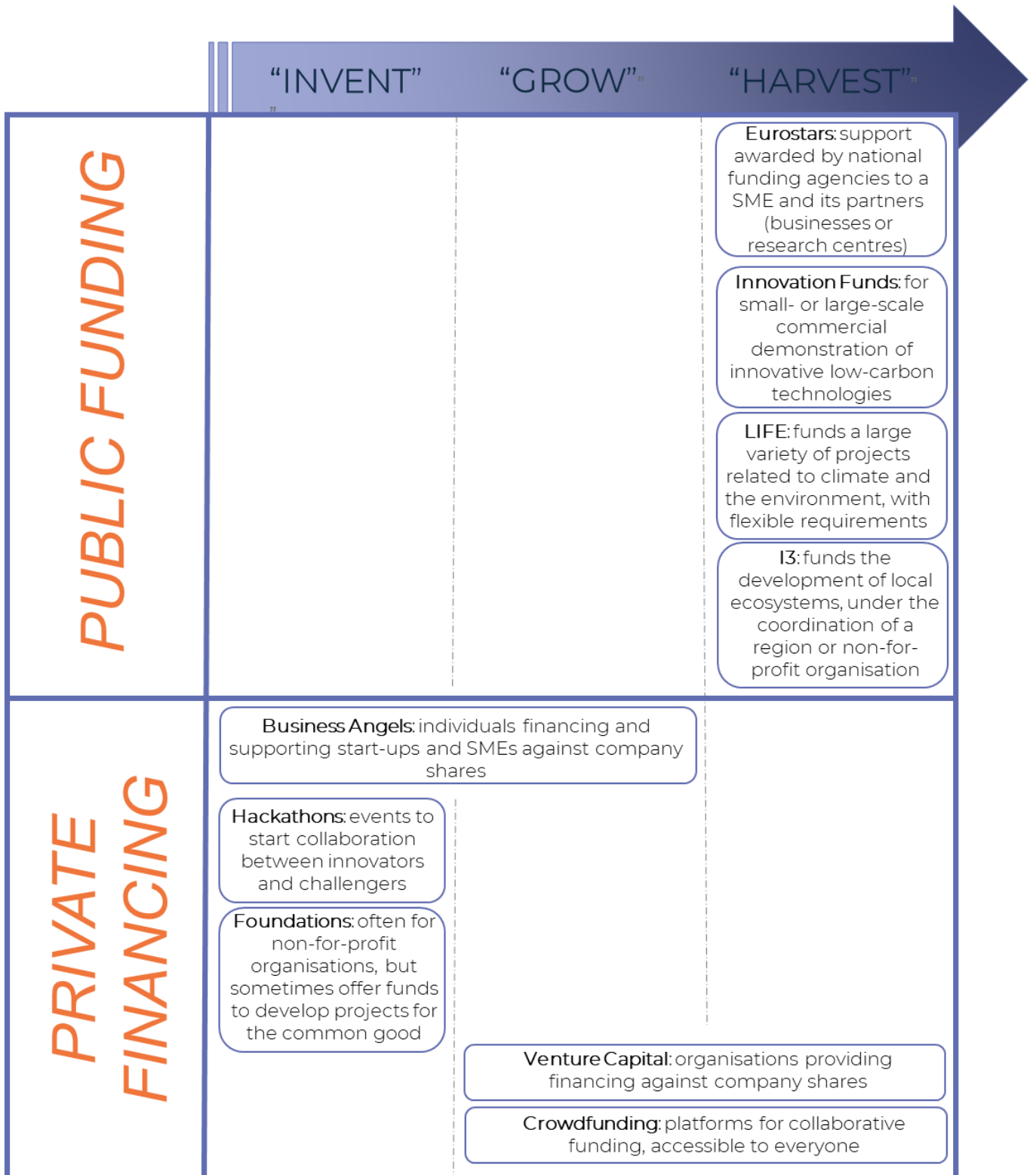
Executive summary

This report introduces the funding and financing landscape for innovators (SMEs, start-ups, research centres etc.) and intermediaries (notably clusters) of the built environment. The table below introduces all funding and financing programmes that will be developed in the following sections. A detailed summary table can also be found in the Annex I.



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859



This report is also enhanced with concrete examples (of funding opportunities and start-ups funding's pathways) from the NEBULA's target countries (Finland, France, Hungary, Italy and Spain). Finally, it presents a set of recommendations for innovators from the built environment willing to raise funds.



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

List of abbreviations and acronyms

Acronym	Description
AEBAN	Spanish Association of Business Angels
B4P	Built4People
B4PIC	Built4People Innovation Cluster
BA	Business Angels
BRL	Business Readiness Level
CINEA	European Climate, Infrastructure and Environment Executive Agency
DG	Directorate-general
EC	European Commission
EIC	European Innovation Council
EIF	European Investment Fund
EISMEA	European Innovation Council and SMEs Executive Agency
ERC	European Research Council
ERDF	European Regional Development Fund
NEB	New European Bauhaus
PhD	Philosophiae doctor
OECD	Organisation for Economic Co-operation and Development
SME	Small and medium-sized enterprise
TRL	Technological Readiness Level
VC	Venture Capital
WP	Work Package



About the NEBULA project

Launched in October 2022 and coordinated by Dowel Innovation, NEBULA will make the bridge between the Built4People (B4P) partnership and the New European Bauhaus (NEB) initiative, in order to foster the dissemination and adoption of the NEB principles and facilitate access to funding and networking opportunities for innovators. This will happen by targeting the local innovation ecosystems related to the built environment in particular B4P Innovation Clusters and their members.

NEBULA aims to create and develop a network of B4P Innovation clusters (B4PIC) and offer a range of support activities to these clusters in order to:

- Increase awareness of the benefits of innovation and improve access to co-financing to promote the adoption and uptake of innovative solutions in line with the New European Bauhaus, thereby enhancing visibility,
- Encourage cross-sectoral and interdisciplinary peer-learning from leading practitioners, as well as cross-border cooperation and networking,
- Ensure the long-term sustainability of the B4PIC network and prepare for the integration of future B4PICs.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

1 INTRODUCTION

Innovation in the built environment sector plays a crucial role in shaping our cities and communities. As the world grapples with challenges such as rapid urbanisation, climate change, and resource scarcity, innovative solutions are needed to create sustainable, resilient, and inclusive built environments. However, funding and financing innovative projects and initiatives poses a significant hurdle as the sector requires substantial upfront capital investments, long-term planning, and extensive collaboration among various stakeholders.

The following introductory pages will set the funding landscape, notably presenting the key stakeholders involved, the different types of funding that will be explored later on and the three critical phases of development that require funding.

The report will then present essential funding programmes and opportunities in more details, with advices, examples and recommendations for each of them.

There is a difference to be made between the terms of “**funding**” and “**financing**”: funding refers to the money provided by an organisation *for a specific project*, when financing refers to the capital or money received *for a business purpose* (i.e. development of a company).

Furthermore, “**co-financing**” will refer to a mix that can be done by an innovator between the different fundraising opportunities.

1.1 WHO IS THIS REPORT ADDRESSED TO?

This report aims at **facilitating the understanding of the public and private funding landscape and possible funding programmes**.

It addresses both innovation intermediaries (clusters, the administrative personal of research centres, consulting companies etc.) **and innovators including researchers, start-ups and SMEs¹ of the built environment**, based on their TRL level/development phases (gathered in three phases: the “INVENT” phase, the “GROW” phase and the “HARVEST” phase).

In the following pages, the presentation of the funding and financing landscape will therefore be somewhat generic as they address both our targets. They will then be enhanced with advice and recommendations directly addressing innovators.

¹ Small and medium-sized enterprises (SMEs) are defined in the [EU recommendation 2003/361EN](#)



1.2 KEY STAKEHOLDERS INVOLVED

Besides innovators and intermediaries that are the targets of this report, key stakeholders involve private and public funders. On the public side, funders can furthermore be distinguished at European and national/regional levels, as seen on the figure below:

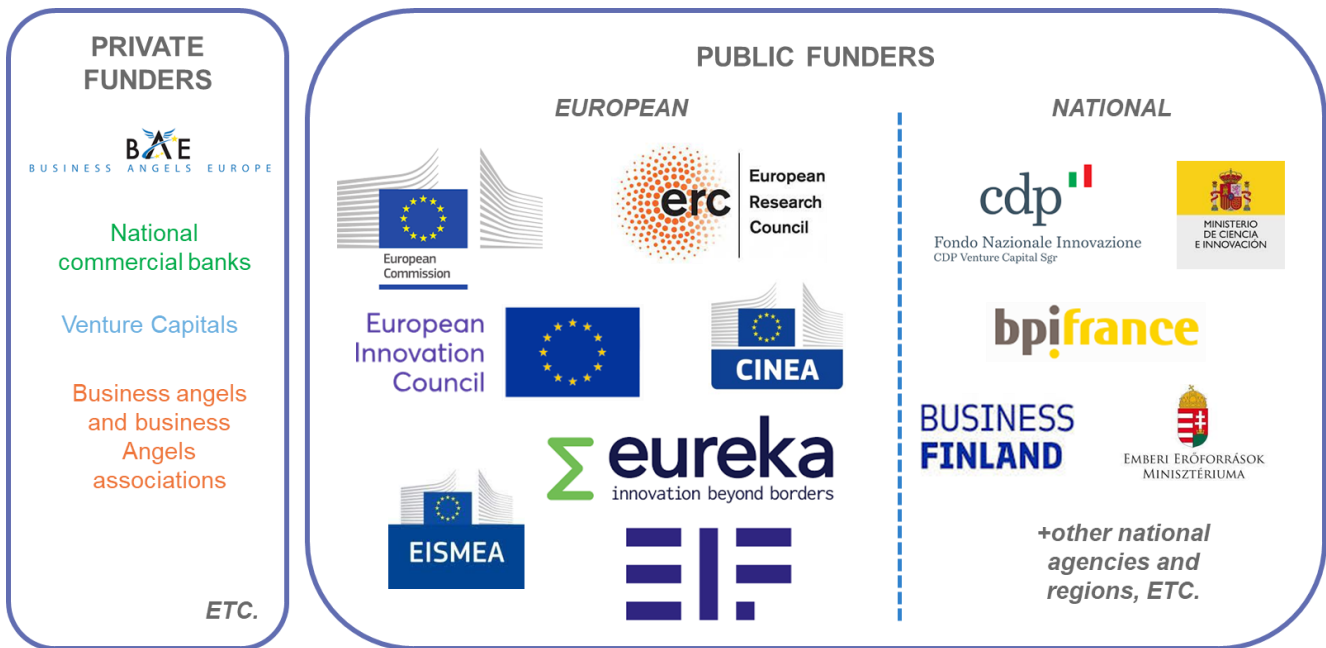


Figure 1: Non exhaustive mapping of the private and public innovation funders of the built environment

At the European level, the European Commission and its different Directorate-general (DG) are supported by several councils (European Research Council – ERC, European Innovation Council – EIC), funds (notably the European Investment Fund – EIF) and agencies (European Climate, Infrastructure and Environment Executive Agency - CINEA, European Innovation Council and SMEs Executive Agency - EISMEA, Eureka) providing funding programmes for innovators (both directly and indirectly).

As the national level, both states and regions are involved in the funding and financing activities, directly or through different agencies.

On the private side, the funders will be either organisations (banks, venture capitals, funders associations etc.) or private persons (mostly in the case of business angels). If banks and their major types of financing are usually known from innovators (due to their private experience or thanks to the support generally offered by these institutions), Venture Capitals and Business Angels often need a short introduction:

- Business Angels (BAs) invest their own money and often provide sectorial competencies, with the aim of generating a financial return. They usually take part to the business' capital in exchange for their support (see more details here: 2.2.2.1). Business Angels are individuals, but they are often gathered in specific networks for a facilitated interconnection.



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

- Venture Capitals (VCs) are organisations that, just like Business Angels, invest in companies with high growth potential (see more details here: 3.2.2.2). They usually are complementary to Business Angels for larger investments.

1.3 TYPES OF FUNDING AND FINANCING PROGRAMMES AND OPPORTUNITIES

The three basic funding types (grants, debt, and equity) are especially important to grasp for start-up/SMEs, as they will influence the businesses:

- **Grants** are often offered by a government, charity or trust and are non-repayable by nature. However, they are often bounded by strict eligibility criteria; finding and applying for suitable grants can therefore be a time-consuming and competitive process. In other words, the investment is often high with high uncertainty on the outcome.
- **Equity** means giving away a share of your company in return for funds. One advantage of this is that the investors share the risk; another advantage is that it can help align the incentives of stakeholders, so that everyone has a reason to want the company to succeed. One big disadvantage is that it leads to 'dilution' (the company founder will own less of the company, hence receiving less of the up-side) and control over decision making may also have to be shared. Equity investors naturally want to maximise the value of their stake and typically want to realise this value at an 'exit', which sometimes leads to conflicts in strategy.
- **Debt** essentially involves borrowing money that has to be paid back at some point, along with the interest accrued over time. It includes loans and overdrafts (banks, lending institutions, peer-to-peer), repayable advances, guarantees and finance secured on assets and asset-based financing. Using debt to finance a business can be a critical decision: a startup using business debt grows its revenues faster and is significantly more likely to survive the critical first three years of operation than does a start-up firm using no debt.

As shown on Figure 2, this report will mostly focus on the two first types of funding (grant and equity), as debt is a more traditional funding way, that is more easily handled by start-ups and SMEs.

The European grants and equity funding landscapes can be more complex to understand. Start-ups and SMEs can pretend to a large variety of funds, offered by a constellation of regional, national and European authorities, organisations, foundations etc.



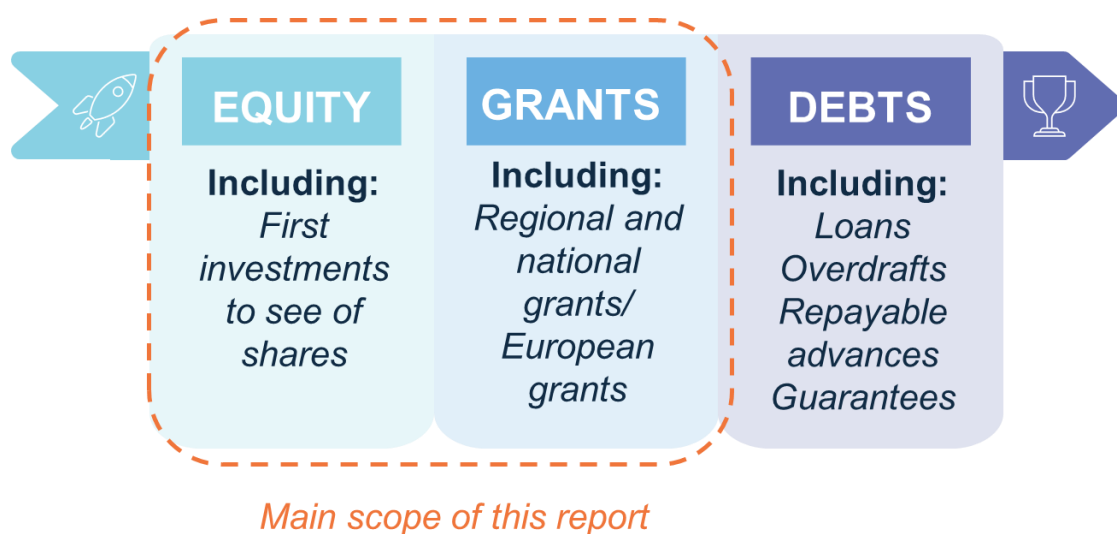


Figure 2: Main types of funding opportunities and scope of this report

1.4 THREE CRITICAL PHASES OF DEVELOPMENT

These development phases represent a slightly different approach to TRL scale as the one usually used and are based on the [Metabuilding labs'](#) scale, adapted to the built environment (see details in the public deliverable D1.3²).

According to this approach, three major phases could be the following: "INVENT", "GROW" and "HARVEST".

They are also aligned with the Business Readiness Level (BRL) scale, which is a major parameter for many financing opportunities (e.g. for Venture Capitals or the EIC Accelerator).

² Metabuilding Labs project, D1.3 "Guidelines for the EU construction sector industrial innovation process improvement", p.38



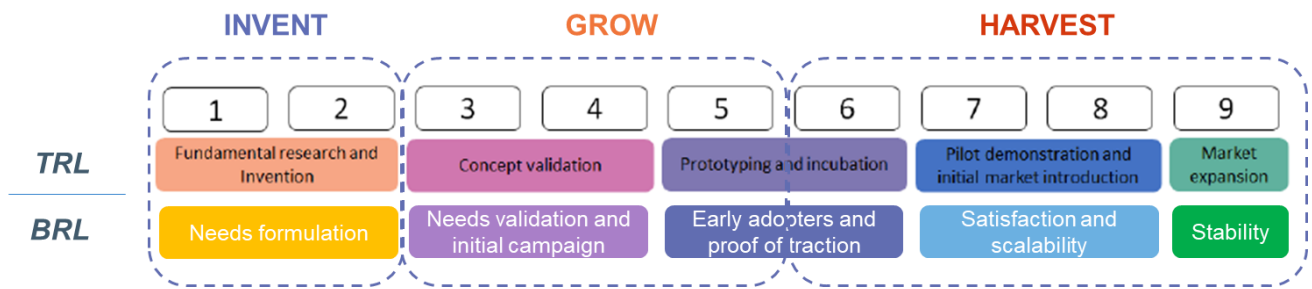


Figure 3: three critical phases of development, based on the TRL and BRL³, adapted from the *Metabuilding Projects TRL scale, D1.3*

The **“INVENT” phase**, groups TRL1 and TRL2, which is associated to only few funding opportunities. These are the fundamental research and the formulation of the technology concept.

The **“GROW” phase** defines the developments made from TRL3 (the experimental proof of concept) to TRL5, which is the technology validation in relevant environment.

Finally, the **“HARVEST” phase** defines the developments made from technology demonstration in relevant environment (TRL6 to TRL9) to the manufacturing.

For each of these phases, this report will present public and private funding programmes adapted to start-ups and SMEs to support them in addressing the right financing stakeholders for their innovations/projects’ development.

To best understand how these funding can be combined, **a selection of funding pathways from different start-ups and SMEs has been collected and produced in this report.** These pathways show the **diversity of funding routes and the importance to have a 360° view on the different funding programmes**, both public and private, to secure your company’s growth, especially because each of these stakeholders have specific requirements and funding specifications (calls or ongoing processes, funding types, collaborative developments or not etc.)

Finally, a set of recommendations has been identified through literature review and interviews with start-ups/SMEs.

³ Stages of the BRL: https://eic.ec.europa.eu/eic-frequently-asked-questions_en



2 CO-FINANCING MODELS: “INVENT PHASE”

The “INVENT” phase groups TRL1 and TRL2. These are the fundamental research and the formulation of the technology concept.

More concretely:

- **TRL1** refers to the observation and report of basic principles. It is the origin of the technology creation, where basic concepts are underpinned before being translated into future research and development.
- **TRL2** refers to the formulation of the technology concept; there are no experimental proofs or detailed analysis available at this stage. However, the basis properties have been defined and practical applications can be applied to scientific research.

2.1 TYPE OF SUPPORT NEEDED FOR THIS PHASE

This phase allows the set-up of the innovation’s conceptual framework. It does not require a lot of material and rather mostly human resources and time. It is a phase where nothing is yet to present, except ideas.

2.2 IDENTIFICATION OF FUNDING OPTIONS

For the “INVENT” phase, the main funding and financing options are of the following three types:

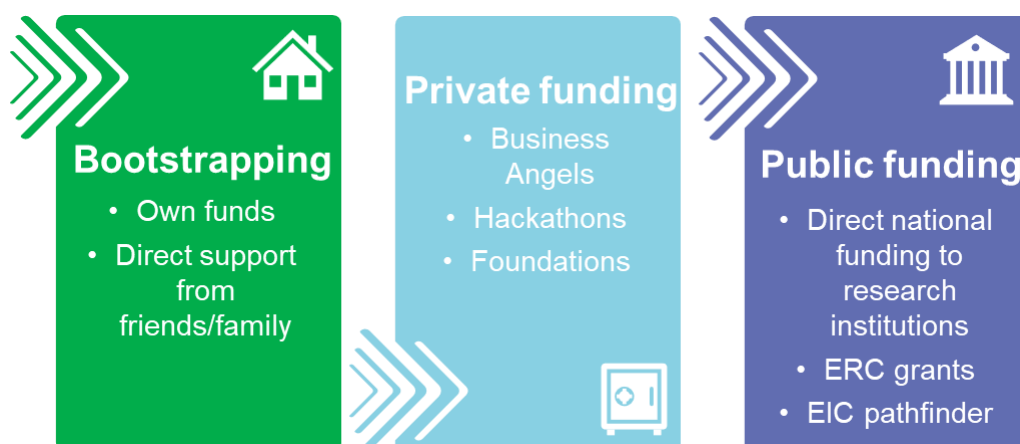


Figure 4 Funding options for Start-ups and SMEs in the INVENT phase



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

In this phase, the funding offer is low and mostly address researchers from universities or established SMEs with an existing track-record in research and innovation. For start-ups, wishing to benefit from a private or public support from start, two indirect opportunities are offered:

- **participate in an innovation competition**, which are organised both at private and public levels, with evolving formats or,
- **creating a partnership with a university** to benefit from technical and human support in the INVENT phase.

Focus on collaborative funding:

At this stage, most of the funding opportunities are not collaborative. Bootstrapping and private funding will address a single company, as well as the European Research Council (ERC).

However, a consortium composed of research institutes, universities and SMEs, can apply to the EIC Pathfinder (see section 2.1.2.3 below). This is a good opportunity for an SME to launch a new project based on its competences and get supported with researchers for the fundamental research.

2.2.1 Bootstrapping

At this stage, innovators mostly use their own fundings. This means personal fundings for start-ups (including from family and friends when possible, or thanks to a consumer loan), or company/university fundings for innovations developed by an established SME or in the framework of a research centre.

- This funding option will therefore be the main funding option for all innovators in the first phase of their work: it can be completed by private or public fundings, but innovators should rely on it exclusively.

For an existing SME: ideas often come from field experience, where an employee notices a need/a problem that the SME could bring a solution to. Some human resources will then be allocated to the theoretical development of a solution.

Finally, for a company that does not yet exist/a start-up, the funding will often be the innovator own funds, or his family/friends support, up until his idea is fixed and he can search some finances for the GROW phase.

Some higher education organisations also organise that type of “creation classes”, where student get to develop an idea and nurture it as part of their “school project”.

Funding needs and amounts are usually low (between a few k€ and a few 10k€). It is mostly used to cover personal costs to prepare the basic documentation related to the innovation (conceptualisation, presentations, first draft of a business model etc.) up until something is ready to raise funds.

2.2.2 Private funding

At this stage, innovators have nothing concrete to present to potential investors, which makes it very complicated to obtain private funds, as these generally only come when the funder believes in the innovation. Private funding therefore mostly addresses either



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

innovators with a successful track-record and a high-risk/high-gain innovation or young innovators, depending on the funding scheme.

Besides the Business Angels, another form of private “funding” can support innovators at an early stage of development: many challenges such as Hackathons are organised by public and private organisations in order to find solutions to operational problems. If this often doesn’t fund a prototype, it still supports innovators with mentorship and other kind of support, in order to reach TRL2/3.

2.2.2.1 Business Angels

The network of Business Angels (BAs) is an important source of early-stage funding for highly innovative companies⁴. Business Angels is a very broad term, gathering different realities.

Here, we will define Business Angels as “informal VC, investing their own money with the aim of generating a financial return”. It is estimated by the European Investment Fund, that this kind of market represents more than 300k investors in Europe.

They can invest alone, or as part of a syndicate (a group of angels). It is important to keep in mind that angel investors are individuals who invest from their own pockets, and don’t manage funds on behalf of others. They may be under less time pressure compared to other private equity investors and more willing to hold investments for a longer time period.

Based on a report of the European Investment Fund⁵, the Angel financing market is very correlated and supports the institutional Venture Capital (VC) industry. The report states that, “a vibrant VC ecosystem is widely recognised as a crucial prerequisite for the development of an innovative, competitive economy”.

This defining characteristic makes them better equipped than traditional VC supplier to deal with the youngest and smallest of SMEs. Angels are usually actively involved with assisting the founders of the businesses they invest in. They tend to spend time with the founders, even on a day-to-day basis, to structure the business to scale, to service large clients, to enter new markets and geographies, to integrate the core team with talented human resources, etc.



Pre-requisite:

Angel investors usually invest at a very early stage of the company’s life cycle (often even pre-revenue). **They typically look to invest in businesses that offer solutions to real problems, that have potential to scale, to which they can add value in addition to the funding provided, that they can exit in the next**

⁴ extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.eif.org/news_centre/publications/eif_working_paper_2020_62.pdfhtmlfile/Shell/Open/Command

⁵ [EIF Business Angels Survey 2021/2022: Market sentiment](#)



five to ten years, and that are being led by entrepreneurs with excellent industry knowledge and execution skills.

How to apply:



- Business angels tend to receive many business plans, so be sure to understand their unique requirements and processes beforehand, and tailor your proposition to potential investors.
- Before applying, entrepreneurs should realise that a decision to seek investment is also a commitment to sell the company provided that a potential buyer is found.
- Pre-application includes a synthetic executive summary and a business plan providing information on the offer, market, first business contacts, competition, and development prospects. The business plan should provide a monthly estimate of the foreseen expenses and income for the first two years, with turnover, fixed costs and variable costs to show cash flow needs.
- Connect with an Angels' association that can largely disseminate your application to a network of angels.

Additional support offered:



Business Angels can add great non-monetary value to a deal, like sector expertise and access to networks.



The Spanish Association of Business Angels (AEBAN), in its 2022 "Report on investment in start-ups: activity and trends"⁶, has assessed the sectors of interest of Business Angels In 2021. The most appealing sectors for Investors Included "ICT and software" (39% of interest), "health and medical equipment" (33% of interest) and "biotechnologies" (29% of interest). "Construction and real estate" came only at the 10th position of this ranking, with 11% of interest.

2.2.2.2 Hackathons

A Hackathon initially was an event hosted by a tech company where programmers gathered to come up with initiative solutions to solve one of the company's operational problems.

Nowadays, hackathons are organised in all sectors when innovation is needed and they gather experts of all types and not only programmers. These events are a win-win situation,

⁶ https://www.investinspain.org/content/dam/icex-invest/documentos/publicaciones/sectores/otros/AEBAN_informe2022.pdf



where organisations improve their solutions and innovators get to meet other experts, exchange together and develop the bottom line of new innovations that may grow if rightfully followed and managed.

Hackathons often are a public-private collaboration, organised by universities/cities/clusters etc. with the support of larger companies that will propose challenges regarding their own activities and attractive prizes, such as mentorship, the possibility to participate in industrial fairs, the participation in scientific publications or a collaboration to develop the created solution and reach TRL2/3.

Participants often represent a large panel, mostly including students, researchers and industry experts (in the built environment, e.g. architects, contractors, engineers etc.)

Many hackathons are organised in the construction sector. Here are some examples: [BuildingSMART](#), [AEC Hackathons](#), [CIB Hackathon](#), [Garage48](#) and [Estonian cluster](#).

2.2.2.3 Foundations

Some foundations fund innovation for the built environment through their support to non-for-profit or charity organisations. However, some foundations such as the [Laudes Foundation](#), also fund the industry directly and globally. It proposes grants to two Industry verticals: fashion and the built environment.

2.2.3 Public funding

At this stage, public funding opportunities are very limited.

European funds only address a very limited number of entrepreneurs. As an example, in 2021 for the EIC Pathfinder (see below, in section 2.2.3.2.1)⁷, 403 proposals from 27 countries were evaluated, and only 39 projects were funded, supporting 214 participants (for a total of €145million). The number of proposals funded for the ERC Starting Grants in 2022⁸ were higher, but still only concern 408 selected proposals (out of 2932 submitted). National funding opportunities can be more accessible, with smaller grants amounts.

Note: the representation of projects/innovations related to the built environment still seems to be very low among projects having received public funding at this stage. The large majority of innovations funded relate to the digital and health sectors. However, several challenges of the EIC Pathfinder will be linked to the Built sector and to the NEB in 2023 (see below).

⁷ https://eic.ec.europa.eu/eic-funding-opportunities/eic-pathfinder_en#latest-statistics---27-october-2021-deadline

⁸ chrome-extension://efaidnbmnnnibpcajpcgiclfindmkaj/https://erc.europa.eu/sites/default/files/2022-11/stg_2022_statistics.pdf



2.2.3.1 National funding

At this stage, national funding appears mostly under the form of direct support to universities and research centres.

2.2.3.2 European funding

The European funding opportunities mostly address researchers from universities and, to a lesser extent, researchers from high-tech organisations. SMEs who want to invest in fundamental research are therefore strongly encouraged to collaborate with universities and research centres.

2.2.3.2.1 European Research Council (ERC) grants

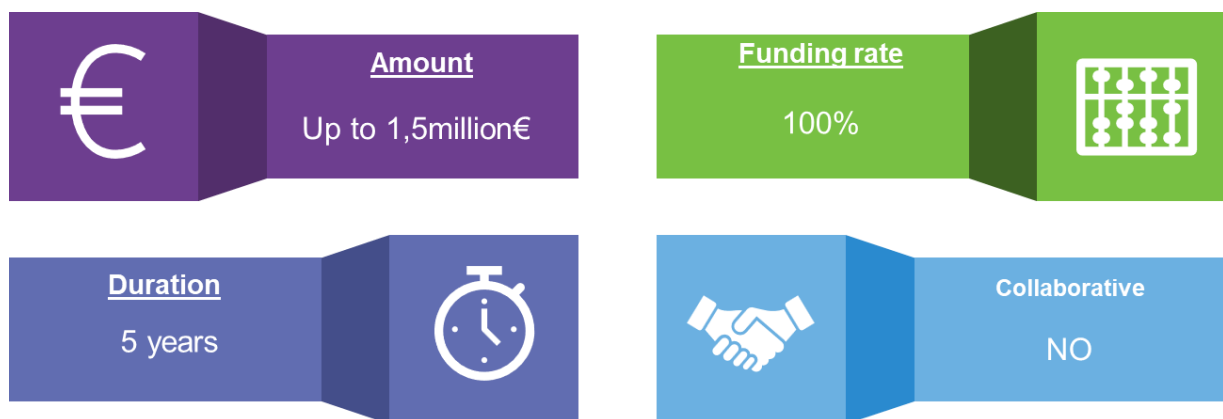


Figure 5 Synthetic view of the ERC grants

The [ERC](#) focuses on basic high-risk research and is not necessarily looking for applicative projects that may end up with technological proof of concept. Different grants exist: the Starting Grant, the Consolidator Grant, the Advanced Grant, the Proof of Concept, the Synergy Grant etc.

In some cases, an ERC project may lay the foundations for a future technology, but the technology itself will be led beyond the scope of the ERC project, in other funding schemes such as EIC Pathfinder (previously FET-Open).



Pre-requisite:

as ERC grants are awarded to individual researchers, one major pre-requisite is the researcher's career/experience. This will notably influence the targeted grant, e.g. Starting Grants are for promising early-career researchers with 2 to 7 years experiences after PhD, Consolidator Grants are for excellent research 7 to 12 years experiences after PhD and Advanced Grants for established research leaders with a recognised track record of research achievements.

Researchers must apply within a host Institution and potential team members.



How to apply:

Proposals must be submitted via the EC funding portal.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

2.2.3.2.2 European Innovation Council (EIC) Pathfinder

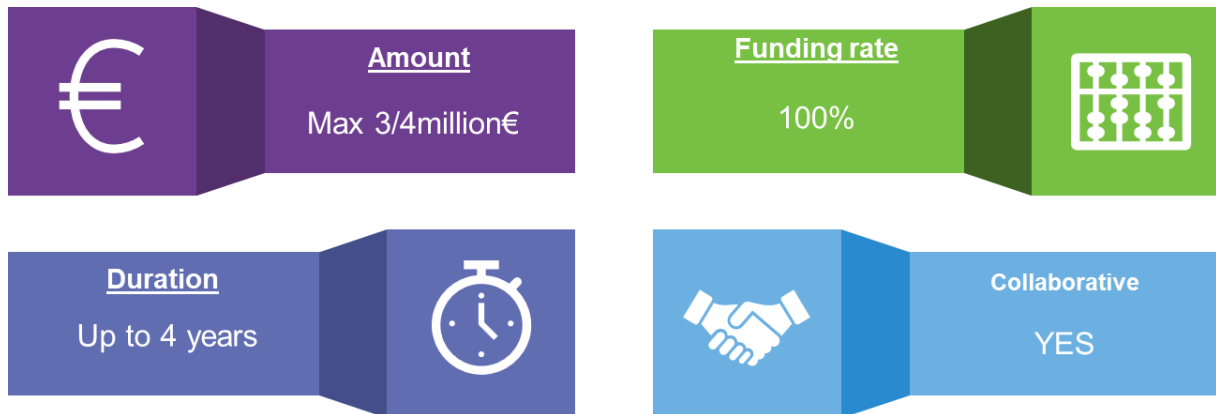


Figure 6 Synthetic view of the EIC Pathfinder

The overall objective of the [EIC Pathfinder](#) is to develop the scientific basis to underpin breakthrough technologies. It is opened to a large audience: “visionary scientists and entrepreneurial researchers from universities, research organisations, start-ups, high-tech SMEs or industrial stakeholders interested in technological research and innovation”, but researchers from research centres and academia are still the majority (see the list of 2021 winning projects and their coordinators⁹). The funded projects aim to disrupt a field and a market or create new opportunities by realising innovative technological solutions. It offers two funding opportunities:

- **EIC Pathfinder Open:** to support projects without predefined thematic priorities;
- **EIC Pathfinder Challenges:** to support projects within predefined thematic areas, changing each year, regarding the EC priorities.



Pre-requisite:

As for other collaborative European calls, the consortium **must include at least three beneficiaries:** universities, research organisations, SMEs, start-ups, industrial partners or natural persons.



How to apply:

Proposals must be submitted via the EC funding portal, in a maximum of 17 pages.

⁹ <https://eic.ec.europa.eu/system/files/2022-04/PATHFINDER%20CHALLENGES%202021%20list%20of%20mailnlisted%20proposals-fv2.pdf>





Additional support offered:

In addition to funding, successful applicants will receive tailor-made access to a wide range of **Business Acceleration Services** and interactions with EIC Programme Managers.

2.2.3.2.2.1 EIC Pathfinder Open

Innovations funded under the EIC Pathfinder Open should meet all the following essential characteristics:

- Convincing long-term vision of a radically new technology that has the potential to have a transformative positive effect to our economy and society.
- Concrete, novel and ambitious science-towards-technology breakthrough, providing advancement towards the envisioned technology.
- High-risk/high-gain research approach and methodology, with concrete and plausible objectives.

EIC Pathfinder Open involves interdisciplinary, collaborative research and development.

2.2.3.2.2.2 EIC Pathfinder Challenge

Part of the EIC Pathfinder budget is dedicated to new challenges, each year. In 2023, two of these challenges are related to the building sector:

- Clean and efficient cooling.
- Architecture, Engineering and Construction digitalisation for a novel triad of design, fabrication and materials.

2.2.3.2.2.3 Enabling access to other funders through the Seal of Excellence

The EIC is a highly competitive programme, resulting in many high-quality ideas failing to receive support due to budgetary constraints.

Companies that fall short on issues other than the quality of their innovation projects receive an **EIC Seal of Excellence**, which signals a strong investment potential for national governments and investors.



For example, the Spanish Ministry of Science and Innovation allocated €20million from the Spanish Recovery and Resilience Plan to EIC Seal of Excellence recipients in 2021, through its national innovation agency CDTI (Centre for Industrial Technological Development).



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

3 CO-FINANCING MODELS: “GROW” PHASE

The GROW phase defines the developments made from TRL3 (the experimental proof of concept) to TRL5, which is the technology validation in relevant environment. More concretely:

- **TRL3** refers to the experimental proof of concept develop through analytical and laboratory studies, determining whether the technology is feasible and ready to progress, with practical potential.
- **TRL4** validates the technology in lab, testing all components to predict performances in the final operating environment.
- **TRL5** refers to the technology validation in a relevant environment, as close to reality as possible.

3.1 TYPE OF SUPPORT NEEDED FOR THIS PHASE

The GROW phase requires a lot of investment. It is a research-intensive phase, thus requiring a lot of human resources to develop, conduct and validate analytical studies and laboratory tests. It also necessitates material investment for the development of the technology: from raw materials to technological components to be integrated in the final prototype. Finally, testing in relevant environment can be difficult and costly.

3.2 IDENTIFICATION OF FUNDING OPTIONS

For the “GROW” phase, the main funding and financing options are of the following three types:





Figure 7 Funding options for Start-ups and SMEs in the GROW phase

During this phase, **the product/solution evolve greatly**. While only a few funding opportunities exist up to TRL3, TRL4 and TRL5 can be funded by several public national and European options, notably research projects funded under the Horizon Europe clusters. However, private funding will offer the larger amount of funds for high potential companies, through early-stage Venture Capital.

Focus on collaborative funding:

At this stage, public fundings often encourage collaborative, large-scale projects, that will allow different stakeholders to improve their technologies and knowledges through one common development. This is notably the case for Horizon Europe funded projects, at the European level.

3.2.1 Loans, overdrafts, repayable advances and guarantees

Financing growth through **loans, overdrafts or repayable advances** is, in many cases, non-negotiable. It is a financing in debt which required guarantees and payment of interests. These sources are offered by private or public banks, and will reinforce the credibility of the company.

A traditional bank loan finance amount usually above 500k€. Interest rates depend on the market cost of money.



Pre-requisite:

Generally, **project owners need to bring at least 20% of self-financing for 80% of loan** and to pay for a due diligence process that checks the technical and economic viability of the project as well as the guarantees (bank account, pledge on the project, guarantees on the facility etc).



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

Guarantees provide the financial insurance policy that is needed to build a project. Most guarantees are provided by financial institutions or governments and done against a form of payment or deposit. In order to get a guarantee, companies often have to provide a collateral as a security (an asset that can be lost the company does not face your obligations).

Ethical banks are an option to consider as they value the social and ecological impact of a project, as part of their review process. A couple of these banks are highlighted in D4.2 and in our NEBULA Funding module.

Another route to explore is the public lender such as **development banks, municipal and regional funds and European Investment funds (EIF)**. Some specific funds are described in section 3.1.4.3 Public funding.

3.2.2 Private funding

3.2.2.1 Business angels

See description in the *INVENT* phase [2.2.2.1 Business angels](#).

3.2.2.2 Venture Capital: early stage

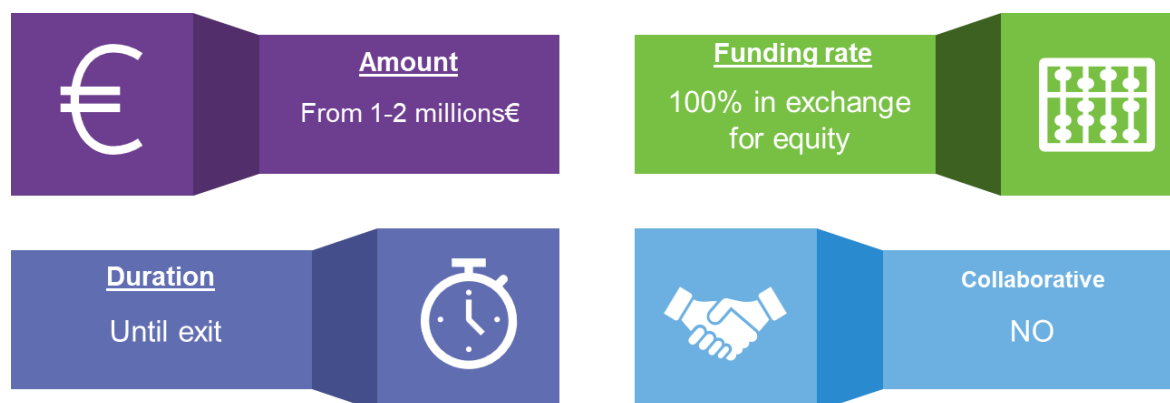


Figure 8: Synthetic view of early stage VC

Venture capital invests in innovative businesses with strong growth potential. Crucially, VCs also **offer non-financial support** to help a business commercialise and grow. **From TRL3 to TRL5**, they focus on “early stage”. Early-stage funding includes Seed and Series A financing rounds:

- **Seed funding** is typically used to finance **a startup's initial costs**, such as product development, market research, and business formation expenses. It is typically provided by angel investors and small VCs **in exchange for equity**. The amount of money raised in a seed round can range from a few thousand dollars to several million, depending on the startup's needs and the investors' appetite for risk.
- **Series A** funding is the next stage of venture capital financing, typically provided by venture capitalists in exchange for equity. The amount of money raised in a Series A round can range from a few million dollars to tens of millions, depending on the



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

startup's needs and the investors' appetite for risk. It is typically used to finance a startup's growth, such as hiring new employees, expanding into new markets, and increasing marketing spend.



Pre-requisite:

As for a Business Angel, prepare your application and include the following documents: a synthetic executive summary and a more developed business plan providing information on the offer, market, business contacts, competition, development prospects, a monthly estimation of the foreseen expenses and income for the first two years, with turnover, and fixed costs and variable costs to show cash flow needs.

Especially highlight any proprietary **Intellectual Property, the experience of your management team members, the potential ability to exit within 5 years (and associated expected gains), and the current valuation of your company.**



How to apply:

Many VCs rely on personal networks and relationships, so **third-party introductions can be useful.** However, some will also be receptive to unsolicited approaches, and may use **networking events, meetups, demo days, accelerators, pitch competitions/ challenges or brokering platforms** to find prospective investments.

3.2.2.3 Crowdfunding

Crowdfunding is a way of financing projects and businesses through many small donations from a large group of people, in exchange for promises of future goods, services, equity, dividends or other rewards. This model allows to build a network of ambassadors and future loyal customers early on in a project/innovation development.

A report from the CrowdfundingHub on the "[Current state of crowdfunding In Europe](#)" (2021) states that around 632 crowdfunding platforms existed in Europe In 2018, for a €6,5billion market, which shows the uniqueness and importance of these platforms for innovation financing.

A high fund raise through crowdfunding also facilitates other types of fund raises, as it shows a market interest. However, success is not always ensured (most of the time, no investment is granted if the target is not reached), and failure is public.

3.2.3 Public funding

Public funding address highly innovative entrepreneurs, that do not want to depend on a private partner. Public funding can be either national or European: the amounts and eligibility criteria will be different depending on the geographical coverage. In fact, national funding opportunities tend to be much smaller than European ones, but also address a larger number of entrepreneurs, with innovations that could not necessarily compete at the European level.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

3.2.3.1 National funding

For this phase, national funding opportunities can be of two types: depending on the country, we can find both ex-ante and ex-post fundings/ tax exemptions.

3.2.3.1.1 Example of ex-post funding opportunities/ tax exemptions

Ex-post funding allows the funding of R&D and R&I efforts after they have been produced. It often corresponds to tax mechanisms, such as tax reliefs. It has become a major tool in the business innovation support policy mix of countries.



Pre-requisite:

To benefit from R&D tax incentives, the R&D expenditures must already have been carried out by the company, with no guarantee to be "reimbursed".



How to apply:

The application process to benefit from the tax relief will differ from one country to another and from one mechanism to another.

Similar mechanisms exist in several European countries such as Spain, Germany, Romania etc. The [INNOTAX platform](#), from the OECD, maps part of them.



In France, several of these mechanisms have been implemented in the last 20 years: the [Research Tax Credit](#) (CIR), the [Innovation Tax Credit](#) (CII), the [Collaborative Research Tax Credit](#) (CiCo) and the [Young Innovative Enterprise](#) (JEI) or the [University start-up](#) (JEU).



Hungary also has set-up several mechanisms of ex-post funding support for R&D, such as the [R&D tax allowance](#), the [R&D tax allowance in innovation contribution](#), the [development tax incentive](#), the [R&D tax credit on wages of research facility employees carrying out R&D](#), the [R&D tax credit in Small Business Tax](#) (KIVA) and the [R&D tax exemption in Small Business Tax](#) (KIVA).

3.2.3.1.2 Examples of ex-ante funding opportunities

National funding agencies and regions propose several types of funding opportunities, including: grants, loans and support services. A list of the different funding opportunities per country can be found on the [Metabuilding Platform](#) for France, Hungary, Italy and Spain.



At the French level, these opportunities are provided by two main agencies: [BPI](#) (the French Investment Bank) and the [ANR](#) (the National Research Agency). The [FUI](#) (Inter-ministry unique fund) provides support for collaborative R&D projects labeled by a French "Pôle de compétitivité".



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

Some examples of financial provided by BPI France are the Bourse French Tech Emergence, the Subvention Innovation, the Concours innovation I-Lab and I-Nov, the [Aide pour le développement de l'innovation](#) and the [prêt d'amorçage](#).



[Business Finland](#) provides funding opportunities of different kinds addressing SMEs for research and the development of piloting. Grants can be offered to SMEs for research activities that do not result in a finished product or service. Loans can also be offered.

3.2.3.2 European funding

At this stage, the major European funding opportunities will be found in Horizon Europe clusters. Some other opportunities exist through cascade funding, the EIT, the ERC or the European Investment Fund (EIF).

3.2.3.2.1 InvestEU

[InvestEU](#) builds on the previous EU financial instruments such as the COSME programme. It provides access to finance for SMEs and start-ups, through a single integrated guarantee facility implemented by the EIF. It also supports equity financing in EU policy special interest areas and notably "sustainability" and "deep and green tech".



Pre-requisite:

For SMEs perceived as high risk or having insufficient collateral.



How to apply:

The funds can be accessed through public or private intermediaries, notably: the [EIF](#) directly, the [Nordic Investment Bank](#) (NIB), the [Cassa Depositi e Prestiti Equity](#) (CDP Equity), the [Caisse des Dépôts](#) (CDC), the [Instituto de Crédito Oficial](#) (ICO), the [Cassa Depositi e Prestiti](#) (CDP) and [BPI France](#).

3.2.3.2.2 European Regional Development Fund (ERDF)

[The ERDF](#) aims at enabling investments in a "smarter, greener, more connected and more social Europe that is closer to its citizens". One of its funding priorities is the support to SMEs and their competitiveness, notably through financing in the framework of the Smart Specialisation Strategies (S3) of European regions.

Indeed, the ERDF funds are distributed to all European regions. They then act as intermediaries and manage the funds, that they distribute based on regional calls for funding. The rules to access ERDF funds are therefore regions dependent (see section 3.2.3.1.2).



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

3.2.3.2.3 Horizon Europe clusters – pillar II

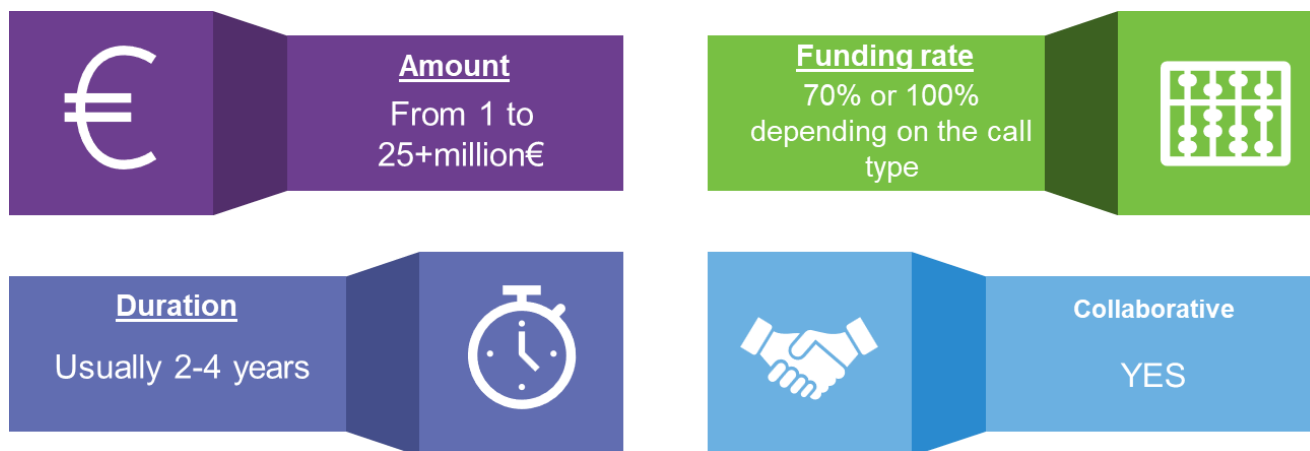


Figure 9 Synthetic view of Horizon Europe programme

[Horizon Europe](#) (HE) has a budget of €95.5 billion over the 2021-2027 programming period. Its second pillar aims at strengthening European Industrial Competitiveness, through calls distributed in six clusters.

Where to look in Horizon Europe programme?

For the built environment, most interesting calls will be found in the cluster 4 (“Digital, Industry and Space”) cluster 5 (“Climate, Energy and Mobility”) and in cluster 6 (“Food, Bioeconomy, Natural Resources, Agriculture and Environment”).

The [Built4People Partnership](#) is co-programmed with HE cluster 5. The calls aim at supporting the sustainability of the built environment, through a more circular and human-centred approach. Around €400millions will be dedicated to these calls by the EC (until 2027).

Specific calls are also labelled “[New European Bauhaus](#)”(NEB) to support the initiative. These calls support the concrete transformation of the built environment and associated lifestyles at the local level.

They can be found in different clusters: cluster 2 (e.g. HORIZON-CL2-2024-HERITAGE-01-01), cluster 4 (e.g. HORIZON-CL4-2024-TWIN-TRANSITION-01-12), cluster 5 (e.g. HORIZON-CL5-2024-D4-02-05), cluster 6 (e.g. HORIZON-CL6-2024-BIODIV-02-2-two-stage) or the calls dedicated to the EU Missions (e.g. HORIZON-MISS-2023-CIT-02-01).



Pre-requisite:

Horizon Europe calls are collaborative calls, where **at least three partners from three different countries** should work together on a proposal. Therefore, these proposals are usually not coordinated by SMEs, but SMEs are encouraged to participate in existing consortia. However, all types of legal entities can apply.



How to apply:

The submission of a European proposal is done by its coordinator on the European funding platform. To be officially part of the consortium, you need to register yourself and your company on the platform, creating a PIC [here](#)

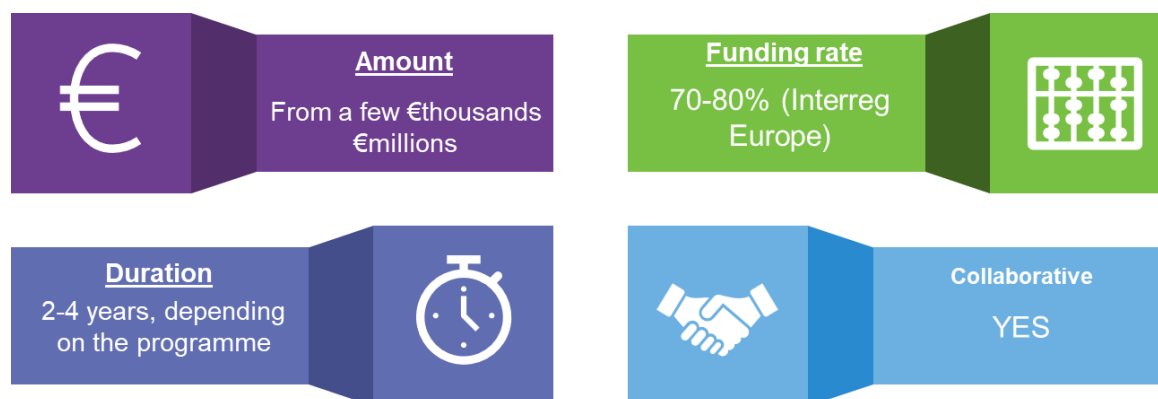


**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

(Participant Identification Code). You will then need to collect a few administrative information to complete your partner's description for the submission.

3.2.3.2.4 Interreg funds



[Interreg](#) funds aim at promoting cross-border, transnational, and interregional cooperation between different regions across Europe. It supports collaborative projects that address common challenges, foster economic development, and promote territorial cohesion. They are designed to overcome territorial barriers and facilitate cooperation and exchange of knowledge, experiences, and best practices among regions. The main objectives of the Interreg funds include:

- **Cross-border Cooperation (Interreg A – 64 programmes):** focus on promoting cooperation between regions that share a common border, on common challenges.
- **Transnational Cooperation (Interreg B – 13 programmes):** support cooperation among regions within larger geographic areas, such as sea basins, mountain ranges, or specific macro-regions. These programs encourage collaboration on issues such as research and innovation, environmental sustainability, tourism, and social inclusion.
- **Interregional Cooperation (Interreg Europe – 1 programme):** supports cooperation and exchange of knowledge between regions across Europe. It focuses on sharing best practices, policy learning, and improving the effectiveness of regional development policies.



Pre-requisite:

Interreg funds groups tens of programmes, each of them being adapted to the local priorities. Eligibility criteria and rules are different depending on the programme, and must be looked at in details before applying.



How to apply:

Calls for projects can be found on the [Interreg website](#), that displays calls from all Interreg programmes.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

3.2.3.2.5 Proof of Concept ERC

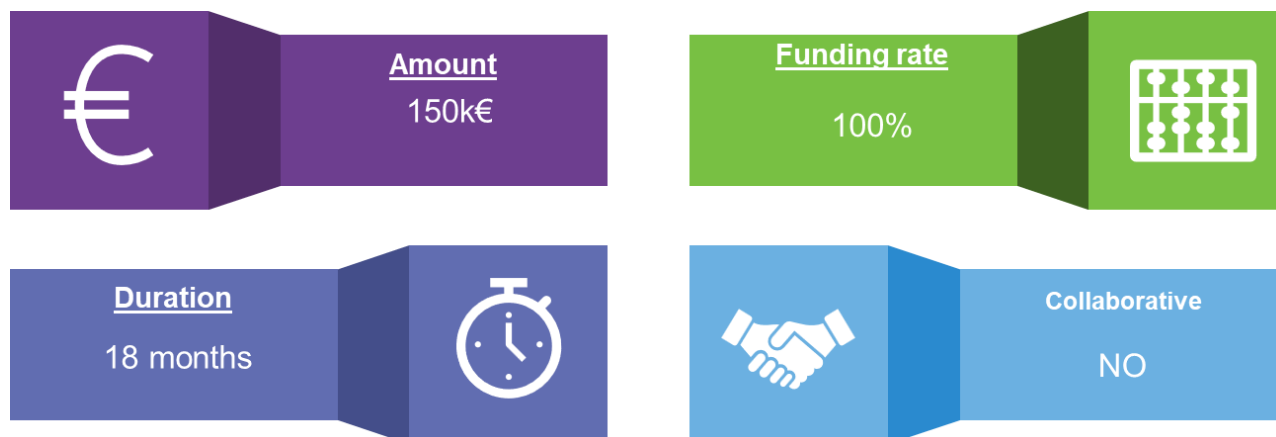


Figure 10 Synthetic view of ERC Proof of Concept

The [ERC Proof of Concept](#) allows innovators to explore the commercial/societal potential of their innovation, to support the maximisation of the value created by excellent research.



Pre-requisite:

This grant is reserved to applicants who have already been granted an EIC grant (see p.19) for a frontier research project (still ongoing or that has ended maximum 12 months before the first of January of the application year).



How to apply:

Applications to the ERC Proof of Concept must be done following the deadlines and expected formalisation of the calls. These calls can be found on the [EC funding's portal](#).

3.2.3.2.6 EIT Community

[The European Institute of Innovation and Technology](#) (EIT) is an EU body that aims to promote innovation and entrepreneurship across Europe. It operates through various Knowledge and Innovation Communities (KICs) that focus on specific thematic areas such as climate, digitalisation, health, and sustainable energy. To date, there are 12 KICs, whose objective is to support innovative ventures' business growth and assist them in becoming influential players on the global stage.

The KICs also organise communities activities, which are supported by several communities at the same time. A specific “New European Bauhaus” activity is supported by the EIT, for example with the organisation of a series of hackathons in 2022.



Pre-requisite:

Pre-requisite will depend on the communities which an innovator want to apply to. It is recommended to look at the eligibility criteria for each community and type of call.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859



How to apply:

Calls for proposals are to be found on each website of the KICs.

3.2.3.2.7 Cascade funding

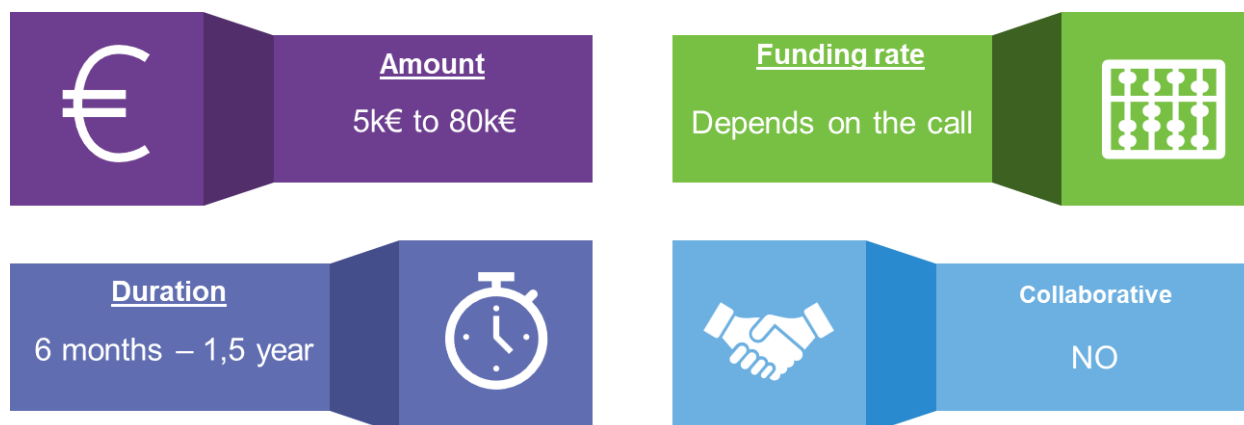


Figure 11 Synthetic view of cascade funding

Cascade funding calls are financed by European projects themselves, with public funds. Indeed, ecosystems representatives or networks, such as the clusters, often know their ecosystems very well and are able to select start-up and SMEs with innovative solutions, that will benefit from small grants (usually between 5k€ and 80k€) and some support for their development.

Among these projects, some target or have targeted the built environment, such as the [Metabuilding Platform](#) or the [EIT Community](#).



Pre-requisite:

Each project will define the eligibility criteria and pre-requisite for the applications to its funding opportunities.



How to apply:

All cascade funding calls are referenced on the EU funding & tender platform for "[Competitive calls and calls for third parties](#)".



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

4 CO-FINANCING MODELS: “HARVEST” PHASE

Finally, the “HARVEST” phase defines the developments made from technology demonstration in relevant environment (TRL6) to TRL9, the commercialisation.

- **TRL6** refers to the demonstration of the technology in a relevant environment. This means that a fully functional prototype has been developed and can demonstrate its full-scale potential in a relevant environment, when being operated. TRL6 is therefore a major step forward in the development of an innovation.
- **TRL7** refers to the demonstration of the system prototype in an operational environment or platform, to demonstrate its performance.
- **TRL8** refers to the completion and qualification of the system, when the final product has been successfully tested and is qualified for its intended operational environment; the technology can be integrated in a technology system or in an already existing technology.
- Finally, **TRL9** refers to the actual technology being successfully proven in its intended environment.

4.1 TYPE OF SUPPORT NEEDED FOR THIS PHASE

As this phase is very large, different needs will be experiment by the innovators depending on their TRL level.

Between TRL6 and TRL8, the technology is still under development, with important costs linked to its testing. Typical needs of course include human resources (HR) costs, costs related to the concrete development of prototypes and demonstrators, and costs linked to the testing itself.

- **Costs linked to the human resources can include:** time spent on the prototype development and testing, trainings etc.
- **Costs linked to the development of the prototype can include:** the materials and components needed for the development of prototypes of different sizes, potential licences or patents of software to run the prototype, services from other companies bringing additional competences to the innovation team etc.
- **Costs linked to the testing can include:** installation costs, spaces (access to or construction of labs/demonstration environment), potential OPEX to run the prototype/demonstrator (such as fuel, electricity, specific chemical reactors etc.), costs linked to the administrative procedures to be allowed to test the prototype/demonstrator etc.

From TRL8, the concrete developments will end, and costs will mostly be related to industrialisation, HR, final testing activities/problem solving and the launch of the commercial and marketing activities.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

4.2 IDENTIFICATION OF FUNDING OPTIONS

For the “HARVEST” phase, the main funding and financing options are of the following three types:

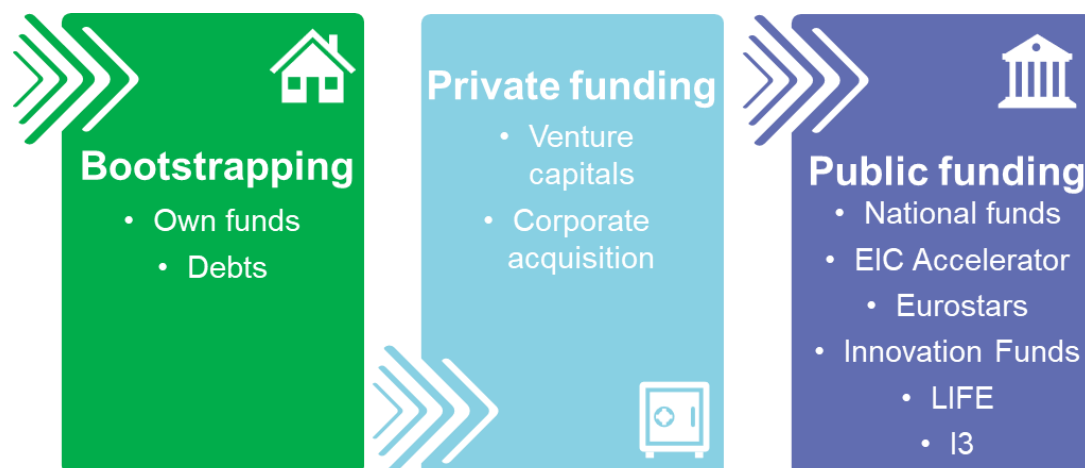


Figure 12 Funding options for Start-ups and SMEs in the HARVEST phase

Focus on collaborative funding:

For private funding, collaboration mostly happens through a funding through collaboration with a large company.

Many different types of collaborative public fundings are available at the European level: I3, Horizon Europe, Eurostars, Interreg (inter-regional or European collaboration) and LIFE (that can either be mono-partner or collaborative for companies in the same country or in different EU countries).

4.2.1 Private funding

At this stage, companies can still benefit from different rounds of Venture Capital: they will benefit from growth capital and exit of venture capitalist.

4.2.1.1 Venture Capital: growth capital

Growth capital from Venture Capitals is used to scale the business. These are typically larger financing rounds with have higher valuations because the companies have started to prove traction and de-risk the investment. Growth capital typically includes Series B, Series C, and later rounds:

- **Series B:** Series B appears similar to Series A in terms of the processes and key players. Series B is often led by many of the same characters as the earlier round, including a key anchor investor that helps to draw in other investors. The difference with Series B is the addition of a new wave of other venture capital firms that specialise in later-stage investing. However, Companies undergoing a Series B funding round are well-established, and their valuations tend to reflect that; most Series B companies have valuations between around \$30 million and \$60 million.



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

- **Serie C:** Businesses that raise a Series C funding are already quite successful. These companies look for additional funding in order to help them develop new products, expand into new markets, or even to acquire other companies. Series C funding is focused on scaling the company, growing as quickly and as successfully as possible.

4.2.1.2 *Venture Capital: exit and acquisition*

VCs can exit through secondary sale, an Initial Public Offering (IPO) or an acquisition. Early stage VCs may exit in later rounds when new investors (VCs or private-equity investors) buy the shares of existing investors. Sometimes a company very close to an IPO may allow some VCs to exit and instead new investors may come in hoping to profit from the IPO.

Furthermore, SMEs/Startups can gain from a corporate acquisition by a large company to benefit from a solid financial background, economies of scale, a large clients and partners base, other services and resources developed by the large company etc.

Several large companies are already very used to this kind of collaboration, such as the French railway company SNCF.

A framework kit may be proposed to ensure that the group and the startup share the same vision and the same priorities. It clarifies all prerequisites and provides a framework for the innovation development. Acquired businesses may be absorbed by the parent company, run as subsidiaries, or function autonomously from the parent company.

4.2.2 Public funding

Public funding suffers from high competition. Grants are therefore difficult to get, especially for SMEs. They also often imply collaboration, with is complicated to set-up as an SMEs. These types of funding opportunities therefore mostly address innovators with a low risk innovation, that are already recognised, at least at national level. A previous national funding, even if not mandatory, is often a good sign for participation.

4.2.2.1 *Example of national funding opportunities*

Here again, national funding agencies propose several types of funding opportunities, including: grants, loans and support services.



At the French level, for example, these opportunities are mostly provided by BPI France, at this TRL level. Some examples of the funding opportunities offered by BPI France are the following:

- **Prêt innovation:** this loan offers up to 5M€ to fund the industrial and commercial launch of an innovation. This fund is reserved to SMEs only, and an innovation shall be proved either by a recent BPI fund for R&D&I, a patent or digital creation or significant R&D expenses.
- **Garantie innovation:** this addresses SMEs of more than 3 years of existence only. It allows them to get a guarantee (of up to 1,5M€) for a private funding targeting an innovation.



4.2.2.2 European funding opportunities

Many different European programmes address the demonstration and industrialisation phases of the development of an innovation. The programmes targeted below all address, but not exclusively, SMEs.

4.2.2.2.1 EIC Accelerator

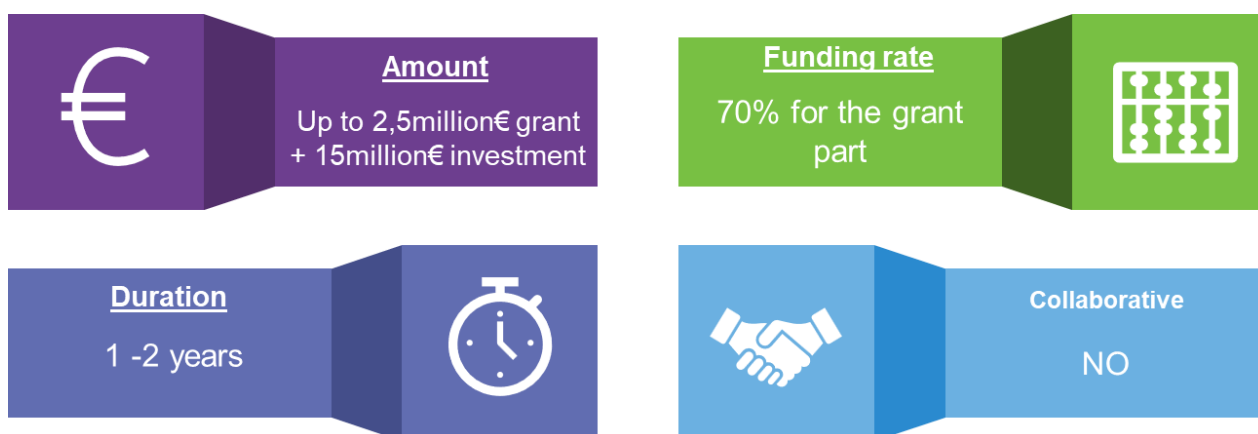


Figure 13 Synthetic view of the EIC Accelerator

The [EIC Accelerator](#) supports companies (principally SMEs, including start-ups) to scale up high impact innovations with the potential to create new markets or disrupt existing ones. It provides a combination of funding from EUR 0.5 to EUR 17.5 million (composed of a grant + investment components).

The EIC Accelerator focuses in particular on innovations where significant funding is needed over a long timeframe before returns can be generated ('patient capital'). Such innovations often struggle to attract financing because the risks and time period involved are too high.

Two different "calls" are organised each year (with four different cut-off dates): an open call (companies working on all topics can apply and be funded) and a challenge call where only companies working on the yearly specific challenges can apply. In 2023, the New European Bauhaus is one of the EIC Accelerator challenges.



Pre-requisite:

The EIC Accelerator supports the later stages of technology development as well as scale up. **The technology component of the innovation must therefore have been tested and validated in a laboratory and other relevant environment** (e.g. at least Technology Readiness Level 5).



How to apply:

The application process consists of three steps:

- A short proposal, that can be submitted at any time and consists of a 5 page form, a 10 slides pitch deck and a 3min video pitch. Feedback is generally received within 4 weeks.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

- A full proposal (including a full business plan and financial forecast). This full proposal must be submitted for one of three yearly deadlines.
- An interview with an EIC jury that also happens during specific periods.

Since the 2nd of June 2023, the application process is done on the [EC funding portal](#).

4.2.2.2 Eurostars

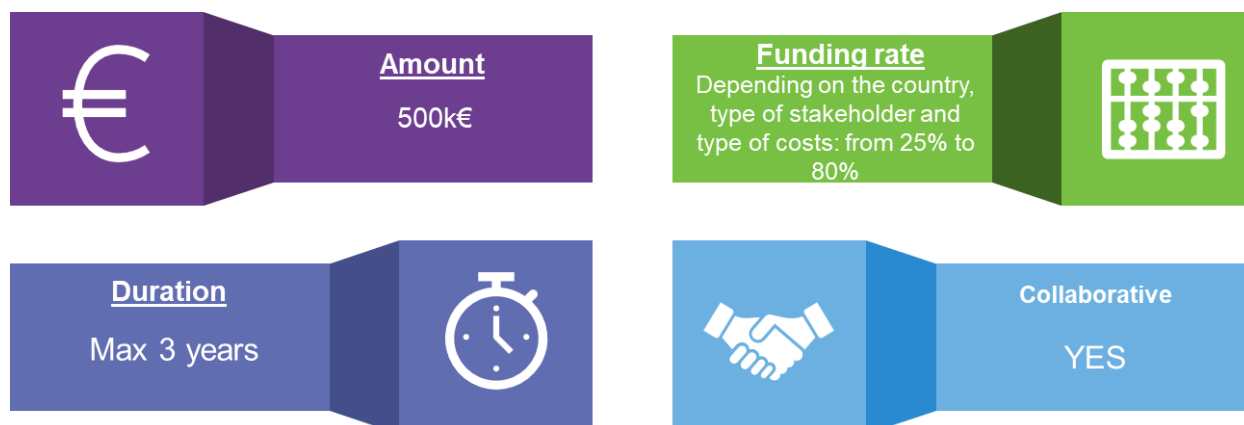


Figure 14 Synthetic view of the Eurostars programme

[Eurostars](#), as part of the European Partnership on Innovative SMEs, is co-funded by the European Union through Horizon Europe, and national funding agencies. It supports R&D projects creating innovation products, processes or services for commercialisation. The beneficiaries of Eurostars are funded directly and each by their own national funding agency. Therefore, the eligibility criteria and funding level may differ from one party to the other.



Pre-requisite:

A consortium of at least two partners, one of them (the main project participant) being an SME and the other either another SME, a large company or an academia/ research centre.



How to apply:

The proposals must be submitted on the eureka platform. Participants are encouraged to contact their national funding bodies to discuss their project idea. Read the [eureka guidelines](#) for more information.

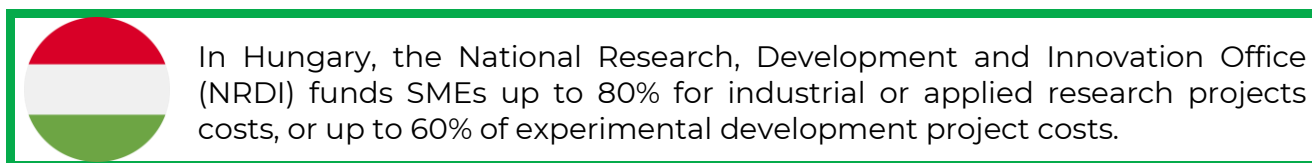


For example, the Italian Ministry for Universities and Research (MUR) covers, for the projects selected in the framework of Eurostars, 50% of industrial research projects costs in grants and 25% of experimental development project costs in grants for SMEs.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859



4.2.2.2.3 Innovation Fund

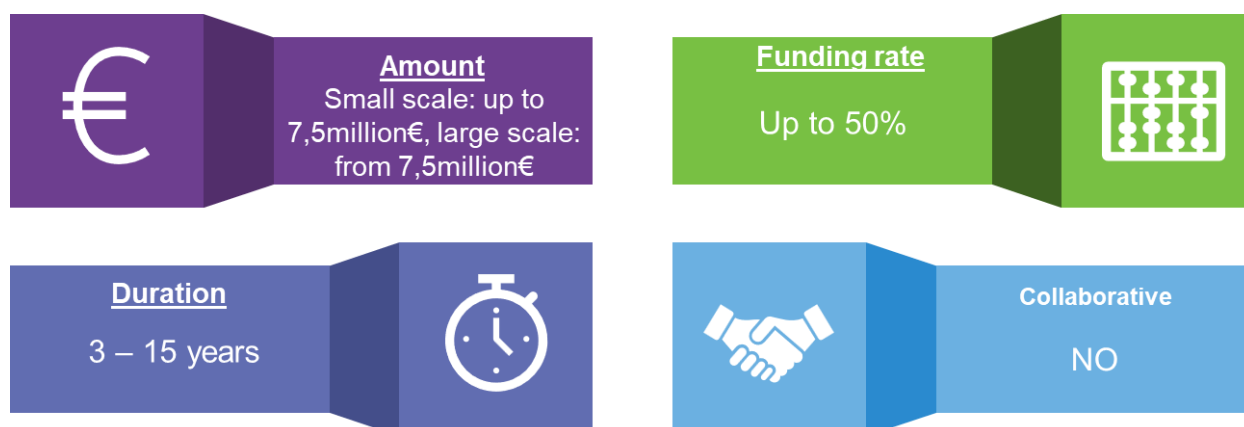


Figure 15 Synthetic view of the Innovation Fund

The [Innovation Fund](#) will provide around €38billion of support from 2020 to 2030 for the **commercial demonstration of innovative low-carbon technologies**.

This is done through calls for large and small-scale projects focusing on:

- Innovative low-carbon technologies and processes in energy-intensive industries, including products substituting carbon-intensive ones;
- Carbon capture and utilisation (CCU);
- Construction and operation of carbon capture and storage (CCS);
- Innovative renewable energy generation;
- Energy storage.



Pre-requisite:

The innovation fund focuses on highly innovative technologies and big flagship projects within Europe that can bring on significant emission reductions. The projects need to be risky (for a “one of its kind” demonstration) and sufficiently mature in terms of planning, business model as well as financial and legal structure.



How to apply:

Calls are opened for both large-scale and small-scale projects, on the [EC funding portal](#).



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

4.2.2.2.4 LIFE

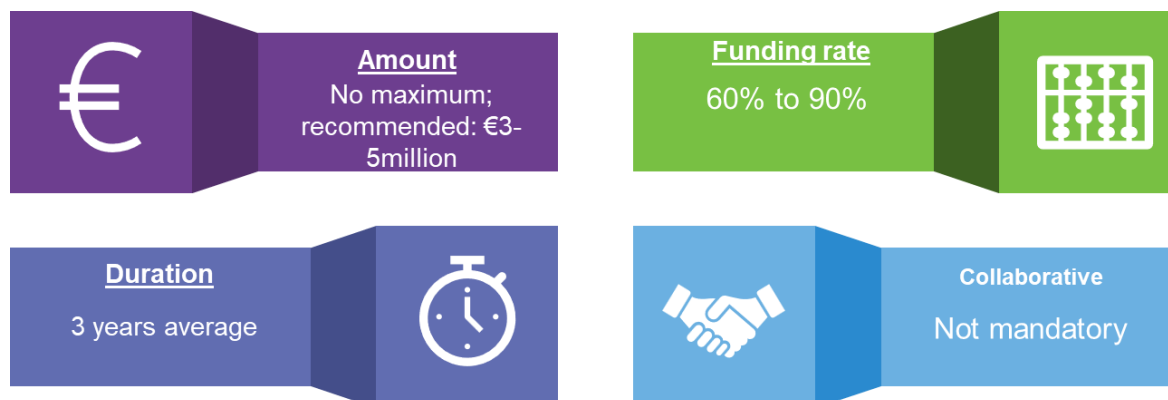


Figure 16 Synthetic view of the LIFE programme

The [LIFE programme](#) is the EU's funding instrument for the environment and climate action. For the 2021-2027 programming period, it has a budget of €5.4 billion and is divided into four sub-programmes:

- Nature and biodiversity;
- Circular economy and quality of life;
- Climate change mitigation and adaptation;
- Clean energy transition.

Organisations can apply by themselves or in a consortium, and participation of SMEs is encouraged.



Pre-requisite:

The projects funded are generally demonstrations and close to market projects. They can address all types of stakeholders: research Institutes, companies and local authorities.



How to apply:

As for other work programmes, LIFE calls are submitted on the EC funding portal. Specific templates are available for each type of LIFE programme, accessible from the call topic descriptions.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

4.2.2.2.5 Interregional Innovation Investments (I3) Instrument

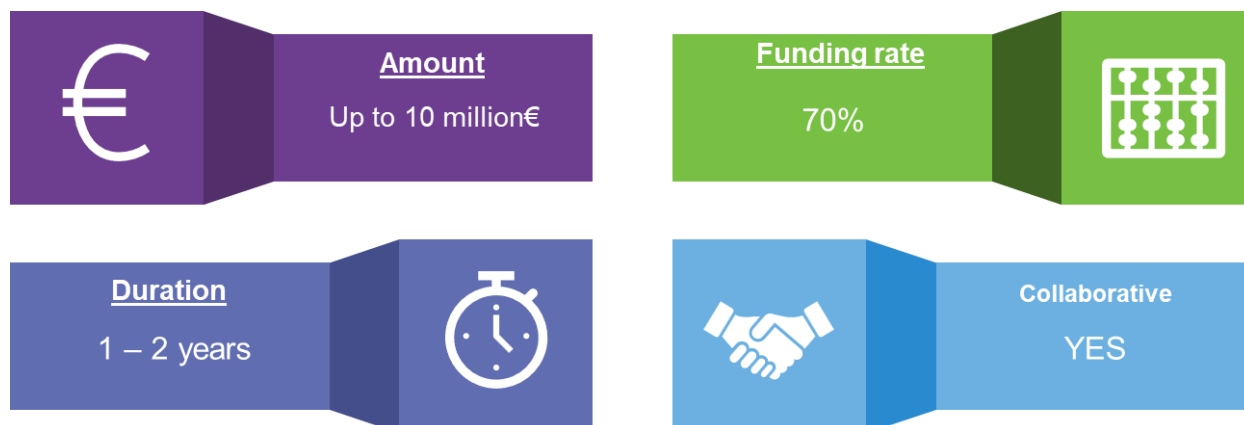


Figure 17 Synthetic view of the I3 instrument

I3 aims at supporting interregional innovation projects in their commercialisation and scale-up phases, giving them the tools to overcome regulatory and other barriers and bring their project to investment level. The major objective of the programme is to move from interregional cooperation to co-investment. **In 2023 and 2024, the budget will range from 78k to 80k€ per year.**

The calls are implemented in two strands:

- Financial and advisory support for investments in interregional innovation projects: this is for mature partnerships to help them accelerate market uptake and scale-up of innovative solutions in shared smart specialisation priority areas, as well as to develop a portfolio of investments projects.
- Financial and advisory support to the development of value chains in less developed regions: focuses on increasing the capacity of regional innovation ecosystems in less developed regions to participate in global value chains and partnerships with other regions.



Pre-requisite:

Projects funded by I3 must be locally anchored (the coordinator must be an EU region or a non-profit organisation) and have a link with the regional Smart Specialisation Strategies, have a minimum of 5 partners, from 5 regions in 3 different countries and be close to market (TRL6-9).



How to apply:

Calls are published on the [EC funding portal](#). I3 projects also organised cascade funding opportunities as part of their mandatory activities (see section 3.2.3.2.7).



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

5 EXAMPLES AND SUCCESS CASES

The section below presents some examples of co-financing models of SMEs. For each company, key facts and numbers are presented, as well as their activities and value proposition.

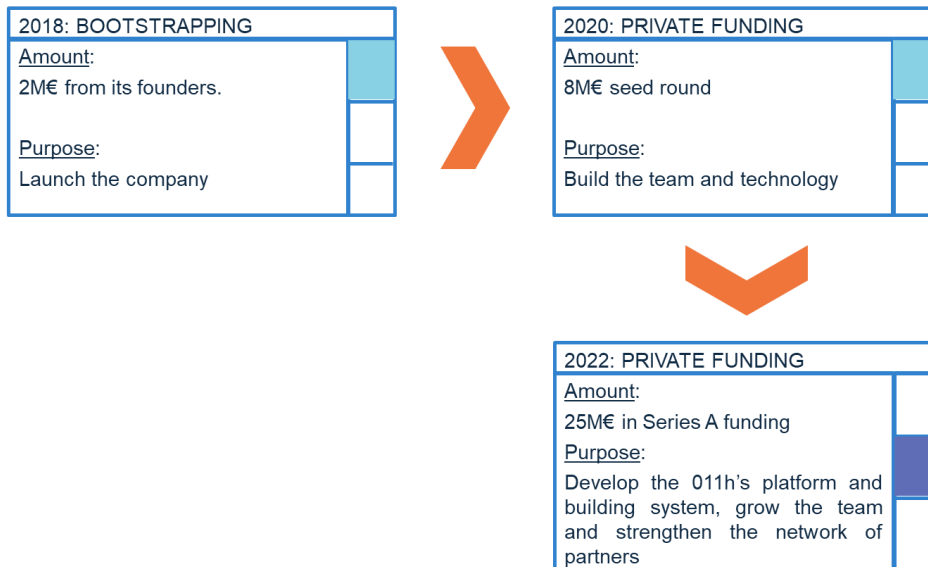
Schemes present the funding pathways of each SME, with available and public information (gathered either from the companies websites or through interviews). They highlight:

- The nature of the funding (public/private);
- The amount when available;
- The purpose of the fundraising;
- A colour box (blue/ purple/ yellow) indicates the development phase for which the funds have been used (Invent/ Grow/ Harvest)

The selected SMEs all have a different approach to funding, using their strengths, networks and opportunities, depending on their professional and personal backgrounds and location.



Funding story
011h



Founded in 2020

20+ employees

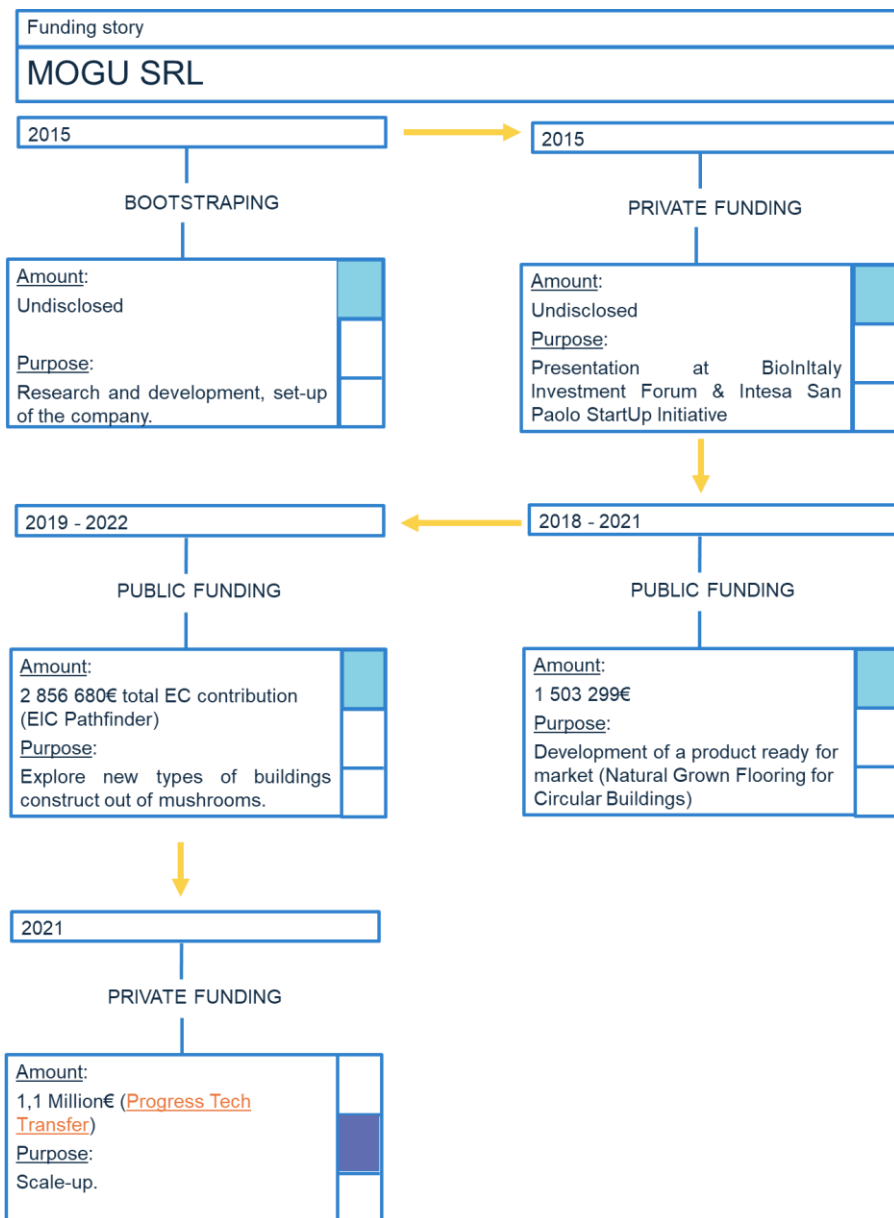
011h is a Spanish start-up standardising and digitalising the building process to make it repeatable and scalable, while incorporating sustainable and circular principles and materials – like mass timber – and preserving design flexibility. This enables architects, general contractors, real estate developers and investors to design, build and manage better-quality net-zero buildings in a faster, more reliable and cost-efficient way. This aims at making the building process more sustainable, reliable and less expensive.

011h has successfully delivered a major project with Renta Corporación, a publicly-traded developer. The embodied carbon of the building was reduced by more than 90% compared to conventional methods and, additionally, construction timelines have been reduced by 35%. This has clearly impressed residential developers in Spain, as three major projects have been booked to start in the coming months.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859



Founded in 2015

15 employees

[Mogu](#) explores the potential of mycelium-based technologies in diverse application sectors and has developed a range of materials with different performances. Today, it offers the first commercial mycelium-based products on the market, suitable for interior design applications.

Mogu ambitions to craft its products with the lowest environmental impact possible, to offer radically innovative experiences. Only residues as raw input materials are employed, setting new value for unexploited resources through the skilful action of fungal mycelium.

Mogu carries on complex and iterative R&D projects, allowing to keep on exploring innovative solutions. Being at the frontier of design and technology, they develop meaningful connections with other industries, through research funding or by engaging in co-development projects. They also largely disseminate their ideas and innovations through workshops, museums expositions, architecture conferences etc.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859



[INDRESMAT](#) is an International chemical startup that aims at redefining buildings and houses envelopes to reduce their direct and indirect CO₂ emissions through the improvement of the thermal insulation performance while decreasing the footprint of the employed materials.

The company relies on its multidisciplinary team, its exclusive know-how in bioPUR chemistry, product design and technology engineering to disrupt the construction market.

As an international company, INDRESMAT has succeeded in being financially supported by international (European Innovation Council), national (National Spanish Innovation Agency) and local agencies (Regional innovation Agencies of Catalonia and Limburg). Its R&D activities developed through many public funded and collaborative projects (Horizon 2020, EIC Pathfinder, INNOSUP, Interreg etc.) It also benefited from the Metabuilding seed call., a cascade funding call.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

Funding story

INDRESMAT

2017: BOOTSTRAPPING

Amount:
2M€ from its founders.

Purpose:
Launch the company



2017: PRIVATE FUNDING

Amount:
Accelerator programme VIA GALICIA

Purpose:
Mentoring programme



2018: PRIVATE FUNDING

Amount:
Accelerator programme Geleen

Purpose:
/



2019: PUBLIC FUNDING

Amount:
71429€ - SME Instrument: EXTRU-PUR project

Purpose:
Feasibility study and market prospection



2020: PUBLIC FUNDING

Amount:
100k€ (ACCIO call)

Purpose:
Accelerate market arrival of Polyurethane windows through marketing actions



2019: PUBLIC FUNDING

Amount:
250k€/500k€ (CDTI call)

Purpose:
Implementation of a manufacturing pilot plant



2019: PUBLIC FUNDING

Amount:
3M€ (total)

Purpose:
Regional collaborative project in Eindhoven "Doing more with Lignin"



2019: PUBLIC FUNDING

Amount:
71429€ - SME Instrument: SAFE-PUR project

Purpose:
Feasibility study and market prospection



2020: PUBLIC FUNDING

Amount:
-

Purpose:
Participation in the EU acceleration programme INVESTHORIZON



2020: PUBLIC FUNDING

Amount:
414 107€ (Industrial Leadership, EC project MEZeroE)

Purpose:
Platform for innovative envelopes for low-carbon buildings



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

Funding story

MATERRUP

2018: BOOTSTRAPPING	
Amount:	
Undisclosed	
Purpose:	
Launch the company	

2018: PUBLIC FUNDING	
Amount:	
Undisclosed	
Purpose:	
Regional grant to buy the first machine of the R&D centre	



2021: PRIVATE FUNDING	
Amount:	
500 000€ (from France Relance)	
Purpose:	
Improvements of the factory	

2020: PRIVATE FUNDING	
Amount:	
1,2M€	
Purpose:	



2022: PUBLIC FUNDING	
Amount:	
Undisclosed (EIC Accelerator)	
Purpose:	
Scale-up of the factory and implementation in other EU countries.	



Founded in 2018

**15+ employees
+15 opened
recruitments**

The revolutionary idea of [MATERRUP](#) is the development of small factory units, that can easily be plugged on a territory with an existing industrial base and companies from the built environment.

MATERRUP is a French company created four years ago by Mathieu NEUVILLE, on a trestle table. In less than a year, its founders have developed a research centre in an incubator, et their first factory (in 9 months). The technology arrived at maturity after only two years of development. It is certified by the CSTB (French Scientific and Technical Centre for Building) and is protected by more than 40 patents.

MATERRUP has been awarded with many labels from the French Tech network thanks to its versatile solution (short circuit, green tech, deep-tech). These labels are well recognised by Venture Capitals and public funders and have strongly facilitated the several fund raisings of the company. Another success factor has been the good connection of MATERRUP with the Pau university. Together in 2021, they have created and co-founded the industrial chair CONSTRUCTERR, which is the first European industrial chair in the construction sector.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

Funding story
MODULOOP

2020: BOOTSTRAPPING
<u>Amount:</u> Undisclosed
<u>Purpose:</u> Launch the company



2020: PUBLIC FUNDING
<u>Amount:</u> Undisclosed (cascade funding from the Metabuilding Platform)
<u>Purpose:</u> Concept validation and marketing support



2022: PUBLIC FUNDING
<u>Amount:</u> Up to 30 000€ (French Tech Bourse)
<u>Purpose:</u> Development of the online "platform"



2021: PUBLIC FUNDING
<u>Amount:</u> Undisclosed (cascade funding from the Metabuilding Platform)
<u>Purpose:</u> Creation of an online catalogue for 2022



2022: PUBLIC FUNDING
<u>Amount:</u> 7000€ (grant from the Hauts de France Region)
<u>Purpose:</u> Support to development



moduloop
circular workspace



Founded in 2020

3 employees

Moduloop aims at simplifying and supporting the sustainability of offices' interior design. The concept promotes the circularity of offices, through the development of sustainable and transformable furniture that can easily be changed and exchanged between companies.

The furniture is designed and produced in Europe, with the support of local craftsmen and associations promoting professional integration.

The company has won two prizes thanks to cascade funding and the METABUILDING platform, which confirmed its founders that there is a real need on the market.

Furthermore, MODULOOP is strongly anchored locally, being incubated at the village by CA in Mulhouse.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

Funding story
CooliBlade

2020: PUBLIC FUNDING
Amount: 700k€
Purpose: Launch the company as a spin-off, with integration in the VTT deep- tech incubator programme.



2020: PUBLIC FUNDING
Amount: Undisclosed
Purpose: Business Finland's Research to Business funding to develop commercial aspects.



2021: PRIVATE FUNDING
Amount: 1M€
Purpose: Seed funding for commercialisation of CooliBlade business line.



Founded in 2020

? employees

CooliBlade is a spin-off from VTT that has developed a next generation thermal management solution provider for high-power electronics. It applies to industrial IGBT, 5G telecommunications, COB LED lighting, energy, e-mobility and special electronics.

A first patent was already filled in 2019, before the spin-off benefited from the TVV LaunchPad incubator services. Since then, different products have been developed and launched successfully.

As a spin-off from a leading Finnish research centre, CooliBlade has benefited from VTT's network and visibility and collaborates closely with the market leading companies.



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

Funding story
Carbonaide

2019: PUBLIC FUNDING	
<u>Amount:</u>	Undisclosed
<u>Purpose:</u>	Launch the company as a spin-off, within the VTT incubator programme.



2022: PUBLIC FUNDING	
<u>Amount:</u>	Undisclosed
<u>Purpose:</u>	EARTO first prize in the category of Impact Expected.



2023: PRIVATE FUNDING	
<u>Amount:</u>	Undisclosed
<u>Purpose:</u>	Winner of the GasumHackathon, commercial agreement



2022: PRIVATE and PUBLIC FUNDING	
<u>Amount:</u>	1,8M€
<u>Purpose:</u>	Mix of seed funding and public loans and in-kind contributions from Business Finland and others

As concrete is one of the largest single sources of CO₂ emissions, VTT’s researchers have developed a solution for manufacturing carbon negative concrete products. They achieve carbon negativity by combining an efficient carbonation process with low-carbon binders.

VTT has studied concrete structures throughout its 80-year history. It was at the forefront of research in 2016, when it was working on the value chain and utilisation of biogenic carbon dioxide in a European Regional Development Fund project.

The study progressed into the simulation phase, and its results were reported in the BioCO₂ seminar in 2018. The idea was then pushed forward when the concept was presented to the VTT Board. The [Carbonaide](#) team therefore received support from the VTT LaunchPad spin-off incubator for the process of turning from researchers to entrepreneurs and for securing funding.

In 2019, Carbonaide demonstrated how to produce carbon negative concrete by carbonating steel industry slags and side-streams from the paper industry.




**Funded by
 the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

6 RECOMMENDATIONS

Based on NEBULA's partners experiences and interviews conducted with some SMEs, the following recommendations have been developed, to help SMEs to prepare themselves to raise the adequate fundings.

Understand the mindset	
<p>Finding funding opportunities takes time</p> 	<p>Understanding your ecosystem, the different types of funding opportunities and programmes, keeping yourself updated on the latest calls, approaching potential investors and negotiate with them, preparing and updating your portfolio and pitches or funding proposals... all of this takes a huge amount of multidisciplinary time that you must be willing to spend if you want your fundraising activities to be successful.</p> <p>Different persons of your company need to be involved, as they bring expertise on different aspects of the fundraising. This time cannot be reduced except by lowering the quality of your fundraising approach, and nobody can do the job entirely for you (however, asking the support of your cluster or a funding expert can still be valuable).</p>
<p>Mix the different funding opportunities</p> 	<p>Don't put all your eggs in the same basket. Successful start-ups and SMEs have a mix of fundings: bootstrapping, public and private opportunities should be explored as they run on complementary timelines and conditions.</p>
Before applying to a funding opportunity	
<p>Personal investment brings trust for future Investors</p> 	<p>The creation phase of a company/new product is very challenging to fund: as nothing is there yet, innovators need to gain the trust of their future investors.</p> <p>Investors will be more likely to invest money if you have invested money yourself in the company, which is a sign that you believe in your own development.</p> <p>For example, the 011h founders have invested 2M€ themselves in their company before discussing with private funds.</p>
<p>Participate in innovation networks (clusters, incubators etc.)</p> 	<p>It is very beneficial for SMEs to be involved in the relevant innovation networks (e.g. clusters, incubators, innovation partnerships etc.) This will allow you to get updated information on funding opportunities; get invited in the relevant events and meet with private funders; get a privileged access to the other network's members, get in touch with cross-border partners for collaborative projects; get updated information on the European</p>






Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

	evolution of the state-of-art to position yourself on the global market and assess your strengths and weaknesses; get support in preparing an application to a funding opportunity etc.
<p>Collaborate with academics and larger companies</p> 	<p>Collaboration with academics and larger companies can be very fruitful for SMEs.</p> <p>It allows you to benefit from advanced research and development knowledges and equipment, thus reinforcing the innovative and competitive aspects of your solutions.</p> <p>It also offers you the possibility to enter new networks and find potential testers/clients.</p> <p>Furthermore, SMEs usually have difficulties (especially due to a lack of resources) to coordinate European projects. Working closely with research institutes dans larger companies will allow them to be integrate in research projects and consortia at a lower cost.</p>
<p>Define a clear vision for your business and fundraising</p> 	<p>Having an idea is a good start but it isn't enough. For investors to trust you, you need to understand your technical and business ecosystem, the sectorial priorities and the KPIs considered as ambitious but realistic, to convince investors to fund you.</p> <p>Fundraising often relies on a promise that your business will be profitable. Therefore, you need to show that you'll make every effort possible to keep your promise and ensure attraction and satisfaction.</p>
<p>Use any opportunity to get visibility for your business</p> 	<p>In order to find new partners and clients, you should work on your business' visibility. This goes through your participation in relevant events (e.g. organised by clusters, your national funding opportunities, NCPs etc.), publications in specialised and general press, active communication on your website and social medias etc.</p> <p>Taking part in a competition can also give your project a major boost and increase your visibility. Apart from the official prize (money, services, support), It is a great opportunity to meet entrepreneurs and professionals, to create or extend your network and to be labelled under the aegis of a community.</p> <p>This will allow you to show your knowledge and connections with the market, and your ability to grow locally and internationally.</p>
<p>Apply to a funding opportunity</p>	
<p>Understand the different types of funding opportunities</p> 	<p>There are a variety of different fundraising methods available. The best method for your business will depend on a number of factors, including the amount of money you need to raise, the timeframe in which you need to raise it, and the level of risk you are willing to take. Some of the most common fundraising methods for small businesses include equity crowdfunding, debt financing, and grants. If you are still unclear on the different opportunities, do not hesitate to get the support of a cluster, or funding expert.</p>



<p>Have your documents ready for investors to look at it</p> 	<p>Demonstrate a clear need for the funds. You need to have a well-thought-out business plan that outlines how the funds will be used and how they will help the business grow. Potential investors will want to see that their money is being used in a way that will generate a return, so be sure to focus on the potential ROI when pitching your business.</p> <p>Besides your financial projections, a strong business plan should also outline your business goals and strategies, information on your target market, your competitive landscape, and your marketing strategy.</p> <p>You should finally have a clear picture of your company's current financial situation, with realistic financial projections, as this will help investors gauge the potential profitability of your business.</p>
<p>Prepare your pitch</p> 	<p>Creating a compelling pitch is essential to get the interest of both private and public funders.</p> <p>The first step is to identify your target audience and the appropriate message that should be clear and concise.</p> <p>One way to make your pitch more compelling is to focus on the problem that you are solving. Instead of talking about your product or service, talk about the problem that it solves. This will help your audience to see the value in what you are offering.</p> <p>Be realistic in your fundraising goals, and honest about the amount of money you need and what you plan to use it for.</p> <p>Finally, make sure to follow up with your audience after the pitch. Thank them for their time and let them know that you would be happy to answer any questions they may have. By staying in touch, you will increase the chances of successfully raising the funds you need.</p>
<p>Don't rush</p> 	<p>Before applying to grants and meeting potential investors, make sure that you are ready to present your project.</p> <p>Pitching your business to potential investors takes time and a lot of effort. Plus you only get one chance to make a first good impression, so better wait until you have a solid business plan to present.</p>



7 CONCLUSION AND OUTLOOK

Most funding programmes and opportunities concentrate on the "GROW" and "HARVEST" phases. From the GROW phase, companies indeed have a clearer view of their innovation and business. They are also more likely to already have developed a strong business plan, thus allowing funders to make projections and believe in the company.

The "INVENT" therefore proposes only a few fundraising options, forcing companies to often rely on strong personal investment at the beginning of their project. This observation can be mitigated for research institutes and their researchers, who can benefit from early stage funding, notably at the European level. This is one reason to encourage academic/business collaboration.

The following figure summarises the funding and financing landscape, both on the TRL and BRL scale:

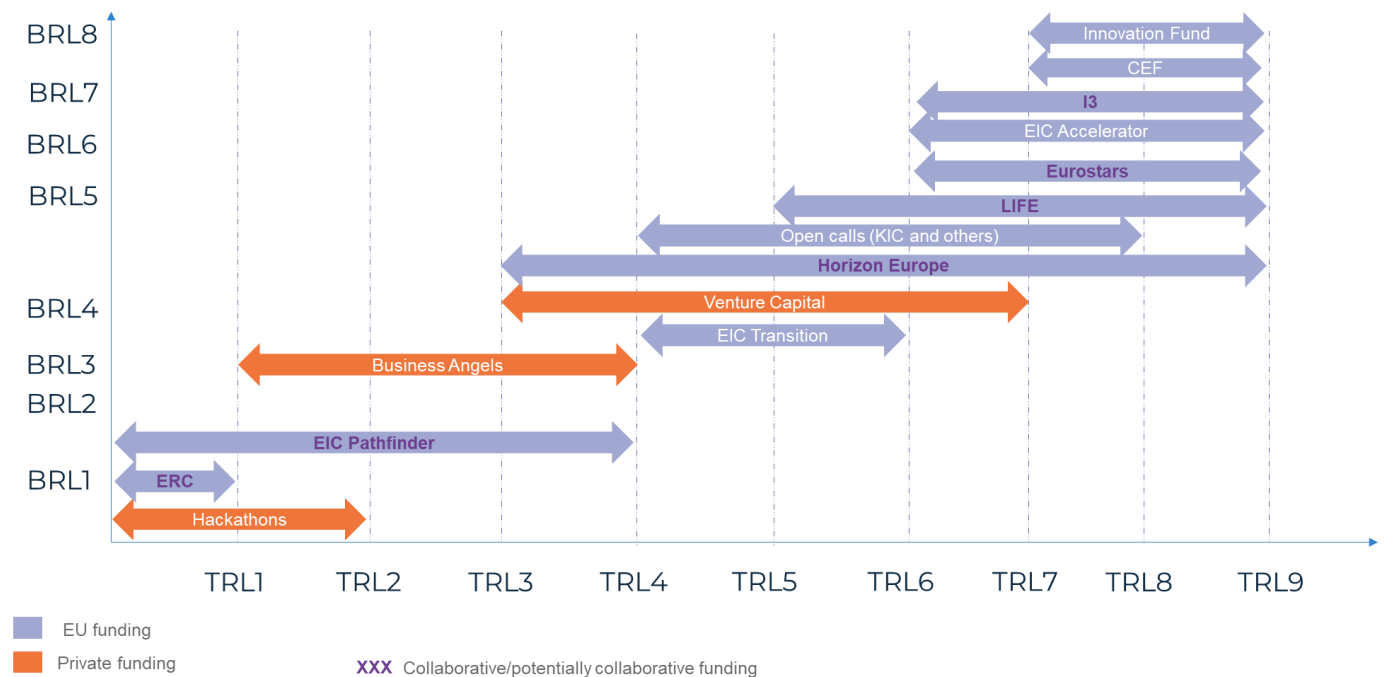


Figure 18: overview of the European funding landscape for SMEs per Technology Readiness Level (TRL) and Business Readiness Level (BRL)

Public and private funding programmes and financing opportunities need to be complementary and companies should not focus on only one or the other. Both types of funding bring along different levels of investment and different requirements (e.g. collaborative or not). Furthermore, most of the funding programmes seen in this report offer grant opportunity, some of them also offer equity or debt. And if private fundings often offer equity or grants, some of them (especially through crowdfunding) can offer grants. The difference between grants, equity and debt is something essential to have in mind when applying for a funding opportunity.



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

To follow-up this report, up to date funding opportunities for each type of funding and funding programme identified in this report will regularly be put online on the [METABUILDING platform](#), where everyone can consult them.

The NEBULA funding toolbox will be also available from the end of July 2023, and present recommendations, good practices and practical tools to support the understanding of and application to the different types of funding programmes and opportunities. The funding toolbox will be [available here](#), on the B4P website.



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

8 ANNEX 1: SUMMARY OF THE MAJOR FUNDING OPPORTUNITIES AND THEIR ATTRIBUTES

The table below introduces most private and public funding opportunities per phase (INVENT, GROW, HARVEST) with their indicative budget, pros and cons. The detail of each funding opportunity (including funding rates, duration, pre-requisite topics etc.) will be detailed in the next sections.

	Private funding
	Public funding

Source (public/private)	Corresponding phase	Indicative budget	Pros	Cons
INVENT PHASE				
Business Angels	INVENT/GROW	10k€ - 60k€	Good financial and mentoring support; access to a large network of future investors/partners/clients etc	Not always easy to find; highly intuitive personae
Hackathons	INVENT	0€-15/20k€	Cross-sectorial ideation; broadened perspectives	Support services and grants not always offered
Foundations	INVENT	5€ - 500+k€	International visibility	Mostly for charity and non-for-profit
ERC frontier research grants	INVENT	1,5M€	All scientific fields are covered	Dedicated to researchers; strong personal success-record expected



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859

EIC pathfinder	INVENT	3M€	Funds both researchers and innovators; possibility to answer to the open call or challenge call	Opened to SMEs but will mostly fund research institutes
GROW PHASE				
Business Angels	INVENT/GROW	10k€ - 500+k€	Good financial and mentoring support; access to a large network of future investors/partners/clients etc	Not always easy to find; highly intuitive personae
Seed and Venture capital	GROW/HARVEST	Few hundred thousand to few millions euros	High financial support; opportunity to enlarge network;	Often involves at least a partial control lost;
Crowdfunding	GROW		Access to private funding without letting go of control; securing a consumer base;	Uncertainty on the amount that will be raised;
InvestEU	GROW	/	Guarantees and equity provided by public and private partners to high risk SMEs	Funding is organised by intermediaries
Horizon Europe	GROW/HARVEST	100k€-several M€ depending on the role and call budget	Allows SMEs to find strong research and innovation partners; important grants covering from 70% to 100% of the innovation costs	Need to find an existing consortium; large competition; very specific funding topics
Proof of concept ERC	GROW	150k€	Facilitate the commercial valuation of a research project	Only for Principal Investigators in one of the ERC frontier research main grants
Cascade funding	GROW/HARVEST	30k€-100k€	Less formal proposals; easier access to the evaluators	Smaller grants; deadlines and regularity of calls very uncertain



HARVEST PHASE				
Venture and exit capital	GROW/HARVEST	Few hundred thousand to few millions euros	High financial support; opportunity to enlarge network;	Control lost;
EIC Accelerator	HARVEST	2M€-17,5M€	High budget for one single SME; Different budgets for open calls and challenges; no need to form a consortium	Highly competitive programme; need strong proofs of both risks and business establishment;
Eurostars	HARVEST	€500k	Allows SMEs to collaborate with international SMEs/research centres or larger companies at reduced costs	Eligibility and funding criteria are nationally set, which can complicate the proposal set-up
Innovation Fund	HARVEST	7.5 - 40M€	High funds for non-collaborative projects; only funds sustainable projects	Focus essentially set on flagship projects
LIFE	HARVEST	0,5M€-10M€ depending on the role and call budget	Wide topics allowing the funding of a large variety of projects related to climate/environment;	40% cofunding; high TRL levels
I3	HARVEST	Depending on the project	More than 60% of the total funding must be allocated to SMEs (directly involved in the partnership or under the form of cascade funding)	Must be coordinated by a region of non-for-profit organisation



References and sources

European funding programme websites

- [EC funding portal](#)
- [Competitive calls and calls for third parties](#)
- [EIC Pathfinder](#)
- [ERC](#)
- [InvestEU](#)
- [EIF](#)
- [ERDF](#)
- [Horizon Europe](#)
- [Interreg](#)
- [EIT](#)
- [EIC Accelerator](#)
- [Eurostars](#)
- [Innovation Fund](#)
- [LIFE](#)
- [I3](#)

National funding programme websites

- [CIR](#) (France), consulted In June 2023
- [CII](#) (France), consulted In June 2023
- [CiCo](#) (France), consulted In June 2023
- [JEI](#) (France), consulted In June 2023
- [JEU](#) (France), consulted In June 2023
- [R&D tax allowance](#) (Hungary), consulted In June 2023
- [R&D tax allowance in innovation contribution](#) (Hungary), consulted In June 2023
- [Development tax incentive](#) (Hungary), consulted In June 2023
- [R&D tax credit on wages of research facility employees carrying out R&D](#) (Hungary), consulted In June 2023
- [R&D tax credit in Small Business Tax](#) (Hungary), consulted In June 2023
- [R&D tax exemption in Small Business Tax](#) (Hungary), consulted In June 2023
- [BPI France](#) (France)
- [ANR](#) (France)
- [FUI](#) (France), consulted In June 2023
- [Nordic Investment Bank](#) (Finland)
- [Cassa Depositi e Prestiti Equity](#) (Italy)
- [Caisse des Dépôts](#) (France)
- [Instituto de Credito Oficial](#) (Spain)
- [Cassa Depositi e Prestiti](#) (Italy)

Companies websites

- [O11h website](#), consulted In June 2023
- [Mogu website](#), consulted In June 2023
- [INDRESMAT website](#), consulted In June 2023
- [MATERRUP website](#), consulted In June 2023
- [MODULOOP website](#), consulted In June 2023
- [CooliBlade website](#), consulted In June 2023
- [Carbonaide website](#), consulted In June 2023



Reports

- Metabuilding Labs project, D1.3 "Guidelines for the EU construction sector industrial innovation process improvement"
- [EIF](#) "The European Small Business Finance Outlook 2021"
- [EIF](#) "EIF Working Paper 2022/81: Business Angels Survey 2021/2022: Market sentiment"
- AEBAN, "[Report on investment in start-ups: activity and trends](#)", 2022
- CrowdfundingHub, "[Current State of Crowdfunding in Europe](#)", 2021

Others

- [BuildingSMART](#), consulted In June 2023
- [AEC Hackathons](#), consulted In June 2023
- [CIB Hackathon](#), consulted In June 2023
- [Garage 48 and Estonian cluster](#), consulted In June 2023
- [Laudes Foundation](#), consulted In June 2023
- [INNOTAX platform](#),
- [Business Finland](#),





www.nebulaproject.eu



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101079859