



I AM GREEN

Incubator Academy Model for a green economy

Deliverable D2.1

DOP – Design Option Paper

I AM GREEN H2020 project

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INTRODUCTION

I AM GREEN is an H2020 project, funded within the [INNOSUP-05-2020 programme](#) “Peer learning of innovation agencies”. The programme aims to investigate and develop, by means of peer learning, new topics and approaches in providing support to small and medium enterprises (SMEs) and other actors operating in the innovation ecosystem.

The **overall objective** of the **I AM GREEN** project is to co-design a widespread incubator and start-up academy model aiming to support entrepreneurs at all stages, from the business idea design to market penetration, passing through a tailor-made training and incubation path that gives particular attention to sustainable development and ways of “greening” the business.

The project aims to contribute to the qualitative improvement of services offered to start-ups, investors and consolidated companies thanks to an integrated approach that guides them along all steps of the entrepreneurial path, with a particular focus on training and financial needs. The designed incubation model will be a virtual and physical space where Innovation & Development Agencies, Research & Training Centres and Start-up Incubators work together to assist entrepreneurs with a 360-degree approach.

The general objective is to offer a more fertile environment for new business ideas to take root and grow, as well as to create new business activities leveraging the potential to address greening opportunities. The goal is to support their development at EU level and act as a real driver for innovation and sustainable growth for Europe. This will be achieved by improving the support that is available to the different actors operating in the innovation ecosystem, functioning as a think-tank that identifies needs, and preparing new opportunities within start-up creation support, as well as in training and consulting services.

The **specific objective** is to develop a Design Options Paper (DOP), which investigates various options and highlights the best ones to implement new services for the widespread incubator model and start-up academy. The model is based on 5 key elements (4 packages of activities and 1 innovative peer learning methodology):

1. **Attraction/Scouting of valuable green start-ups and business ideas;**
2. **Needs Analysis in terms of training, facilities, finance, etc.;**
3. **Education and training programme;**
4. **Incubation programme;**
5. **Peer-learning methodology with the Participatory Design (PD) approach.**

I AM GREEN represents a challenge-driven proposal aiming to design a support programme for SMEs based on the 3 participating agencies described below, to introduce a new integrated service fostering growth and innovation of incubated/accelerated SMEs. In particular, the specific aims of each agency are the following:

- **Sinergie** supports companies and start-ups, assisting them in the definition of their strategy, as well as in setting the business models to go to market or to access finance

or public funding (at EU, National or Regional level) in order to develop their business idea. Sinergie also offers consulting services on IPR protection, patenting and innovation management. In parallel, being a VET (Vocational Education and Training) centre, Sinergie works to improve the managerial, technical and operational skills of the supported company's staff. Sinergie activity is particularly focused on energy efficiency, circular economy and industrial symbiosis processes as well as on some emerging technological fields such as fintech. In the context of the project, Sinergie's aim is to learn how to create a widespread incubator model, switching from physical incubation within its spaces to a model that allows start-ups to be mentored and eventually incubated by established companies that can introduce them in the market, connect them to the relevant value chains and leverage existing relationships.

- **Enterprise Ireland** is the government organisation responsible for the development and growth of Irish enterprises in world markets. Enterprise Ireland works in partnership with Irish enterprises to help them start, grow, innovate and win export sales in global markets. In this way, it supports sustainable economic growth, regional development and secure employment. Enterprise Ireland has a team of business and specialist advisers based in Ireland, who work with colleagues located in its international office network, to help Irish companies compete for and win international sales. Enterprise Ireland clients are assigned a Development Adviser according to their stage of development (e.g. start-up, established or high growth) and sector (e.g. food, pharmaceuticals, international services). Other specialists work with clients to help them achieve global success, for example: Technology Advisers work with companies and research institutions to develop innovation capability and to commercialise research; Market Advisers work directly with client companies to help them win export sales in international markets. The activities foreseen in the project match considerably with Enterprise Ireland's role as a State sponsored entrepreneur development team and the whole organisation will benefit from the project's approach and outcomes.
- The **Israeli Innovation Institute** is a "non-profit think and do tank", bringing innovative technologies and knowledge to real-world frameworks. The Institute enables and manages the development, testing, and demonstration of innovative, scalable solutions for global challenges – in areas such as healthcare, education, and transportation. The Institute and its partners, in collaboration with workplaces such as schools and health facilities, fuel a holistic and sustainable change to provide the highest quality of life in Israel and the world. It works with a view to positioning Israel as the centre of innovation for global challenges and increasing the well-being of 21st-century citizens, in Israel and all over the world. They bring together ecosystem stakeholders, innovative thinkers, high-tech and social entrepreneurs, policymakers, academics, corporations, start-ups, service providers and consumers, inspiring people and dynamic communities - reshaping the landscape of innovation. As part of this project, the Israeli Innovation Institute aims to integrate the EU's Green Deal agenda into Israeli innovative thinking. Unfortunately, the green agenda is not sufficiently integrated in the way that SMEs develop

themselves. Therefore, the Institute aims to raise awareness on the issue through a detailed greenhouse model that will engage companies from different backgrounds and countries.

I AM GREEN aims to answer to the following questions:

- Who are the green start-up entrepreneurs, the green investors and the companies looking to green their production or business models?
- What is their current experience and how they interact with the ecosystem?
- What kind of support can the I AM GREEN model provide to the identified actors in terms of:
 - **Matching:** namely, how to help actors to create synergies with each other and/or to find resources for their projects?
 - **Training, empowerment and coaching:** namely, how to support actors in achieving skills, knowledge and capacities to be successful in implementing their green business projects?

Answer to questions	I AM GREEN Pillars	DOP Chapters
Who are the green start-up entrepreneurs, the green investors and the companies looking to green their production or business models? What is their current experience and how they interact with the ecosystem?	1. Attraction/Scouting of valuable start-ups and business ideas. Recruitment of consolidated companies. 2. Needs analysis in terms of training, facilities, finance, bottlenecks and potential symbiosis between different production processes and sectors.	1. Scenario Analysis: who are the green entrepreneurs and the green investors? 2. Value proposition: what is the added value of the I AM GREEN services?
How to support actors in achieving skills, knowledge and capacities to be successful in implementing their green business projects?	2. Needs analysis in terms of training, facilities, finance, bottlenecks and potential symbiosis between different production processes and sectors. 3. Education and training programme.	3. Training needs analysis and potential training offer of the I AM GREEN model 4. The I AM GREEN Academy Model and synergies among actors
How to help actors in creating synergies among them and/or finding resources for their projects?	4. Incubation programme.	5. Business Model Canvas of I AM GREEN services
Lessons learned	5. Peer learning methodology.	6. Peer learning methodology and lesson learned

Table 1 – A summary of questions and structure used to direct the work programme and feed into the Design Option Paper (DOP)

FRAMEWORK

There are several different definitions that apply to the word “start-up”. For Ramaciotti (2012), a start-up is represented by the initial phase of a newly-created company, the newly established company itself or a company that has just been listed on the stock exchange. For the purpose of I AM GREEN, we assume that a start-up is a new company with the characteristic of being “*a temporary organisation designed to seek a repeatable and scalable business model*” (Blank, 2010), since its main features are a short life cycle and the search for an easily replicable business model.

Every start-up is usually created to exploit a highly innovative idea that is, at the same time, risky. To maximise the probability of success, the initial setting phase may benefit from the support of entities such as incubators (Aernoudt, 2004) and investors (Cassar, 2004), and the acquisition of adequate planning tools (Chwolka and Raith, 2012) is also very important.

In I AM GREEN we considered a particular type of start-up: those classifiable as ‘green’. As Berget and Fichter (2015) pointed out, the indication green can refer to three main aspects:

- **Product:** the product or service produced and distributed by the innovative company is environmentally friendly and has a low ecological impact. Sustainable products and services are generally of high quality as they are designed to maximise their life cycle, saving resources and energy.
- **Entrepreneur:** the contribution made by the founder through elements such as motivation, values and attitude are important in the context of structuring an eco-sustainable business. The entrepreneur who launches a green start-up is not only attracted by the potential profits, but at the same time is motivated by ideals about an environmentally and social sustainable future.
- **Strategy:** the green start-up does not generally aim for unconditional growth but sets limits with respect to available resources and the potential environmental impact caused. Depending on the combination of these three parameters, various types of green start-ups can be distinguished.

The same authors found that there are innovative companies that are totally sustainability-oriented and others that achieve sustainability in an unintentional form while operating on a business idea. Bergset and Fichter’s conceptualisation of green start-ups provided the Consortium with the theoretical framework to define and categorise the different start-ups to be addressed within I AM GREEN. The topic is further explored and deepened in chapter 1.1 “Definition of the project target” of the current document.

On the methodological side, to design the I AM GREEN model, we used the **Business Model Canvas (BMC)** framework as defined by Osterwalder and Pigneur (2010). Using Osterwalder’s own words: “*a business model describes how an organization creates, delivers, and captures value*”. Graphically, the BMC is a visual tool that is used to design and present how a given business creates value and bring it to the market. A strength of the BMC is that it is particularly suitable for brainstorming and participative co-design. Referring its structure, the BMC is divided into 9 blocks:

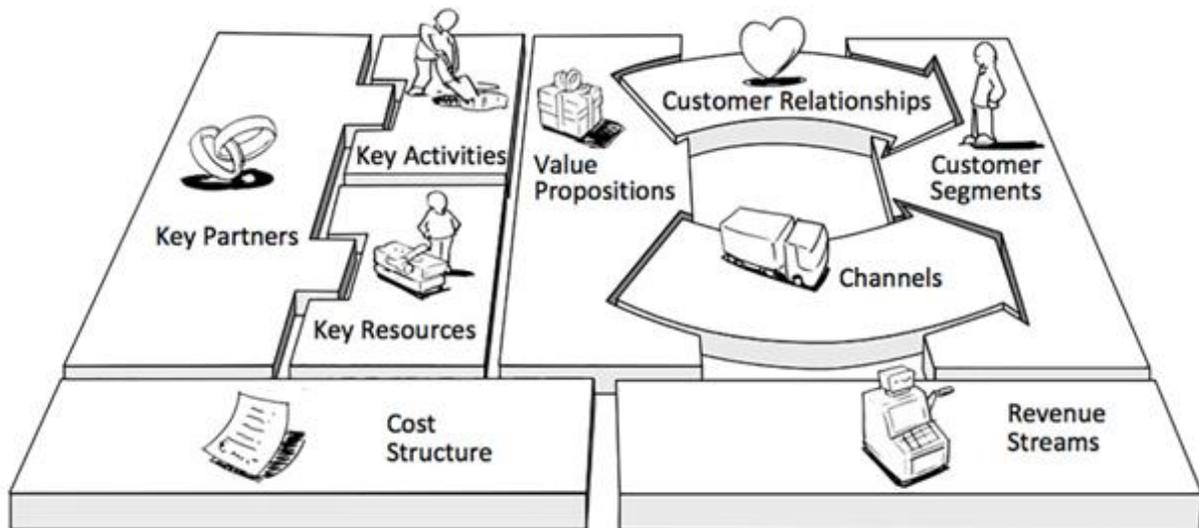


Figure 1: The 9 components of the BMC (Osterwalder and Pigneur, 2010)

Customer segments: customer segments are the different groups of clients for whom the business aims to create value. Customer segment analysis is the first step to create a BMC, as it is important to understand whether a potential demand for the company product or service exists. The analysis carried out in the customer segments block allow to assume the customer's perspective in order to understand his/her needs and the most effective way to meet them.

Value proposition: the value proposition block identifies what are the company's products or services that meet the different needs of the customers identified in the customer segments block. It outlines the benefits of the company product or service with respect to any other competing solutions.

Channels: channels are the means used by the company to interact with customers creating value. With channels companies make customers aware of their value proposition and guide and accompany them in the purchasing process.

Customer relationship: the customer relationship block identifies how the company acquires and retains its customers. This section is important to create customers' loyalty understanding how to create the best possible customer experience.

Revenue streams: this block aims to understand how the company creates revenue flows selling its products or services to the identified market segments. The block answers to questions such as "what is the structure of revenue flows?", "which payments methods?", "what is the pricing policy?".

Key resources: the key resources block considers strategic resources that the company need to put together in order to create and sustain its own value proposition. Resources could be physical (e.g. machineries, plants, technologies), intellectual (e.g. patents, brands) or human resources that provide specific skills.

Key activities: the section contains actions and processes that are needed to implement the company's business model. Activities mapped in this block are the most relevant for the creation of the competitive advantage and may be classified as production activities, problems to be solved, networking.

Key partners: in the key partners block, the company lists relevant partners and suppliers. After having identified resources and activities needed, the company lists which of them are taken outside. The block then illustrates strategic collaborations needed to implement the business model.

Cost structure: the block summarises the costs that the company should cover to implement its business model. The section depends on the identification of key activities, resources and partners.

To sum up, the BMC is composed by two macro-areas. The right one illustrates for whom the value is created, how it is distributed and caught as well as how it is reflected in the revenue flows. The left side defines the kind of product or service that will be realised and what the company needs for its realisation, defining which are the involved costs.

The BMC approach provided the theoretical framework to design the I AM GREEN model. In particular, the potential recipients of the I AM GREEN model have been analysed in order to feed the customer segments block of the I AM GREEN BMC (see chapter 1.2). In the same way, value proposition analysis has been carried out analysing the emerging customers profiles and creating solutions that fit customers needs (see chapter 2). The whole I AM GREEN Business Model Canvas is included in chapter 5 of the current document.

METHODOLOGY

The structure of the Design Option Paper (DOP) has been split into 3 rounds, each aimed at providing background information for specific chapters and providing answers to the questions set in Table 1. Each round started with a preparation phase (i.e. preliminary research) that provided inputs to the discussions held during the subsequent Twinning Meeting (second phase). In the last phase of the round, the partners took stock on what emerged during the preparation and the Twinning Meeting, delivering the DOP. As the DOP chapters were written, specific dissemination activities to involve external stakeholders were carried out.

1 st ROUND	2 nd ROUND	3 rd ROUND
Preparation of TM ₁	Preparation of TM ₂	Preparation of TM ₃
Twinning meeting 1	Twinning meeting 2	Twinning meeting 3
DOP writing – Chapters 1-2	DOP writing – Chapters 3-4	DOP writing – Chapters 5-7
M ₁₋₃	M ₄₋₇	M ₈₋₁₁
Design Option Paper – Chapters 1-6 (M₁₁)		

Table 2 – Work Programme Summary feeding into the Design Option Paper (DOP)

Twinning Advanced (Twinning+) is a methodology for organising meetings involving two or more entities, which provides participants with the opportunity to share points of view, exchange opinions and discuss different perspectives on a certain problem. The Twinning+ Methodology fosters the exchange of best practices among actors and organisations from the innovation ecosystem, and facilitates the design and the implementation of these practices on common challenges.

The 1st Twinning Meeting fed into chapters 1 and 2 of the DOP; the second one contributed to chapters 3 and 4; the third and final one provided insights for chapters 5 and 6.

Although Twinning Meetings in the context of the I AM GREEN project were held online due to Covid-19 restrictions, the Consortium applied several methodologies aimed at further involving the audience in participatory activities, such as:

- Discussions on given topics, moderated by a professional facilitator and aimed at the collection of feedbacks;
- Breakout rooms where participants were invited to discuss on topics related to the meeting goals, and then report back in the plenary session;
- An interactive workshop aimed at building the Business Model Canvas of the I AM GREEN Incubator Academy Model, where participants were asked to provide their contributions using an interactive whiteboard (Conceptboard tool).

1st Twinning Meeting

Agenda | 29/03/21, 11:00-13:00 and 14:30-16:30

TIMING	TOPIC	SPEAKER
11:00-11:15	Opening and presentation of I AM GREEN	Giovanni Pede (Sinergie) + Albert Schram
11:15-11:35	Innovation ecosystem in Emilia Romagna: focus on incubation and acceleration services, and selection of companies	Lucie Sanchez - ART.ER
11:40-12:00	The experience of PoliHub in innovation and start-up acceleration. How this approach can foster the green transition?	Enrico Deluchi - POLIHUB
12:05-12:25	Presentation of Enterprise Ireland: experience, services, criteria to select start-ups	Enterprise Ireland
12:30-12:50	The investor point of view, how start-ups are selected and evaluated	Isabelle O’Keeffe – Sure Valley Ventures
12:55-13:00	Wrap-up of the morning session of the meeting	Albert Schram
13:00-14:30	BREAK	
14:30-14:35	Introduction to the afternoon session	Albert Schram
14:35-14:55	Presentation of Israel Innovation Institute: experience, services, criteria to select start-ups	Yoav Fisher - Digital Health Innovation Israel Innovation Institute
15:00-15:20	The point of view of start-ups / international vocation	Jonathan Haran – Village in a box
15:25-15:45	2 Breakout rooms	Chair: Albert Schram + Vittoria Fontanesi (Sinergie)
15:45-16:05	Plenary discussion of Breakout rooms’ findings	
16:05-16:15	Business ideas from the winners of a call for idea	Mario Moschetta (E-Co Work) and Fabio D’Albenzio (Mipu)
16:15-16:20	Questions	Albert Schram
16:20-16:30	Wrap-up of the afternoon session of the meeting	Albert Schram

Summary

The 1st Twinning Meeting of the I AM GREEN project took place in March 2021 and was organised by Sinergie, the project coordinator. The **goals of this meeting** were:

- Presenting the innovation ecosystem in the three project countries (Italy, Ireland and Israel);
- Stimulating a discussion on the perspectives of the actors involved in the innovation ecosystem: start-ups, eco-investors, consolidated companies, incubators and accelerators, innovation agencies;
- Identifying the challenges and opportunities for green innovation;
- Collecting useful feedback for the analysing the innovation scenario (Ch.1) and clearly understanding the added value of the I AM GREEN Incubator Academy Model (Ch.2).

Each presentation given during the meeting was followed by a lively discussion on a number of topics, such as the role of start-ups, acceleration and incubation processes, the importance of seed and venture capital, and the overall eco-system supporting green innovation in the three involved countries:

- The two speakers from Italy presented regional and local experiences, which are far more significant than a national-level vision, due to the marked differences between Italian regions. **Lucie Sanchez** ([ART-ER](#)) presented the support measures for start-ups in the Emilia Romagna territory, aimed at enhancing local innovative experiences through several networking and training activities. **Enrico Deluchi** ([PoliHub](#)) explained why the University incubator of the Polytechnic of Milan is especially focused on incubating and accelerating deep tech companies, and on the importance to interact with international networks in the digital innovation field.
- From Ireland, we heard from **Kevin Donnelly and Keith Brock** from HPSU (High Potential Start-up Unit) of [Enterprise Ireland](#), which is also one of the Partners of I AM GREEN project. They focused on how a state agency such as EI needs to provide a transparent and fair support to start-up, by enhancing the most strategic experiences succeeding in providing an answer to the most current market trends. Then, **Isabelle O’Keeffe** ([Sure Valley Ventures](#)) presented the perspective of an investor from the seed capital industry in screening and assessing the most promising start-ups.
- The Israeli innovation ecosystem was represented by **Yoav Fisher** ([HealthIL – III](#)), who delivered a speech on how to assess innovative solutions so to include specialties and technology components, and by **Jonathan Haran** ([Village in a Box](#)), who presented his idea for a circular redesign of city infrastructure.

In the second part of the meeting, Sinergie organised two breakout sessions to discuss on the **challenges and opportunities for green innovation**: the first group dealt with the issues of climate change, energy and digital transitions; the second group also focused on the opportunity to invest in sustainability as a long-term solution to the most urgent and current topics.

Finally, **two young entrepreneurs** were invited to present their business ideas: [MIPU Predictive Hub](#), an AI-powered solution for energy management and maintenance; and E-Co Work, a co-working solution for digital nomads aimed at re-populating little villages and offering a sustainable lifestyle.

For a complete minute of Twinning Meeting 1, it is possible to read Annex A to the current document.

2nd Twinning Meeting

Agenda | 27/07/21, 11:00-13:00 and 14:00-16:00

TIMING	TOPIC	SPEAKER
11:00-11:10	Welcome and short presentation of I AM GREEN project. Introduction to morning session	EI + Albert Schram
11:10-11:30	International entrepreneurship models	Prof. John Breslin (NUI Galway)
11:30-11:50	Start-up support: prepare for launch	Domenico Uva (Startup Geeks)
11:50-12:10	Do investors really value green motives?	Sarai Kemp (Trendlines)
12:10-12:30	Green aspects of entrepreneur support	Cinzia Morisco (STEP)
12:30-12:50	INNOSUP projects about Open Innovation	Nicola Doppio (HIT)
12:50-13:10	Round Table	Chair: Albert Schram
13:10 – 13:15	Conclusion of the morning session	EI
13:15-14:15	BREAK	
14:15-14:20	Introduction to afternoon session	EI
14:20-14:40	Start-ups: who to nurture	Rosemary Ward (South East BIC)
14:40-15:00	Start-ups play to your strengths	Uriel Perman (KIC)
15:00-15:20	Environmental impact of start-ups: long-term VS short-term vision	Agnese Metitieri (Impact Forecast)
15:20-15:40	Round table	Chair: Albert Schram
15:40-16:00	Wrap-up of main results	Albert Schram
16:00-16:05	Goodbye and conclusion of the meeting	EI

Summary

The 2nd Twinning Meeting of the I AM GREEN project took place in July 2021 and was organised by Enterprise Ireland, the Partner from Ireland. The **goals of this meeting** were:

- Collecting useful feedback for the training needs analysis (Ch.3);
- Creating a joint training catalogue from which the participants in the meeting could define the skills, knowledges and abilities that are at the basis of the proposed educational activities targeted to innovation actors (Ch.4);
- Considering the actors gravitating around the I AM GREEN Incubator Academy Model and the synergies created around them, in order to effectively implement the proposed academy;
- Understanding the role of big companies in the mentorship process for start-ups.

The meeting opened with Professor **John Breslin** ([National University of Ireland – Galway](#)), who provided a general overview of what the general public thinks when referring to innovation, and presented the “5 S” conceptual framework for start-up success: Spirit, Skills, Space, Support and Spondulix (i.e. financial support). He also described the market segmentation of I AM GREEN customers, and the main components of the innovation ecosystem.

The second speaker from Ireland was **Rosemary Ward**, start-up business consultant at [South East BIC](#), who discussed extensively on the support that they offer during the whole start-up journey, and questioned on how to select and nurture the potentially successful enterprises. She also emphasised the importance for start-ups to quickly arrive at a stage when they can offer a Minimum Viable Product (or service).

The following speech was given by **Domenico Uva** from [Start-up Geeks](#), a community of Italian start-uppers and online incubator, which aims at helping young entrepreneurs to transform their ideas into profitable businesses. He presented the practical support that this incubator provides start-ups with at different stages of their development; he also marked the need to clearly define a training programme and focused on the importance to create the right mindset for aspiring entrepreneurs.

Another interesting intervention was that from **Nicola Doppio**, Innovation Officer at [HIT – Hub Innovazione Trentino](#), who presented its work in establishing collaboration between the Trentino Region, local authorities and the University. He also elaborated on the topic of innovation prizes.

From Italy, there were also two speakers more focused on the green aspects of innovation: **Cinzia Morisco**, Innovation and Green Funding Specialist at [STEP Tech Park](#), who presented the perspective and the activities of the accelerator aimed at achieving important goals, such as climate neutrality by 2050; and **Agnese Metitieri**, trainer for [Climate Impact Forecast](#) and circular economy consultant, who presented an online tool aimed at assessing the climate impact of specific innovations within a start-up or a company.

Then, it was the turn of **Sarai Kemp**, tech venture capital specialist at [Trendlines Agritech](#), who outlined the ideal framework for start-ups to get financial support, which is a combination of private equity, national, international and standardised subsidies. She also offered her point of view on how investors give value to the green motives behind a start-up’s mission. Finally, **Uriel Perman** shared the history of [Kinneret Innovation Centre](#) in Israel, in which a College of Engineering, agricultural companies and factories cooperate together. They also offer start-ups multiple services, depending on their stage of development.

Please refer to Annex B of the current document for the full minutes of Twinning Meeting 2.

3rd Twinning Meeting

Agenda | 22/11/21, 11:00-13:10 and 14:30-16:15

TIMING	TOPIC	SPEAKER
11:00-11:10	Welcome and short presentation of I AM GREEN project. Introduction to morning session	
11:10-11:30	Irish Incubator UVP – from the customer point of view	Liam Dunne (Klearcom Ltd)
11:30-11:50	Irish Accelerator UVP – the offering	Aisling O’Neill (ArcLabs R&I Centre)
11:50-12:10	Workshop – I AM GREEN UVP: Defining together with the guests the IAG Incubator’s UVP	Moderator: Albert Schram
12:10-12:30	Cross-border partnerships for incubators	Annamaria Fiore (ARTI – IN-CUBA project)
12:30-12:50	Key activities of an Israeli incubator	Yishai Binnes (Labs/02)
12:50-13:10	Workshop – IAG Partnerships for High-Level activities strategy: Defining together with the guests the IAG incubator’s partnerships and main activities	Moderator: Albert Schram
13:10 – 14:30	BREAK	
14:30-14:35	Introduction to the afternoon session	
14:35-14:55	A sustainable model for an incubator	Eammon Sayers (Guinness Enterprise Centre)
14:55-15:15	Italian Incubator UVP – Mission Statement and Incubator’s DNA	Stefano Marastoni (ARTI)
15:15-15:30	Lessons learned: challenges in the way of a successful incubator	Eliran Keren
15:30-15:50	Workshop – IAG cost & revenue: Defining together what is the cost structure and revenue stream	Moderator: Albert Schram
15:50-16:10	Wrap-up of main results	
16:10-16:15	Goodbye and conclusion of the meeting	

Summary

The 3rd Twinning Meeting of the I AM GREEN project took place in November 2021 and was organised by Israel Innovation Institute, the Partner from Israel. The **goals of this meeting** were:

- Analysing the feasibility and the sustainability of the business model of the incubator developed in the context of the I AM GREEN project;
- Identifying the best practices supporting the implementation of the model;

- Creating a Business Model Canvas template for the I AM GREEN incubation model and envisaging a roadmap for its implementation (Ch. 5);
- Carrying out a SWOT analysis and understanding how the model is positioned according to the results of the value proposition analysis;
- Collecting feedback for drafting the last parts (Ch. 6) and the conclusion of DOP.

The meeting opened with **Liam Dunne** ([Klearcom Ltd.](#)), who listed the main factors of success for a start-up from his point of view: a shared culture among the founders, fast execution, identification of the unknowns beyond key competences, the local element to create confidence locally among customers and investors, finding suitable Partners.

The second speaker from Ireland was **Aisling O'Neill**, Manager at [ArcLabs R&I Centre](#), an accelerator ecosystem established in 2005 in Ireland, whose final goal is to create high quality jobs in the region. She stated that one of the main challenges is communicating the mission of the Centre and its capacity of putting researchers and entrepreneurs together for innovation purposes.

The third speech was given by **Annamaria Fiore**, responsible for the [INCUBA project](#) at ARTI. The project aimed at supporting enterprises of the agrifood sectors through the provision of relevant services to new entrepreneurs in Apulia (Italy) and Western Greece regions. One of the main goals was also to create cross-border partnerships between incubators, in order to offer training and counselling support services to start-ups, but also to develop an ideal business model for collaborative ideas.

Another interesting intervention was that of **Yishai Binnes** from [Labso2](#), an early-stage venture capital and incubator. He stressed the importance of local specialised knowledge for creating cutting-edge, high-value companies, especially in a country like Israel where government agencies respond correctly and efficiently to changes in the market.

In the second part of the meeting, three speakers were invited to present the entities where they collaborate in and to debate on several specific topics. The first one was **Eammon Sayers**, Manager at [Guinness Enterprise Centre](#), one of the largest and most successful innovation centres in Ireland.

From Italy, we also heard from **Stefano Marastoni**, who shared the mission and the values of [ARTI](#) – Regional Technology and Innovation Centre for Apulia region. Established in 2004, ARTI supports the regional government in designing and managing economic development, innovation, education, training and job policies. In particular, he focused on the initiative “Talent Mining”, through which ARTI funds tailored paths supporting teams of aspiring entrepreneurs in multiple innovation areas.

The final statements were made by Eliran Keran, who stressed the importance of having an overarching strategy and making choices for specific areas, and who also touched upon many successful examples of innovation agencies and experiences in Israel.

The meeting also featured three interactive workshops aimed at creating the Business Model Canvas for I AM GREEN incubator: the first one aimed at a collaborative definition of the unique value proposition; during the second session, a high-level activities strategy was identified; the third one was focused on cost structure and revenue stream of the model.

Please refer to Annex C of the current document for the full minutes of Twinning Meeting 3.

1. Scenario analysis: who are the green entrepreneurs and the eco-investors?

1.1 Definition of the project target

For the purposes and activities of I AM GREEN, a **green start-up** can be defined as a newly created company that proposes to bring to market a new product or service embodying a measure of sustainable **innovation**. This new **product or service** should have a positive environmental impact, contributing to the green transition of the economy.

Bergset and Fichter (2015), borrowing their classification from the Eurostat “Environmental Goods and Services Sector”, identified seven sectors in which green start-ups thrive: **renewable energy, energy efficiency, renewable resources, resource efficiency, circular economy, waste management, emission reduction and climate protection, including biodiversity and ecosystems**. The start-ups considered as a target for I AM GREEN have been selected understanding whether they had an impact on one or more of these areas. In the same research paper, the authors identified different typologies (actor types) of green start-ups, taking stock of previous research results and further elaborating them - namely Linnanen (2002); Schaltegger (2002) and Walley and Taylor (2002). The results are summarised below. This categorisation has been adopted for I AM GREEN.

- 1) **The alternative start-up.** Entrepreneurs of this kind of start-up are often less profit-oriented and ethical mavericks. They have personal motivation in reducing negative environmental issues and/or social injustice, such as employing people that for some reasons have been excluded from the job market. Companies taking part to the “slow movement” are also included in this category. Often their business remains local or regional, therefore their funding needs are quite small. In addition to this their business may be perceived as risky and low profit. Conventional investors are likely to be uninterested in this kind of company. Crowdfunding (or even local grants) may be the only source of funds.
- 2) **The visionary start-up.** These start-ups reflect the “change the world” mentality of their founders that find business the best way to this end. The business focus is more global/international than local, and their aim is to reach a mass-market customer base. Growth is their primary objective and it is likely they actively look for collaboration with other actors. Their strategy often includes a low return rate in the short term (despite being potentially high in the long run) and high risk. Conventional investors may be interested in funding visionary start-ups, but such companies may be more oriented to collaborate with investors with a similar orientation. Founders typically have high business skills.
- 3) **The inventive start-up.** These start-ups have entrepreneurs who are highly inventive, technically skilled and often quite involved in their social community. They often lack business education or experience. The high technological level on which the companies base their businesses makes them risky and often require a significant amount of capital to start and operate. Profits are potentially high in the long run. The risk profile means that inventive start-ups have problems in accessing credit or funding. As environmental impacts are also potentially high, these companies need to access specialised funds or meet sustainability-oriented investors.

- 4) **The ecopreneurial start-up.** Here the entrepreneurs are considered “opportunists”, with a high level of business skills. They identify eco-opportunities likely to be scaled and aim for high growth in the short term. These entrepreneurs often are not inventors and so rely on other people that manage the “technical side”. What they provide is their business experience and enlarged network. Environmental impacts are potentially high. Risks are lower than in other start-up categories, but the trade-off between environmental and economic sustainability objectives is more prevalent than in the other listed categories. Ecopreneurial start-ups with a clearer market objective and a less risky technology roadmap are more viable for conventional investors than the other categories.
- 5) **The unintentionally green start-up.** In this category there are ‘ordinary’ start-up (without necessarily a specific vocation for the green economy) that are creating, without being aware, positive environmental impacts or externalities within their business. Becoming aware of their contribution to the green economy, such companies may leverage that to further scale-up. It is likely that the product or service is already on the market. This makes the investment in such start-ups less risky and by extension more attractive to investors.

Start-ups are not the only target group of I AM GREEN. The project also tries to identify the profile and the journey of the **eco-investor**. By analysing the start-ups, we can infer the ideal profile of such investors, namely that they may have a long-term profit strategy, and that they should share green companies’ values and entrepreneurs’ mindset. They should be mainly driven by ethic and environmental criteria in taking decisions on who to finance or fund.

The final class of “users” to be addressed by the business model are the **consolidated companies**. These companies may be part of the incubator/academy service in becoming a potential investor or, (and this should be interesting to be analysed as a potential new service), in creating synergies with the start-ups in terms of **industrial symbiosis or circular economy** models. A non-green vocation start-up may become an unintentionally green start-up by identifying potential symbioses with consolidated companies, or these may emerge from visionary start-ups looking for new synergies.

1.2 Analysis of the project targets and identification of “customer segments”

The definition established in section 1.1 created the framework to guide the realisation of research activities before the 1st Twinning Meeting, aiming to deepen the profiles of green start-ups, eco-investors and consolidated companies looking for synergies in implementing their industrial symbiosis or circular economy projects.

Adopting the classification presented in 1.1, with desk research analysing existing literature, blogs, corporate websites and specialised magazines, we looked for representative companies of each category (the five green start-ups types, eco-investors and consolidated companies). We collected their stories in a database highlighting their journey, their interaction with the ecosystem, and their story from the creation of the company to the stage they are now. Then, for each country, we selected 2

start-ups per category, 1 eco-investor and 1 consolidated company involved in industrial symbiosis or circular economy projects with start-ups and deepened their stories with a semi-structured interview.

This phase allowed us to better understand the point of view of potential end users of the I AM GREEN business model, defining their profiles and their journey from the idea, through funding, to the eventual scale-up.

Considering the **standard customer analysis** tool as commonly used in creating the business model canvas (Strategyzer, 2020), this research allowed us to map for each category of target users their jobs (namely who are they, what are their normal activities), their pains (what is not working well and is disappointing them while dealing with their jobs) and gains (what can create additional value and facilitate the users' jobs). This research allowed us to compare the situation in the three partner countries (Italy, Ireland & Israel).

In order to feed the customer analysis, we carried out the following actions:

- **Desk research:** we looked for successful start-ups, investors, start-up/consolidated companies synergies stories on specialised journals and magazines, blogs and incubators/accelerators' websites. We tried to learn what was the key of their success and eventual difficulties.
- From the desk research we selected some relevant start-ups and other relevant actors to **deepen their stories** and asked to specify what, in their opinion, is missing in the current market offer of support services that could be valuable for them (gains).

The picture below shows how the interviews and the desk research fed the customer analysis canvas.

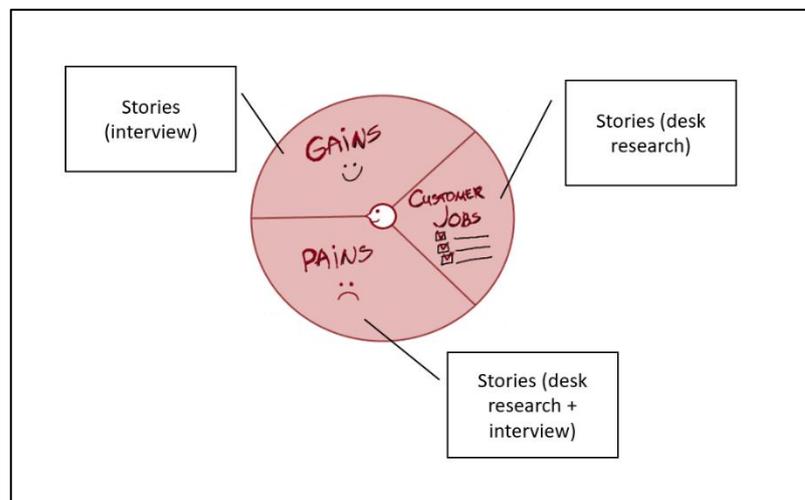


Figure 2 – Contributions of stories to I AM GREEN's value proposition analysis

Target category	Italy	Ireland	Israel	Total
Alternative start-ups	2	1	2	5
Visionary start-ups	3	1	2	6
Inventive start-ups	5	1	2	8
Ecopreneurial start-ups	2	0	3	5
Unintentionally start-ups	3	0	2	5
Eco-investors	1	1	1	3
Consolidated companies	1	0	1	2
TOTAL I AM GREEN	17	4	13	34

Table 3 – The stories collected through desk research and/or semi-structured interviews per country.

The preparatory research gave us useful insights to map the profile of the different start-up segments according to the BMC customer analysis scheme (Figure 1). The following tables summarise the segments profiles' jobs (what are the actions that typical for their business), gains (what is currently missing in existing services) and pains (what difficulties and problems they meet in their job).

Alternative start-up	
Gains <ul style="list-style-type: none"> - Market tests (testing the start-up product in real markets) thanks to the accelerator network and validation of the business model. - Technology assessment and development guides. 	Jobs <ul style="list-style-type: none"> - The company launches a non-fashionable idea (i.e. not corresponding to the bigger technology trends, such as circular economy or digitisation), but with potential to solve social and/or environmental issues. - The founders exhibit a technical and socio-logical background and the idea is less business oriented. The company finds an incubator/accelerator that share its values and vision (e.g. third sector/humanitarian accelerator). - After a round of interviews the company is selected to access acceleration and mentoring services. - The company is assisted to launch its business and gets a grant to cover its investments for business development.
Pains <ul style="list-style-type: none"> - It is more difficult to have access to funding and finance as the product is not "sexy" and the company is more socially oriented than business oriented. - The lack of resources does not allow the company to have access to their own experts in business planning and market analysis. 	

Visionary start-up	
Gains <ul style="list-style-type: none"> - Specific training for consultants and mentors so they that can guide applicants through the most challenging funding programmes. 	Jobs <ul style="list-style-type: none"> - The company proposes a visionary product encompassing a novel approach. This puts the company outside the experiences of their local ecosystems. - The visionary company starts its business working with its own capital and access to bank financing when possible.
Pains <ul style="list-style-type: none"> - Difficult to find the right funding, incubation or acceleration programme. - Difficult to find investors, given the high risk involved. 	

<ul style="list-style-type: none"> - Difficult to find the right path through bureaucracy. - Given the narrow focus of the business, it is difficult to find a mentor who shares and understands the vision. 	<ul style="list-style-type: none"> - Ordinary grants are not normally accessible for this company, different strategies should be assessed (e.g. crowdfunding). - The company business is risky.
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Inventive start-up	
Gains <ul style="list-style-type: none"> - Dedicated advisor sponsorship for business guidance. - Connection with angels and VCs and other investors helping the team to become more business oriented. - Funding programme “all along the way” that supports companies at the specific stage they find themselves. 	Jobs <ul style="list-style-type: none"> - Highly technological idea developed in research centres or universities. - Founded by researcher with PhD or similar education background. - Lack of business education or expertise in the company team. - The company is supported by the university/research centre in which the founders already work and can access their facilities and laboratories. This kind of collaboration lasts until the innovation get a patent. - Access to award programmes and innovation prizes (that support the setting of the company).
Pains <ul style="list-style-type: none"> - Understands how to manage IPR and the relations with the stakeholders when the company is ready to start its commercial development. - The company is early stage, this makes it more difficult to attract investors. 	

Unintentionally green start-up	
Gains <ul style="list-style-type: none"> - There are no incubators offering a problem-solving service, as they only support start-ups in their launch / initial stage. What is missing are the managing activities accompanying start-ups, operativity and rapidity. - Learning how to leverage the green impacts. 	Jobs <ul style="list-style-type: none"> - The company’s main business is in the digital economy. The efficiency of the novel algorithm developed by the company allows for relevant impacts in the reduction of energy consumption of the hardware where the algorithm is running. - The company has access to any programme supporting digital start-ups. The environmental and energy impacts connected are added values that make the company more suitable for such programmes. - After the company is established and eventually incubated, it needs programmes that support further development, testing, validation and launching of the innovative product (e.g. H2020).
Pains <ul style="list-style-type: none"> - R&D and Innovation funding programmes requires high and specialised skills to access them. - As the environmental or energy objectives are not the main part of the product development strategy, it is not always easy to acknowledge that the product has this important added value. 	

Ecopreneurial start-up	
Gains <ul style="list-style-type: none"> - Networking and collaborations with “bigger players”. - Access to EU funding programmes. 	Jobs

<p>Pains</p> <ul style="list-style-type: none"> - Difficult to find incubators or accelerators that are not generic but specifically dedicated to circularity. - National programmes can be constrained and have excessive bureaucracy and limitations. 	<ul style="list-style-type: none"> - The company has a scalable business, that is already bankable. This allows the company to invest in consultancy to improve the business plan and the whole strategy. - IPR, Mentoring and Open Innovation are the opportunities they mainly look for within the innovation ecosystem. - The company collaborates with universities and research centres to improve its product and to have the environmental impacts “certified”/attested by authoritative source.
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Eco-investor	
<p>Gains</p> <ul style="list-style-type: none"> - Sustainable funding - Double benefit: positive economic performance; supporting sustainable development and green economy 	<p>Jobs</p> <ul style="list-style-type: none"> - Allowing institutional and private investors to finance green projects and companies in the field of environmental sustainability, energy efficiency, renewable energy
<p>Pains</p> <ul style="list-style-type: none"> - Eco-investment is still rather unknown to the general public: in fact, eco-investors are usually young and highly educated people living in cities or in wealthy industrial areas. 	

Consolidated Company	
<p>Gains</p> <ul style="list-style-type: none"> - Start-ups as ideal interlocutors for the development of digital innovation experiences and different types of collaboration. 	<p>Jobs</p> <ul style="list-style-type: none"> - Matching the needs of consolidated companies looking for start-ups with which to collaborate in open innovation projects. - Identifying the sectors benefitting from open innovation experiences: big data, cybersecurity, ERP and CRM systems, etc. - Creating synergies between consolidated companies and innovative start-ups / universities and research centres.
<p>Pains</p> <ul style="list-style-type: none"> - Possible difficulties in replicating the matching model of consolidated company – start-up in I AM GREEN. - The partnership between companies and start-ups is a short-term one. - A change in mentality is needed within the companies: long-term vision, openness to invest in R&I, looking outside for sources and opportunities for innovation. 	

Table 4 – The Gains, Pains, and Jobs associated with the 5 categories of start-up described in section 1.1

Difficulties start-ups can find in their journey

- **Attracting investors**, especially when large capital expenditure is required from the beginning and does not entail a return in the short term. In order to attract funding, many start-ups need to pitch to different investors:
 - National and international foundations;
 - [Mass Challenge](#) (i.e. the global network for innovators trying to solve global challenges by connecting start-ups, corporations, experts and communities to grow and transform businesses and the economy);
 - [Humanitarian Innovation Fund](#) (a global charity supporting research and innovation really solving complex humanitarian problems, by providing local communities with knowledge and tools that effectively work);
 - Business angels;
 - Venture capitalists;
 - Entrepreneurs' private investments;
 - Sponsors' investment and support plans in the specific sector of the start-up (e.g. solar energy);
 - Innovation calls and tenders;
 - European funding programmes on research and innovation.
- Nowadays, for many investors, **opportunities linked to the digital economy world are more attractive** (AI, software, apps, machine learning, etc.) or, in general, are those where they can obtain higher form of return. They tend to neglect all other areas, despite the fact that they can prove to have an impact of some kind from a social / humanitarian point of view, or solve important problems affecting third world countries, disaster areas, etc.
- Big megatrend ideas cannot be realised by small personally funded micro-companies. A **consortium of actors** with different skills is needed, in order to cover all the processes – from manufacturing a product to selling it.
- Start-ups with a very specific approach find it hard to integrate themselves in the innovation eco-system, but also to look for a mentor.
- **Administrative and normative procedures, bureaucracy**, decision-making processes. A normative support is much needed.

What do entrepreneurs need?

- Measures and **incentives to stay** in a certain region or come back and establish their business there, support services to start-ups and innovation. This would be much required in the South of Italy, where such supports are hard to find.
- **Technical and scientific support from Universities and from the research field**, especially in those cases where the product or service launched needs constant innovation and a research-backed experimentation before being implemented and officially launched on the market.
- They need **both technical skills and commercial and/or marketing competences** within the team in order to cover all the needs in the initial phase. This is important to attract investors and, generally speaking, the interest from industrial players and commercial partners. In fact, they are much more likely to invest in a start-up that is able to provide both an added value in terms of technological development and an impact from a commercial point of view.

- Since the start-up teams are small by definition, sometimes they **lack professional skills** which are instead needed in order to make the business flourish: they can be either scientific experts supporting the development of the product, or commercial professionals ensuring its successful launch on the market, or consulting services providing strategic guidance. All these profiles are needed.
- Incubators offering a continuous problem-solving service, managing activities along the start-ups' journey, and not limiting themselves to accompany them only in the launch phase; a sort of **"Fab Lab" supporting start-ups** in going to production and helping them find the right position in the market – as other consolidated companies; a **"security belt"** offering support and solutions to those problems that start-ups do not manage to solve by themselves.
- **Technical mentoring** in the specific field where the start-up operates.
- **Commercial mentoring** to support the sales and marketing strategy of the start-up

Suggestions

- Focus on a route to market that ensures a **payback** in a relatively short term, which demonstrates market pull.
- Make sure that as a company proves its worth **funding** will be provided **all along** the company launch and consolidation, not only in the start-up phase.
- When a start-up finds itself in a difficult situation from a financial / economic / social point of view or when its product / service suffers from an unsuccessful launch on the market, where appropriate, it can **reinvent** itself by analysing market trends and focusing on a more promising pivot, or by focusing its attention on products where there is a high demand from the market. For example:
 - Solarmarine Energy (IE) recognised the trend of removing plastics from the marine environment and developed a new product which removes 95% of a potentially polluting polymer in the design of its platforms.
 - Saba Technology (IT) reinvented itself and its business model after the outbreak of Covid-19 pandemic. It exploited the rising demand for air sanitisation devices and launched a tool that previously represented a secondary technology in its product range: a system of air sanitisation through photocatalysis, which succeeds in reducing the bacterial count of all the substances dissolved in the air. Before the pandemic, this tool was integrated to a self-sufficient agricultural greenhouse, whose main feature was represented instead by the devices collecting water from air humidity.
- Entrepreneurs should learn to **value professional experiences** done abroad and replicate strategies in their own country. For example:
 - Ikeo Group (IE): the founder identified the timber megatrend while he was working in the United States.
 - Saba Technology (IT): the founder noticed that water supply and desertification represented huge problems in many countries both in the Middle East (where he worked previously in the real estate domain) and in the Mediterranean area.
- Entrepreneurs should know exactly **their objectives and the direction they want for their business**. It is very important to have clear ideas on this point before launching a business.

2. Value proposition: which is the added value of I AM GREEN incubator academy model?

2.1 Value proposition design

This chapter analyses how the I AM GREEN Consortium can create value for its target users and how this value can be translated into new services to improve the capability of the Consortium members to support the innovation ecosystem at local level.

Value is a measure of the benefit provided by a good or service to a stakeholder. It does not generally coincide with the market price, as it is usually perceived as higher: a customer decides to buy a product or a service when (s)he places a value that is higher than the market value, i.e. where benefits are most valuable than costs.

I AM GREEN's **value proposition** is then a promise of value to be delivered to its customers (national and local start-up ecosystem supporters).

To design a value proposition, it is necessary to identify and understand customers. Who are they? What are they doing? What are their needs? Are they dissatisfied? From customer insights, it is possible to identify what can be offered and how this creates value for the customer.

Osterwalder (2014) proposed a value proposition canvas that is now normally used in service design and that is part of the whole **Business Model Canvas**. Osterwalder's tool allows an understanding of whether and how the proposed value fits customers' needs.

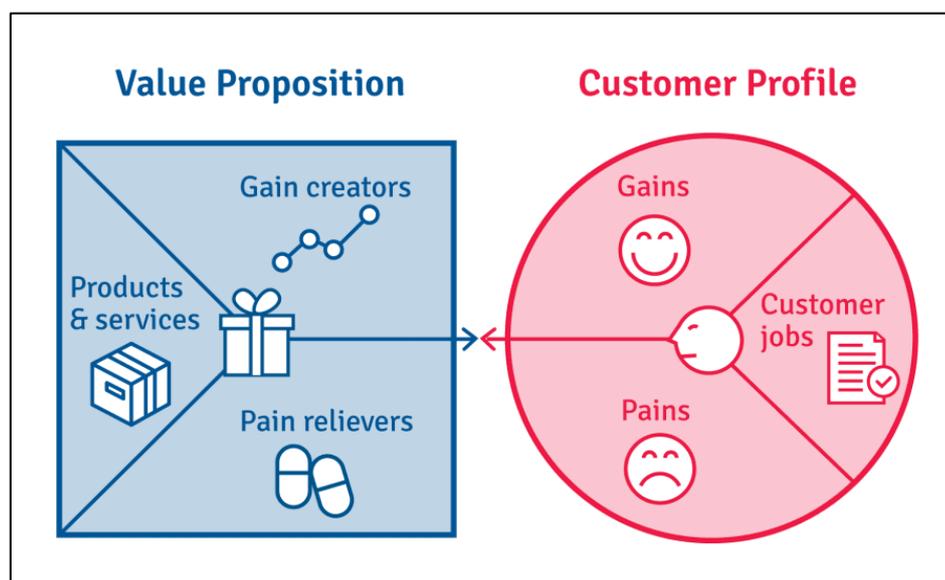


Figure 3 – Osterwalder (2014)'s value proposition canvas

Thanks to the preparatory research based on the 1st Twinning Meeting (see Annex A) and presented in Chapter 1, we had the opportunity to analyse the different segments of I AM GREEN end customers, understanding their needs and *desiderata* and find possible solutions for their benefit.

2.2 Value proposition for start-ups

In Chapter 1 we considered the 5 types of start-up proposed by Bergset and Fichter (2015) from the point of view of the customer. In this chapter we will consider the I AM GREEN's value proposition with reference to the same 5 start-up archetypes. Value proposition was created starting from the Jobs, Gains and Pains of the start-up segments analysed in Chapter 1. A value proposition statement has been created according to the results of the value proposition tables.

Alternative start-ups	
Services <ul style="list-style-type: none"> - Early stage funding - Matching & networking with investors - Mentoring - Skills development 	Gain creators <ul style="list-style-type: none"> - Market expert mentors (i.e. sectoral experts rather than generic business experts) - Technology experts in the scientific committee that can guide and advice the start-up company - Collaboration with universities and re-search centres
	Pain relievers <ul style="list-style-type: none"> - Specific channels for social innovation - Training to improve the company team's internal business skills
Value Proposition: The I AM GREEN model supports "Alternative start-ups" by accompanying them in their business and technological development.	

Visionary start-ups	
Services <ul style="list-style-type: none"> - Advice and guide to access national and EU R&D funding programmes - Matching and networking with investors - Skills development 	Gain creators <ul style="list-style-type: none"> - Advice to assist with access to funding schemes for disruptive or pathfinder innovations - Advice to access to alternative finance (e.g. crowdfunding)
	Pain relievers <ul style="list-style-type: none"> - Training on grant writing/management - Training on innovation communication
Value Proposition: The I AM GREEN model supports "Visionary start-ups" guiding them through the most challenging innovation funding programmes.	

Inventive start-ups	
Services <ul style="list-style-type: none"> - Matching and networking with investors - Skills development 	Gain creators <ul style="list-style-type: none"> - Network of visionary eco-investors
	Pain relievers <ul style="list-style-type: none"> - Training on IPR management - Training on business skills
Value Proposition: The I AM GREEN model supports "Inventive start-ups" in their business development, by empowering their teams and networking with visionary and philanthropic investors.	

Unintentionally green start-ups	
Services <ul style="list-style-type: none"> - Tailored mentoring/consultancy activities - Skills development - Advice and guide to access national and EU R&D funding programmes - Matching and networking with investors - Market Analysis 	Gain creators <ul style="list-style-type: none"> - Scale up services - Green marketing advice Pain relievers <ul style="list-style-type: none"> - Training on grant writing / management - Third party technology impact assessment
Value Proposition: The I AM GREEN model supports “Unintentionally green start-ups” helping them understanding the real impacts of their innovation and leveraging on them to foster the company growth.	

Ecopreneurial start-ups	
Services <ul style="list-style-type: none"> - Business matching and networking - Tailored mentoring/consultancy activities - Skills development - Advice and guide to access national and EU R&D funding programmes 	Gain creators <ul style="list-style-type: none"> - Business matching events and collaboration with different actors, including consolidated companies Pain relievers <ul style="list-style-type: none"> - Training on grant writing / management
Value Proposition: The I AM GREEN model supports “Ecopreneurial start-ups” growth matchmaking them with the ecosystem actors, especially consolidated companies, with the aim to create synergies and business integration.	

Table 5 – An analysis of Osterwalder (2014)’s value proposition canvas applied to the 5 types of start-up defined in section 1.1 above

2.3 Value proposition for eco-investors

In the same way we did for the start-up segment, we defined the value proposition for investors with an interest in sustainability projects.

Eco-investor	
Services <ul style="list-style-type: none"> - Matchmaking and meeting with project teams aiming to create sustainable innovation - Awareness raising and communication 	Gain creators <ul style="list-style-type: none"> - Pre-screening of companies with high potential - Impacts and Technology assessment
	Pain relievers <ul style="list-style-type: none"> - Focused communication campaign ensuring visibility for eco-investors
The I AM GREEN model helps the eco-investor in finding the best green projects to invest in , allowing them to fund the development of sustainable innovation while not renouncing to a ROI, that includes also visibility (i.e. marketing return) to the investor.	

Table 6 – An analysis of Osterwalder (2014)'s value proposition canvas applied to eco-investors

2.4 Value proposition for consolidated companies

The last segment that has been analysed is those of consolidated companies, interested in outsourcing the solution of specific problems that need innovations held by start-ups.

Consolidated companies	
Services <ul style="list-style-type: none"> - Open innovation projects - Matchmaking 	Gain creators <ul style="list-style-type: none"> - Outsource to start-up the development of solution for specific problems
	Pain relievers <ul style="list-style-type: none"> - Workshops and events to showcase successful open innovation projects in industrial symbiosis/circular economy
The I AM GREEN model helps consolidated companies in collaborating with innovative start-ups creating synergies that are fruitful for both sides : the consolidated company save moneys in researching technology solutions, while the start-up develop a first commercial relationship.	

Table 7 – An analysis of Osterwalder (2014) 's value proposition canvas applied to consolidated companies

3. Training needs analysis and catalogue for green start-ups

3.1 Training needs and skills gap in start-up entrepreneurship

One of the scopes of the I AM GREEN project is to help the participating innovation agencies to improve the services offered to start-ups, including those aimed at empowering entrepreneurs that are taking part in an incubation or acceleration programme. This is a very important service and may play a crucial role in the start-up success and capability to attract funding. Moog (2002) found that the **human capital** is a key component of the start-up success: more skilled and educated founders mean being more efficient in getting, evaluating and utilising information, increasing the number of contacts and negotiations with banks, investors and venture capitalists. The most successful start-ups have a good balance of theoretical background (the knowledge that generated the innovative idea) and practical and business experience.

The human capital of the founding team is crucial in the early stages of a company's lifecycle and is the main factor on which investors choose to invest in one start-up instead of another. The founding team profile makes the start-up credible and give a reasonable signal about the quality of the idea: high skilled teams have attractive opportunities outside the company, the fact they are investing in their own company as well as the skills they have make success more likely (Bernstein et al., 2017).

Empowering start-up teams is therefore, a key element of an incubation or acceleration programme and it is important to understand how to help companies to develop the skills they need to succeed. In order to have effective entrepreneurship training, learning by action should be emphasised, with actions that replicate real business tasks or problems (**action-based training**). Theoretical framework (**theory-based training**) is important, but should not be too deep and should be included as "action principles". **Action principles** are derived from academic literature and scientific evidence and provide guidelines on how to deal with entrepreneurial tasks and showing the optimal approach to follow as a rule of thumb (Gielnik et al., 2015).

To develop the correct entrepreneurial mindset, action planning is pivotal. **Action planning** makes it more likely that entrepreneurs who have a goal, initiate and start working on it. The action plan should not be confused with business plan (economic viability of an action) as it provides a mental simulation of actions, and the sub-steps and operational details to attain a goal, including a way to control and direct efforts. The higher the background knowledge of the processes behind the action, the stronger the effectiveness of the plan and its effect on entrepreneurial mindset. **Self-efficacy**, namely the individual's confidence in his or her capabilities to accomplish tasks, is another point that make success of a start-up more likely. Self-efficacy influences the initial choice of activities, the goal level, the commitment, the effort and the persistence. Drnovsek and Cardon (2010) distinguished business start-up self-efficacy from business growth self-efficacy, as successful entrepreneurs during the start-up phase are not necessarily those that are successful in growing a venture. Start-up self-efficacy may focus on beliefs about identifying and converting an innovative technology into a marketable product, venture growth self-efficacy may be more related to exploiting the market value of product and service and grow their market share. This distinction is important in understanding why some entrepreneurs may be effective in identifying opportunities but fail to capitalise on them. Task and outcome goal beliefs are not related, task self-efficacy does not imply outcome self-efficacy. Entrepreneurs with high self-

efficacy beliefs may become demotivated, abandon aspirations and disengage with business goals. Negative thinking control and cognitive training methods in general, are often ignored in entrepreneur training programmes despite evidence related to the impact they have on business success.

Many researchers (e.g. Cooney, 2012) agree on identifying three groups of skill-set to be developed to be a successful entrepreneur. These are entrepreneurship skills (that includes soft and transversal skills such as self-efficacy), managerial skills and technical skills. **Technical and Managerial skills** are easier to train, while **transversal skills** are more dependent on personal characteristics. Success in entrepreneurial skills is not granted but training may help entrepreneurs become aware on their limits and take better decision on which skills should be sourced externally, potentially enlarging the company team. Among relevant entrepreneurial skills, Cooney identifies ability to take risks while in the management skills, decision making is pivotal. Financial literacy has been found as a critical point influencing efficacy in correctly evaluation risks and related decision-making actions. As start-ups lack funds, financial management and related decision are extremely important. According to OECD (2018):

“Financial literacy is defined as the combination of awareness, knowledge, skills, attitudes and behaviours that a potential entrepreneur should have in order to make effective financial decisions to start a business, run a business, and ultimately ensure its sustainability and growth”.

The framework of skills identified by OECD relates to the use and choice of financial services, financial and business management and planning, risk and insurance, financial landscape. There are differences among EU countries: some show a higher understanding of financial concepts, while others lack this knowledge.

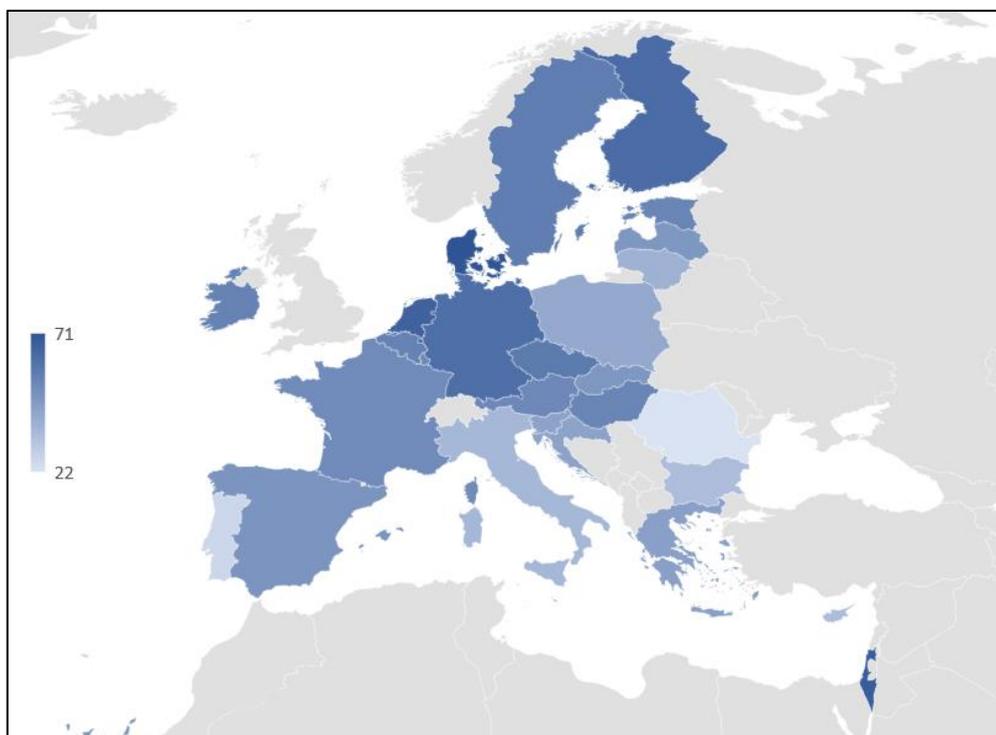


Figure 4: Financial literacy in the EU + Israel (visualisation of data taken from Klapper et al., 2015)

Another set of skills that influence decision-making competences are those classified as **social skills**. Baron and Markman (2015) identified four different social skills that are in some way helpful for entrepreneurs:

- Social perception. Social perception relates the propensity to perceive correctly the sentiments, traits, reasons and aims of others.
- Impression management. Impression management involves the tactics conceived to induce a favourable first impression by others.
- Persuasion and social influence. Ability to change other's attitudes or behaviour in the desired direction.
- Social adaptability. The capability to adapt to a different range of social situations.

This set of social skills is useful in various situations: presenting the business project to investors and customers, obtaining financing, attracting and retaining key employees, networking and establishing business relations with other actors of the business ecosystem, increasing the company social capital.

Entrepreneurs lacking social skills make poor first impressions, fail to generate enthusiasm for their ideas and may annoy persons with whom they are negotiating. Enhancing social skills with training can assist entrepreneurs to avoid these pitfalls and contribute to their success. Social skills may be enhanced (and this is how training is currently offered) through simulation, role play or assisting and/or filming real interactions and show people how they managed that situation. This increases self-awareness and eventually changes what did not work.

The **twin transition to a digital and green economy** are the main policies to tackle the consequences of the Covid-19 pandemic on the economy and society as a whole. These are among the most important objectives of the EC's Recovery plan for Europe and requires investments in upskilling citizens, workers, entrepreneurs to guarantee a smooth transition.

Emerging skills for aspiring entrepreneurs

The European Recovery Plan promotes the transition to a green economy and the digital transition as the two main policy measures to deal with the effects of the Covid-19 pandemic on both economy and society all around Europe. However, in order to ensure the effectiveness of both transitions and to foster recovery after the crisis, it is also vital that not only citizens, but also existent and aspiring entrepreneurs, master new skills and know how to deal with green and digital technologies.

The main goal of new policy and regulatory measures, in fact, goes in this direction: on the one hand, [the SME Strategy for a Sustainable and Digital Europe](#) underlines the importance of education and training for all SME managers and employees, but also for future entrepreneurs; on the other hand, the [New Skills Agenda](#) aims at developing the skills of both citizens and businesses. In particular, the European Commission plans to launch initiatives in order to promote an **entrepreneurial mindset**, and to train students in entrepreneurship skills and knowledge at all educational levels, so that they can feel comfortably trained and motivated to launch their own business.

The abovementioned policies show that there is a growing awareness at a European level of the promotion of entrepreneurship, and on the importance of effective and suitable education to train future entrepreneurs and make this opportunity viable for more and more people. This means supporting existing SMEs in their entire life cycle, by promoting training for both managers and employees so

that they can keep updated on recent professional developments, but also by reaching out to specific high potential groups and encourage them to pursue their entrepreneurial career. In particular, the skills that aspiring entrepreneurs are called to acquire can be thus classified: digital, sustainability and financial literacy and entrepreneurial skills.

Digital skills

Digital competences are transversal and operational to the acquisition of other key skills. Starting from the European Digital Competence Framework (DigiComp) of 2013, which identified the characteristics and the attitudes of a digitally competent citizen or business, now the whole debate has expanded and developed to include digital literacy as a priority in the Digital Agenda for Europe. The European Commission has also supported a number of national strategies on digital skills in Member States, with the goal to improve teaching and pedagogy with digital tools, and also to provide the suitable infrastructure for remote working and education.

Financial skills

Financial literacy can be defined as the set of knowledge and skills that an entrepreneur or a manager of a SME should master to ensure the financial sustainability and the development of his/her business. It is especially crucial for those groups that tend not to benefit from all the opportunities of the financial markets, like young entrepreneurs and entrepreneurs in the informal sector.

Financial skills are very important for both SMEs and entrepreneurial world in general, as stated by the [G20/OECD High level principles on SME financing \(2015\)](#). In this policy paper, a number of indicators are highlighted as essential to improve and sustain the financial literacy of both managers of SMEs and aspiring entrepreneurs. These types of skills will complement and further develop their entrepreneurial mindset, by focusing not only on the understanding of available financial tools and the ongoing changes in policy regulations and legislation for SMEs, but also as a way to acquire greater awareness of the general competences that all adult consumers need to master in order to feel safe and comfortable from a financial point of view. Entrepreneurs can benefit from the support of a series of projects launched by the European Commission and financed by the COSME programme, aimed at integrating the acquisition of financial literacy skills within a wider programme on entrepreneurial competences in more general terms.

Sustainability skills

Key competences in terms of sustainability should be transversal at all educational levels and intrinsic for the entrepreneurs of the future. They will allow individuals to be able to solve complex problems and exploit business opportunities, by always considering the sustainability perspective. The European Green Deal pointed out the need to develop an **organic and all-encompassing competence framework to help create awareness and develop skills on climate change and environmental and social sustainability**. This should be true both for normal citizens and for aspiring entrepreneurs, who will start to introduce procedures like the impact assessment of their company as an integral part of their business development.

Thematic box: Benefit Corporations – When Financial skills meet Sustainability skills

Entrepreneurs aiming to launch a new business cannot ignore the increasing trend towards sustainability issues (understood as integrated social-environmental-economic sustainability) and the success of the **B Corp Certification**, that is leading to the transformation of many companies into Benefit Corporation (Bcorporation.eu, 2022). This type of business goes beyond the goal of profit and is linked to the concept of development. It is characterized by continuous innovation aimed at maximizing the positive impact on employees, communities and stakeholders, in line with the ongoing implementation of the green economy principles.

The ecological transition and the transition to sustainable business models are also processes that transversally affect all business areas, from procurement, to production, to logistics; from marketing to administration. For this reason, it is of fundamental importance that a start-up takes into consideration **sustainability** aspects in all business areas from the beginning, when defining its mission, goals, all aspects of the marketing mix and also sources of funding.

Introduced in the US in 2020, a **benefit corporation** is a traditional for-profit corporate entity that includes positive impact on society, workers, the community and the environment in addition to profit as its legally defined goals, in that the definition of "best interest of the corporation" is specified to include those impacts.

To reach those impacts, a benefit corporation has to comply with a series of obligations and commit itself to higher standards of purpose, accountability and transparency:

- 1. Purpose:** Benefit corporations commit to creating public benefit and sustainable value in addition to generating profit. This sustainability is an integral part of their value proposition.
- 2. Accountability:** Benefit corporations are committed to considering the company's impact on society and the environment in order to create long-term sustainable value for all stakeholders.
- 3. Transparency:** Benefit corporations are required to report to show their progress towards achieving social and environmental impact to their shareholders and in most cases the wider public.

A benefit corporation is neither a social enterprise nor a non-profit organisation, but rather an evolution of the concept of for-profit business taking on the challenges of the 21st century and bringing about common benefits both for society and the environment.

On January 1st 2016, Italy became the first European state and the second country in the world creating a new legal status for companies, called "**Società Benefit**". Importing the model from the US, a "Società Benefit" is a company which combines the goal of profit with the purpose of creating a positive impact for society and the environment and which operates in a transparent, responsible and sustainable way.

A **benefit corporation** (or "Società Benefit" in Italy) is a *legal tool* to create a solid foundation for long term mission alignment and value creation. It can also help to increase access to private investment capital as benefit corporation status can make the company more attractive to long term investors, as a company with increased legal protection, accountability and transparency around its mission.

Distinct from the benefit corporation that is the legal designation, **B Corporation** (also B Corp) **certification** of "social and environmental performance" is a private certification of for-profit companies

conferred by [B Lab](#), a global non-profit organization. To be granted and to maintain the certification, companies must receive a minimum score from an assessment of "social and environmental performance", integrate B Corp commitments to stakeholders into company governing documents, and pay an annual fee based on annual sales. Companies must re-certify every three years to retain B Corporation status.

Certifying as a B Corporation goes beyond product- or service-level certification. B Corp Certification is the only certification that measures a company's entire social and environmental performance. The B Impact Assessment (BIA) evaluates how the company's operations and business model impact its workers, community, environment, and customers. From supply chain and input materials to charitable giving and employee benefits, B Corp Certification proves the business is meeting the highest standards of verified performance.



Figure 5: B- Impact Assessment (BIA)

Source: The B book (<https://nativelab.com/bcorp-italian-summit/The-B-Book.pdf>)

Around the world, benefit corporations and B Corps are becoming even more interesting for the investor community that is supporting thousands of benefit corporation entrepreneurs. More and more, we are seeing entrepreneurs choosing to become benefit corporations and then proceed to do large-scale successful capital raises with traditional investors.

Benefit corporations are also successfully using crowdfunding to raise capital from their friends, families, and supporters. There are multiple crowdfunding platforms available to entrepreneurs interested in taking this step and some are more specifically tailored to support benefit corporations (e.g. [Wefunder](#)).

Talking about business sustainability, **ESG rating** is also an increasingly popular way for investors to evaluate companies in which they might want to invest.

Environmental, social, and governance (ESG) criteria are a set of standards for a company's operations that socially conscious investors use to screen potential investments. ESG criteria can also help investors avoid companies that might pose a greater financial risk due to their environmental or other practices.

Environmental criteria consider how a company performs as a steward of nature. Social criteria examine how it manages relationships with employees, suppliers, customers, and the communities where it operates. Governance deals with a company's leadership, executive pay, audits, internal controls, and shareholder rights.

Entrepreneurial skills

In 2016, the European Commission launched the **European Entrepreneurship Competence Framework (EntreComp)**, with the goal to improve the entrepreneurial skills of individuals in the European Union by creating a common set of knowledge skills, attitudes aimed at becoming entrepreneurs. It also aimed at giving all people the opportunity to develop an entrepreneurial mindset, as mastering these kind of skills does not imply that they need to be used to found and manage a company or an organisation, but they can be implemented in everyday life and activities and be useful for personal development and self-realization (competence for life). Since we live in a constantly changing world, an entrepreneurial mindset will prove itself useful to achieve both professional and personal goals.

Based on the assumption that developing entrepreneurial skills is considered a key competence area for a knowledge-based society by the European Commission, EntreComp is a tool to improve the entrepreneurial capacity of European citizens and organisations, but also to create consensus around a common understanding of these skills by defining:

- 3 competence areas: “Ideas & Opportunities”, “Resources” and “Into action”.
- 15 competences (5 per each competence area), which constitute the building blocks of entrepreneurship as a competence.
- 60 threads describing what a certain competence really means in practice.
- 442 learning outcomes
- 8 proficiency levels, from “foundation” to “expert”

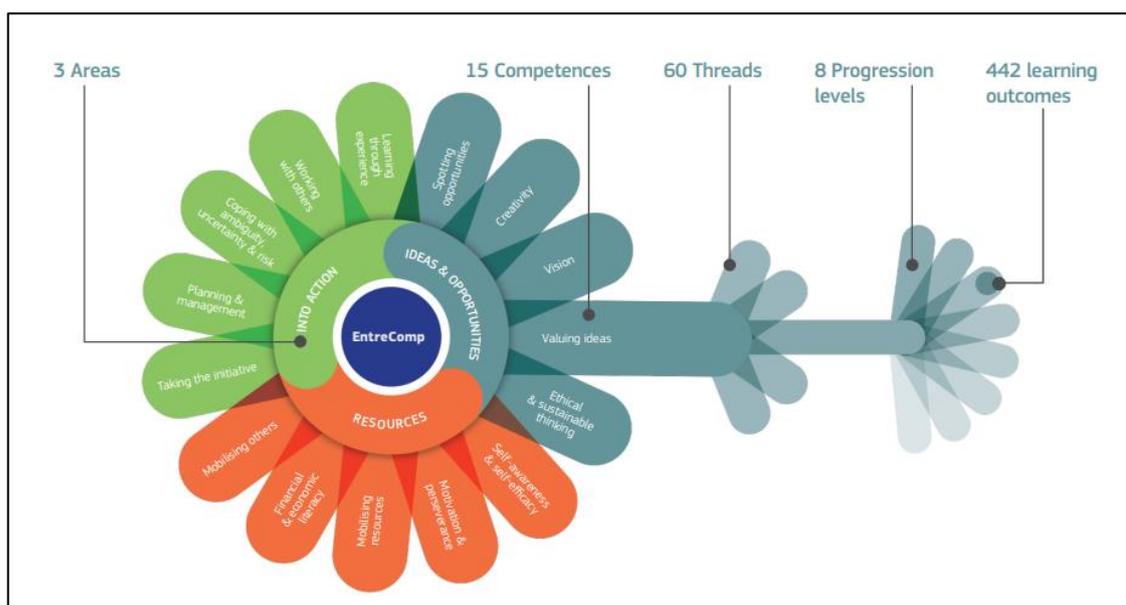


Figure 6: EntreComp – Entrepreneurship Competences Framework (European Commission, 2016)

The EntreComp model can be used as a basis to develop learning activities aimed at fostering entrepreneurship as a competence, assessing the acquisition of these competences and, creating value for others. It is a free and flexible tool that can be adapted to multiple contexts and goals, for example in education and training, to recruit and manage HR, and by start-ups and entrepreneurs

- to understand how activities carried out contribute to entrepreneurial competences,
- to help entrepreneurs map their own skills,
- to design new training schemes for business creation and/or development.

3.2 Training methodologies

One of the most significant elements of entrepreneurship curriculum design is choosing which **teaching-learning methods** to apply. These should be consistent with entrepreneurship goals and contents, and should also be developed according to the learners' needs. With regard to entrepreneurship teaching methods, no definitive method is proposed. An overview of the literature on entrepreneurship shows the change pattern from conventional teaching of entrepreneurship to modern methods based on "action learning". **Entrepreneurship education** is, simply defined, a systematic, conscious, and goal-oriented process, through which non-entrepreneurial individuals who have the necessary potential are creatively trained. In fact, entrepreneurship education is an activity used to transfer knowledge and information required for entrepreneurship and leads to an increase in, improvement, and development of attitudes, skills and abilities of non-entrepreneurs. Moreover, it forms the students' beliefs and values for creating an entrepreneurship culture (Khanijazni, 2009). Entrepreneurship education should be considered as a creative process rather than a mechanical one. Thus, teaching such a process would be challenging and problematic and requires new and active teaching methods. Researchers have offered various methods for teaching entrepreneurship, such as:

- **Process-oriented teaching** instead of content-oriented, problem-based teaching introduces concepts and methods such as group projects, writing business plans, practical experience in producing and selling products and services, and learning from mistakes (Oyelola, 2013).
- **Group projects, case studies, individual projects**, developing a new investment project, problem solving, guiding young entrepreneurs by supporting them in their projects, training in investment, group discussion, official speech, interviewing entrepreneurs, simulations, and scientific visits (Arasti et al., 2012).
- **Entrepreneurship camps as teaching methods**: Moving people from their normal work place or school environment to a camp site can be an efficient means for team building, creativity training and innovation boosting purposes. The camp model is increasingly used in the entrepreneurship education field as a supplement to classroom teaching. Some camps focus on the generation of ideas while others on turning ideas into concepts and rudimentary plans. (Torben, 2010).
- **Business planning**, case studies, students starting businesses, business games, student entrepreneurs' teams and networks, internships in small companies, feasibility studies, training in communication, getting advice in starting small businesses, distance education, external cooperation and business simulations, games, analysis and discussion of real businesses, group work, mentoring, networking (common experience), tutoring, action learning, problem-oriented method, peer group support, expert advice and intensive counselling, and access to business networks as teaching methods of entrepreneurship (Potter, 2008).
- **Case study**, business planning, discussions, research projects, computer simulations, entrepreneurship, visiting sites and class practice (Solomon, 2008).
- **Problem-oriented learning**, active learning, and action learning (Ton and Frank, 2006).
- **Entrepreneurship** through individual, extracurricular activities and entrepreneurship training, defining and completing individual projects, action research, probing process, turning ideas into action plans, discussing important and perfect actions plans and implementing designed plans, control over research methods, and scientific, educational, and research development (Sharif et al.; 2011).

- **Problem solving**, active training methods, and practical learning activities, presenting creativity opportunities, developing new ideas, and holding classes and specialized workshops (Mojalal et al. 2011).
- **Experiences in real life** and assimilated learning environments, group work, involving in learning, action research, and permanent and continuous connection with entrepreneurs as teaching methods (Kowsari and Norouzzadeh, 2009).

Teaching-learning methods	Elements
Direct teaching-learning methods	Inviting guest entrepreneurs – Mentoring - Official speech-seminars – Video watching and recording - Training in extracurricular activities - Training in specialized lessons - Small businesses mentoring –Entrepreneurship tutoring
Interactive teaching-learning methods	Process-oriented learning - Learning from mistakes - Interviewing entrepreneurs - Bilateral learning - Group discussion - Networking – Discussion - Problem-oriented learning - Active learning
Practical-operational teaching-learning methods	Role-playing - Training workshops - Site visiting - Class practice - Research projects – Internship - Business planning - Starting business - Studying nature - Investment projects - Practical experience

Table 8 – Summary of the most valuable methods to teach entrepreneurship (Esmi et al., 2015)

Business Mentoring: In a start-up, as well as the founders and their team of collaborators, we can find other actors external to the company who influence the business and, very likely, the decision-making process of the founders, namely: **mentors and advisors**. In the entrepreneurial world, these figures provide the new business creators with the security to take their first steps and improve their positioning. A mentor is someone who is willing to dedicate their time and experience to guide the development of the business and of its entrepreneur. Many confuse the term **mentorship** with coaching. Though similar, they are substantially different because the mentor is a source of knowledge and support, but does not search for a change in behaviour or habits like coaching does. The main purpose of a mentor is to help entrepreneurs with specific questions by sharing their knowledge and contacts, harvested through their years of experience. Therefore, a mentor must not only fulfil their executive functions, but also understand the process and evolution of the project. In the market, we can find different mentors who have had different successes with their own businesses and now offer their experience to entrepreneurs as well as professionals who support new ideas. On the other hand, we can also find mentors from business schools who contribute with a more technical knowledge, and who can be focused on a specific area of business (marketing, finances, product, international expansion, fundraising, legal, etc.) The ideal type of mentor is a mix of both profiles.

Coaching for potential entrepreneurs: As Brinkley & Le Roux (2018) pointed out, coaching is a support function for individuals that facilitates learning and has been demonstrated that is a useful means to empower and encourage entrepreneurs to think strategically and increase their self-efficacy and skills. The authors found an interesting link between coaching and mentoring and proposed a framework to understand where the methodologies work better. Their framework shows that a combination of mentoring and coaching may allow entrepreneurs to cover a wider range of skills. Mentoring is more appropriate to developing practical skills, while coaching works better for self-development.

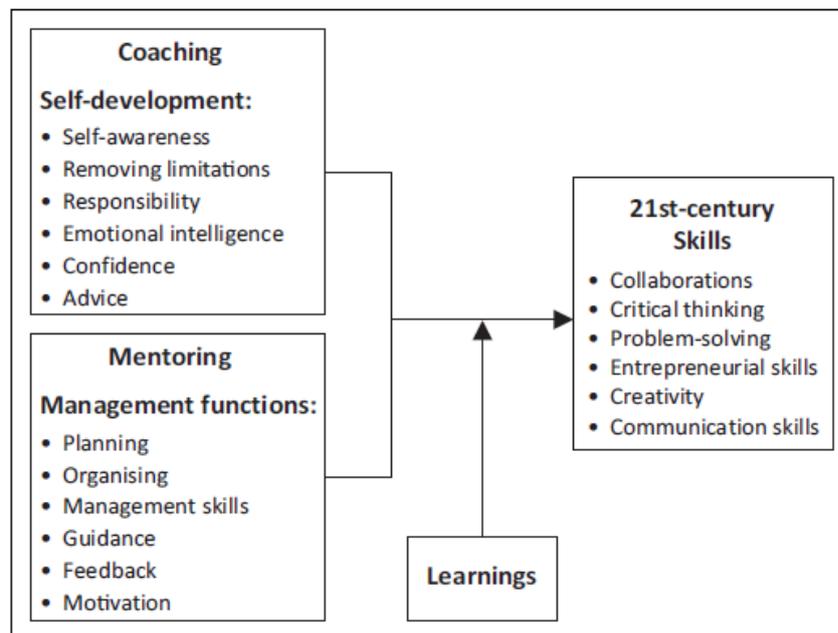


Figure 7: Linking framework taken from Brinkley & Le Roux (2018)

Kotte et al. (2020) proposed the following definition of **entrepreneurial coaching**:

"Entrepreneurial coaching is a custom-tailored, reflective, and results-oriented development intervention that is directed towards entrepreneurs with differing levels of experience and across different stages of the entrepreneurial process. It is based on a collaborative relationship between a professional coach (who may or may not have personal entrepreneurial experience) and an entrepreneur. EC can be embedded (e.g. in entrepreneurial programs or start-up grants) or be conducted as a stand-alone intervention. It entails both expert- and process-consultation elements and, beyond focusing on the individual entrepreneur and their work, involves a consideration of the venture level".

Action Learning: Action learning is becoming recognised as an important programmatic approach for encouraging and enhancing entrepreneurial learning. Action Learning is a method for individual and organisational development based upon small groups of colleagues meeting over time to tackle real problems or issues in order to get things done; reflecting and learning with and from their experience and from each other as they attempt to change things (Edmonstone, 2003). This approach brings small groups of people together from different areas of business to solve real issues in real time and it is considered as a valuable method to support start-ups and aspiring entrepreneurs to learn how to develop new ideas for their business.

4. The I AM GREEN Incubator Academy Model and synergies among actors

4.1 Benchmark of Corporate Academies

In order to define the I AM GREEN Academy Model a desk research exercise has been conducted aiming to identify inspiring case studies and the best practices they implement, together with an analysis of weak points, challenges and obstacles to success, and ways to overcome them.

SMAU ACADEMY (ITALY) https://www.smauacademy.it/	
<p>Smau is the main business matching platform in Italy about innovation, chosen each year by over 50.000 entrepreneurs, managers of companies and public administrations to grow and update on topics such as innovation, leading-edge technology, digital and internationalization.</p> <p>Smau has shaped its own format, promoting networking and professional updating, becoming a relationship platform that connects companies with the entire innovation ecosystem: digital players, start-ups, incubators, accelerators, following the dynamics of open innovation.</p> <p>Smau Academy is the free training and professional updating platform active 365 days a year and dedicated to Italian entrepreneurs, managers and professionals who want to increase their skills on highly topical issues, such as digital marketing, analytics, social media for business, the internationalization of companies, the 4.0 factory, cloud computing, IT security, all issues related to privacy and the use of sensitive data and much more.</p> <p>Every year Smau organises, thanks to the support of a network of independent speakers - professionals, consultants, analysts and teachers - over 700 free 50-minute workshops as part of the stages of the Roadshow around Italy. One of the main objectives is to spread the culture of innovation through short training pills, to be studied in depth, then through direct contact and handshake.</p> <p>Furthermore, Smau makes available for free a selection of videos of the most followed workshops of its Roadshow that can be viewed directly from the Smau website. The podcasts of the workshops are available on iTunes and Spotify. Each week the Smau Academy channel is updated with new content.</p> <p>To support companies to remain competitive and face the challenges of the market, Smau has modelled its own format, favouring networking and professional updating, becoming a relationship platform that connects companies with a varied innovation offer from the entire innovation ecosystem - digital companies, start-ups, incubators, accelerators - following the dynamics of Open Innovation.</p> <p>Companies looking for ideas, projects, skills and tools to innovate and accelerate their business can find the right partner for their business needs in Smau events and projects.</p> <p>Its model is based on 4 main services to companies:</p> <ol style="list-style-type: none"> 1. BUSINESS MATCHING: it allows entrepreneurs to meet the right partner and talk to potential suppliers to develop new projects and business opportunities. 2. ORIENTATION TO INNOVATION: it makes possible for entrepreneurs to discover innovative start-ups, incubators and research centres. 3. ENHANCEMENT OF EXCELLENCES: it spreads information about the companies and PAs that have innovated so that entrepreneurs can learn from their success stories. 	

4. **TRAINING AND UPDATING:** entrepreneurs are offered the possibility to stay up to date with the qualified trainers and the numerous workshops available at each stage.

Main areas are:

- Industry 4.0;
- Trade and tourism;
- Internationalisation;
- ICT;
- Start-up & Open Innovation;
- Web marketing.

ENI CORPORATE UNIVERSITY (ITALY)

<https://www.eni.com/en-IT/about-us/subsidiaries-and-affiliates/eni-corporate-university.html>



Eni is an Italian energy company operating all over the world. In 2001, **Eni Corporate University (ECU)** was founded to carry out training activities and ensure that the company's culture was consistently and correctly developed and shared. The goal is to provide continuous training programmes that focus on the individual and employ the most innovative learning methods to strengthen and develop people's skills.

It promotes and develops advanced training courses with Italian and international universities and carry out introduction and cross-functional skills courses for schools (School-Work Experience). It also carries out knowledge management initiatives in Eni's business and professional areas, providing specialist support for designing and implementing projects for the dissemination and development of skills and strategic know-how.

VeniSIA – Venice Sustainability Innovation Accelerator (ITALY)

<https://www.venisia.org/>



VeniSIA is a sustainability innovation accelerator, based in Venice and devoted to the development of business ideas and technology solutions able to face climate change and other environmental challenges.

VeniSIA is a corporate accelerator that attracts institutions, companies and individuals who share the belief that it is the perfect background to provide ideas and solutions for those sustainable development challenges that are applicable to Venice fragile and unique environmental ecosystem, and yet scalable, to the benefit of the whole planet.

Its ambition is to collect all global efforts to achieve the SDGs, mainly related to climate change and other environmental problems, with the ultimate aim to turn Venice into the oldest city of the future.

VeniSIA will focus on a series of SDGs and develop a range of ideas and solutions that will be tested in Venice, prove to achieve positive results and finally lead to a start-up.

The 5 SDGs on which VeniSIA operates are:

- SDG7: Affordable and clean energy;
- SDG11: Sustainable cities and communities;
- SDG12: Responsible consumption and production;
- SDG13: Climate action
- SDG14: Life below water.

VeniSIA's acceleration program lasts 7 seven months and includes the following phases, to support companies to identify, through an international call to action, and engage the most qualified researchers/entrepreneurs to carry out the sustainability innovation projects.

- Phase 1: Call & Pre-selection -> Scouting & Selection (Online);
- Phase 2: Training & Selection -> Education: Business Model; Business Plan; Validation; MVP; Marketing Team; Fundraising (Online);
- Phase 3: Pre-acceleration & Final selection -> Implementation: Business Model; Business Plan; Pitch Deck (Live in Venice);
- Phase 4: Co-Innovation -> Helping start-ups to be ready for the market and to improve business metrics (Live in Venice).

For more info please download the official brochure of VeniSIA at the following link: https://www.venisia.org/wp-content/uploads/2021/01/venisia_eng.pdf?v=2

THE STARTUP ACADEMY (ITALY)

<https://www.thestartupacademy.it/>



The Startup Academy was organised in February 2021 as a 4-day online event, in collaboration with the University LUM BUSINESS School, targeted to aspiring entrepreneurs with the aim of helping them to launch their businesses thanks to useful suggestions and practical tools to implement.

Main topics of the training activities were:

1. The Startup Canvas® method: it is an innovative strategic framework created to structure start-ups through 12 building blocks, using the Lean approach. It aims to minimize waste and maximize efficiency;
2. Startup branding and positioning and business plan: for a new company, the name of a solution and a business must be the same, at least at the beginning. A single brand, therefore, but two positions. One of the biggest challenges for a start-up is to bring order between the pitch and the sales material, to distinguish its product from the "start-up". The training module explores how to effectively structure the pitch for investors. A double brand awareness strategy to correctly position a start-up in both markets.
3. Pitching using the Pay4Growth® method: the pitch, but also the way of presenting it, can make the difference when an entrepreneur goes to expose it to investors. The pitch is fundamental, because it accompanies the entrepreneur during events and networking moments. The training module aims to teach how to structure it in the right way, with Guy Kawasaki's model and how to "pit" effectively.

4. Product development: even a small company can design and implement a “world-class” solution, proceeding lightly and methodically. The training module answers questions like: “When is your customer ready to pay for your solution?”, “What other products do they use, which you will have to deal with?”. It is explained how to talk to the defined target and how to modify, if necessary, the proposed solution, thanks to the feedback of the first customers. Tools, technologies or systems that can help the entrepreneurs to create the best solution and manage the whole process are presented.
5. The market, the competitors and the design bases using the Pay4Growth® method: to start a business project is fundamental analysing the target, the problem and the solution. It is a blatantly simple subject, but it is not always analysed with the right attention. In addition, the Top-Down and Bottom-Up approach, TAM (Total Addressable Market), SAM (Served Available Market) and SOM (Serviceable and Obtainable Market) are presented.
6. Marketing & Communication using the Pay4Growth® method: the idea does not make a winning company; a start-up needs a strategy. Once the product or service has been created, it is important to understand how to communicate it to the potential customers correctly and effectively to be successful. There are 21 marketing channels. You do not have to use them all, but the ones that are most appropriate for the start-up.
7. Equity plan and Fundraising: to launch a product on the market a source of capital is needed. It’s necessary to know how they are collected, planning and strategies, based on the different fundraising tools. The module analyses how to build a long-term quota evaluation plan, how to plan the milestones to reach the objectives and the best tools for each stage of growth. In this module, entrepreneurs are guided to identify what to put immediately in the “Deal Room” and understand how to structure the “Equity Plan” and which Fundraising strategy to adopt.

The total training duration was 8 hours organised around 4 days.

**GREEN WEEK ACADEMY
(ITALY)**

<https://www.greenweek-festival.it/academy-il-bando-2/>



greenweek

**festival
della green
economy**

The **Green Week Academy** is part of a wider event called Green Week – Festival of the green economy, taking place every year in Parma (Italy). Since 2011, the Green Week addresses issues related to the green economy and sustainability.

The Green Week Academy intends to offer a unique opportunity to meet, exchange and train, through active participation in the event which guarantees selected students:

1. Guided tours with companies that symbolize sustainability and the green economy;
2. Participation in major events and conferences of the four thematic sections (transport and mobility, food supply chain, green chemistry, economy and sustainable finance);
3. Moments of meeting and deepening with the big names in sustainability and the green economy.

An interesting initiative within the Green Week Festival is called “The factories of sustainability”: a tour of the most innovative companies in terms of eco-sustainability. The selected candidates will meet the entrepreneurs and technicians of the companies thanks to a program of guided tours, workshops and conferences during which the different scientific, cultural and technological approaches adopted will be revealed. This will allow participants to learn about the technologies and products that will mark the future in these sectors.

GENERALI ACADEMY – ITALY	
<p>Initiative launched by Generali to support training and learning of their employees, who can access the e-learning space through the Generali Learning Platform. All employees will have the possibility to design a unique and targeted learning path and keep updated on online and offline training opportunities.</p> <p>The goal of the Academy, launched in 2014, is to offer technical education of excellence, as well as global programmes of leadership and group talents development. The first courses to be implemented concerned technical excellence, leadership and management.</p>	

UNICA: UNIPOL CORPORATE ACADEMY – ITALY https://www.unipol.it/en/people/our-growth/unica-corporate-academy	
<p>Unipol Group’s Corporate Academy was founded in 2016, with the goal to oversee the training activities of all Unipol group structures in Italy. The founding pillars are the quality and the depth of specialist and managerial expertise, the focus on economics, the development of suitable partnerships and constant benchmarking and networking.</p> <p>The Academy is open to all employees, agents, staff of Unipol group networks, and also insurance brokers.</p> <p>There are multiple courses dedicated to the main jobs and skills in the domain of insurance and finance, with a catalogue of over 200 courses. There are also two faculties on the soft skills required to manage relations, and to economics, governance and technology.</p> <p>All employees and network staff can access to the learning opportunities provided by the Academy. Courses are held both in classroom and remotely through webinars.</p>	

DUBLIN BIC (IRELAND) www.dublinbic.ie	
<p>Dublin BIC offers the most comprehensive range of practical support available to early stage entrepreneurs in Leinster county, by providing access to funding and helping start-ups to prepare for fundraising. It hosts events to help start-ups cultivate their network, and provides incubation space to make them grow.</p>	

SOUTH EAST BIC (IRELAND) https://www.southeastbic.ie/	
<p>South East BIC, a public-private partnership, supports the generation and development of new innovative enterprises and assists existing SMEs to innovate and expand. It provides high quality specialised business consultancy and active incubation.</p> <p>The BIC team works in collaboration with other local, regional, national enterprise support agencies and has strong international connections, particularly in Europe, through its membership of the European BIC Network (EBN).</p>	

South East BIC works throughout the counties of Waterford, Wexford, Carlow, Kilkenny and Tipperary; it focuses on project evaluation and development, business modelling, planning and sourcing finance.

WEST BIC (IRELAND) https://www.westbic.ie/	
<p>West BIC provides tailored, high level support to entrepreneurs and assist them to convert their innovative ideas into a commercial reality and become “investor ready”. It supports the entrepreneur in the process of starting and scaling up the enterprise. The journey involves navigating the entrepreneurs and their idea through the stages of market and technical validation, gaining international market traction, building the team, working the proposal up to secure investment.</p>	

CORK BIC (IRELAND) https://www.corkbic.com/	
<p>Cork BIC is a private-sector led organisation, specifically set up to identify and build knowledge-intensive companies based on promising technology and capable innovative people. It supports entrepreneurs in raising finance, sorting out business propositions, arranging agreements with shareholders and investors, and finding customers.</p> <p>Every year, Cork BIC identifies, selects and develops several high potential start-ups or expansions: 85% of start-ups engaging in this integrated process survive after five years, far outstripping the international survival average of 50%. Over the past 30+ years, Cork BIC has worked with over 500 start-ups, many of whom come back and re-engage.</p>	

NEW FRONTIERS pre-Accelerator programme (IRELAND) https://www.newfrontiers.ie/	
<p>New Frontiers is the national programme designed to develop entrepreneurs. Its primary purpose is to accelerate the development of sustainable new businesses that have strong employment and growth potential, and contribute to job creation and economic activity in regional locations.</p> <p>The programme addresses individuals who:</p> <ul style="list-style-type: none"> • Have an innovative business ideas, with export and employment potential • Can show evidence of a commercial market for the proposed product / service • Are ambitious, growth-oriented and committed to fully engage in all the aspects <p>New Frontiers is a national programme, based on 16 incubation centres across the country.</p>	

LOCAL ENTERPRISE OFFICE NETWORK (IRELAND) www.localenterprise.ie	
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A nationwide network of **Local Enterprise Offices** provides advice, information and support to entrepreneurs in starting up their business. It offers a wide range of experiences, skills and services both to new and existing entrepreneurs, early stage promoters, start-ups and small businesses looking to expand.

WATERFORD INSTITUTE OF TECHNOLOGY – ARCLABS RESEARCH AND INNOVATION CENTRE (IRELAND) https://www.arclabs.ie/	 <small>Waterford Institute of Technology</small>
<p>ArcLabs is the research & innovation centre at Waterford Institute of Technology. The business incubators in Waterford and Kilkenny help entrepreneurs to harness amazing ideas, creativity and innovation, and to convert concepts into thriving, commercial businesses.</p>	

GUINNESS ENTERPRISE CENTRE (IRELAND) www.gec.ie	
<p>GEC (Guinness Enterprise Centre) is a hub providing a world-class entrepreneurial environment that empowers businesses to grow and scale their innovative enterprises.</p>	

Table 9 – Examples of existing Corporate Academies

Starting from the initial idea shared by partner about the key elements of the **widespread start-up incubator and academy model**, and thanks to the deeper knowledge acquired through the approach of Twinning Meetings with external experts invited as guests and a further analysis of success stories, the 5 key elements of the I AM GREEN Academy Model have been described in more detail:

1. **Attraction/Scouting of valuable start-ups, business ideas, talented entrepreneurs or aspiring ones:** The Academy will intercept and support promising and innovative start-ups with a vocation to green economy and sustainability, by helping them convert their ideas into concrete entrepreneurial initiatives, and by supporting them in solving organisational, operational and strategic issues. Once the business idea is validated by experts from the Academy, conditions and needs to implement it will be investigated.
2. **Needs Analysis:** entering the Academy, entrepreneurs and start-up managers will have checked their needs in terms of training, facilities, finance and other key issues in order to develop and implement a tailor-made Education & Training programme and then the Incubation process.
3. **Education & Training programme:** according to the training needs, diverse courses would be implemented on both soft and hard skills with a multidisciplinary or vertical training approach:
 - a) Soft Skills - Education on entrepreneurial mind-set: teaching entrepreneurial skills and enhancing the development of entrepreneurial talent, self-confidence, leadership and managerial skills.
 - b) Hard Skills - Technical competences: Green Economy, Green Finance, Sustainability, Lean management, Design Thinking, Blockchain applications, circular economy, industrial symbiosis and any other technical competence requested for the business;

4. **Incubation programme** (also a short period to spend at premises of an incubator/agency located in a foreign country, if deemed useful and necessary for the specific case, could be part of the incubation programme), with focus on helping start-ups navigate the process of taking their idea to market. It will promote relationships between new businesses, the job market, companies and investors, combining acceleration services with specific skills aimed at launching the business concept on the market. It will also support the initial development of the start-ups by providing them with pilot operations, R&D support, business development services, marketing and accounting assistance, support from professionals and consultants, access to networks in the business and credit industries, as well as dedicated offices, shared spaces and IT facilities in collaboration with companies making available their laboratories, know-how and by-products that, in an industrial symbiosis approach, can become raw materials for the innovative start up.
5. **Peer-learning methodology for activities among start-ups with the Participatory Design (PD) approach:** representatives of start-ups from different economic sectors of the same value chain or with potential implementation of industrial symbiosis mechanism meet in a round table with the aim of finding innovative solutions, opportunities and resource to boost the respective businesses. This methodology will enhance social learning and create a peer community of entrepreneurs.

4.2 Stakeholders' mapping

Stakeholder mapping allows to identify external actors that can help in implementing the I AM GREEN model. The mapping is particularly important with the purpose to understand which strategic collaborations may be activated to effectively create value for the identified market segments. The map below provided inputs to the "key partners" section of the BMC (see chapter 5).

PROBLEM OWNER: people and organisations the need support to launch a business	Aspiring entrepreneurs, start-ups	POLICY MAKERS At EU and national level, support the implementation of the incubator and academy model thanks to policies.
PROBLEM SOLVERS: create a fertile environment to help problem owners to find solutions and put them in connection with enablers	Innovation Agencies, Start-up Incubators and Academies	
ENABLERS: institutions/companies that provide skills and expertise	Universities, Research Centres, Education providers, Corporate Academies, Large Companies and Innovative Companies with expertise	

Table 10 – Stakeholders' mapping of the I AM GREEN project

5. Business Model Canvas of I AM GREEN Incubator Academy Model

5.1 Elements of the I AM GREEN Business Model Canvas

A BMC workshop has been held during the 3rd Twinning Meeting. The value proposition and the customer segments analysis held in Twinning Meeting 1 and Chapter 2 of the DOP provided the basis for the “right-side” part of the business model canvas. The model used for the participatory workshop held during Twinning Meeting #3 was Osterwalder’s (2010).

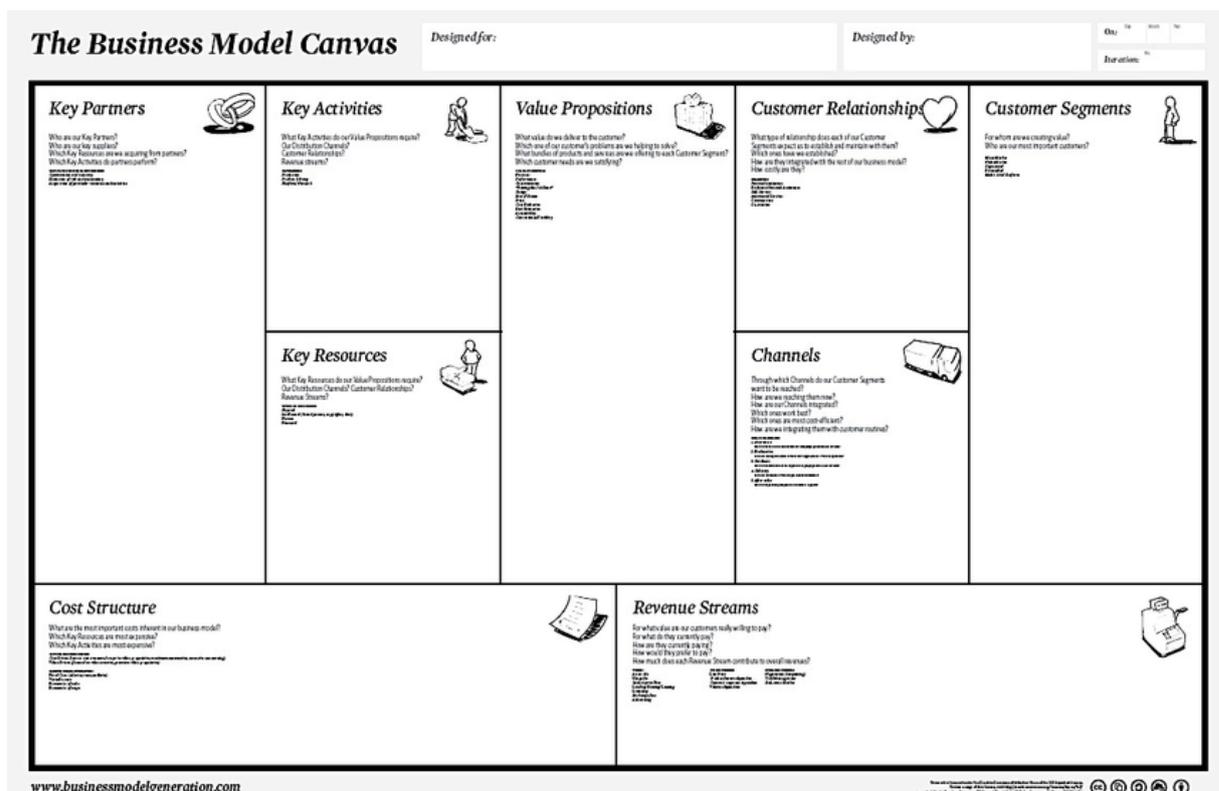


Figure 8: The Business Model Canvas template (Osterwalder and Pigneur, 2010)

Starting from the identification of value proposition for different segments, as given in Chapter 2.2 of the current document, the whole value proposition of the I AM GREEN model has been defined as the implementation of a novel business model that includes synergies between different actors (start-ups, investors, companies, innovation agencies, research bodies and academia) offering matchmaking services and a point where demand (of technologies, innovative skills, finance) and offer meet. For start-ups, mentoring and training services will be implemented in order to accompany them in the growth process and fill their skills gap. Value proposition that fits customer segments needs have been identified as:

Customer Segments

Start-ups	Include the 5 categories as listed in chapter 2 according to their approach to sustainability.
Eco-investors	Investors that value sustainable impacts and is interested to invest in companies that show a 'green' orientation of their business.
Consolidated Companies	Established companies that aim to solve green innovation problems and need collaboration with innovative start-ups creating synergies.

Value Proposition

Start-ups	<ul style="list-style-type: none"> • Mentoring / training • Access to finance and funding
Eco-investors	<ul style="list-style-type: none"> • Pre-screening of promising start-ups • Green marketing campaigns and visibility
Consolidated Companies	<ul style="list-style-type: none"> • Synergies between consolidated companies and innovative start-ups
Common to the three segments	<ul style="list-style-type: none"> • Social innovation and green business model

The analysis of "Channels" shows how, after the identification of the value proposition, the I AM GREEN innovation model aims to bring this value to the identified customer segments.

There are different possible channels, each is valid for the three identified segments but the contents and utilisation strategy may be diversified. The main goal of the communication channels is to attract different actors of an ecosystem in which the I AM GREEN model is implemented (with the agency implementing it becoming a "hub"), enabling collaboration between them. Competitions and match-making events may be pivotal in this strategy: e.g. consolidated companies proposing sustainability problems with start-ups applying to solve them; eco-investors launching call for sustainable projects addressed to start-ups and/or consolidated companies – or both jointly.

When the collaboration network between actors is set, with I AM GREEN model being in the middle and facilitating collaboration, a way to deal with the different customer segments need to be defined. Customer relationship includes the different contact points that will be activated and how the first contact is going to work. For start-ups, the relationship starts with the application to be part of the incubation/mentoring programme. For investors, there will be a professional inside the I AM GREEN model dealing with investors relations. For the other two segments, project managers and specific mentors will be appointed.

Channels

Common to the three segments	<ul style="list-style-type: none"> • Website and social media • Events (innovation prizes, exhibitions, meetings) • Competitions and matchmaking • Specialized newspapers and magazines • Interaction with local innovation ecosystem
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Customer Relationships

Start-ups	<ul style="list-style-type: none"> • Evaluation procedure (application + interview)
Eco-investors	<ul style="list-style-type: none"> • Investors relation manager
Common to the three segments	<ul style="list-style-type: none"> • Mentor / Trainer • Project Manager

Revenue streams connected to the value proposition implementation will be then:

Revenue Streams

Start-ups	<ul style="list-style-type: none"> • Resist the temptation to allow companies to remain forever
Eco-investors	<ul style="list-style-type: none"> • Revenue streams: start-up companies, service providers, donations, grants. • 50% start-ups, 20% service providers, 15% donations, 15% grants • Get balance of fees right needs to represent the true value of the incubator, without crippling the entrepreneur
Consolidated Companies	<ul style="list-style-type: none"> • Need to secure support from outside the entrepreneur community, government, philanthropy, etc.
Common to the three segments	<ul style="list-style-type: none"> • Customers will be willing to pay for office spaces • Balance long-term and short-term revenues • Government funding is limited and rigorously managed, so don't waste you or your clients' money. Modern business operates smooth web-based paperless procedures with rigorous but simplified costs and project reporting. Publicly funded supports need to be managed similarly.

Referring key activities and resources, the participatory workshop at the 3rd Twinning Meetings and the further exploration done by the I AM GREEN partners resulted to the following:

Key Activities

Start-ups	<ul style="list-style-type: none"> • Technology evaluation • Support business modelling activities • Training courses and 1-to-1 mentoring / coaching
Eco-investors	<ul style="list-style-type: none"> • Matching investors' needs and offer with start-ups financial needs and remuneration offer
Consolidated Companies	<ul style="list-style-type: none"> • Matching needs with start-up offer
Common to the three segments	<ul style="list-style-type: none"> • Networking • Gaps and needs analysis

Key Resources

Common to the three segments	<ul style="list-style-type: none"> • Contact points (see Customer Relationship) • Being part of the innovation ecosystem • Connection with investors and public bodies offering funding
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The innovation agency implementing the I AM GREEN model should be integrated in the local innovation ecosystem, this means having consolidated collaborations with all different actors offering services to the three identified customer segments. In this way, synergies may be created and the value offered to start-ups, eco-investors and companies increased with complementary services that can maximise effectiveness.

Key Partners

Start-ups	<ul style="list-style-type: none"> • Funding bodies • VET • Crowdfunding platforms
Eco-investors	<ul style="list-style-type: none"> • Venture capitalists / Business angels / Associations
Consolidated Companies	<ul style="list-style-type: none"> • Employer associations / Social parties
Common to the three segments	<ul style="list-style-type: none"> • Policy makers • Universities / Academia / Research • Subject matter experts and practitioners • International networks • Local ecosystem actors

Finally, the cost structure is summarised by the table below.

Cost Structure

Start-ups	<ul style="list-style-type: none"> • Support external oversight, advice and support. Incubators are about the future, and the future is a foreign country. • Maintain a small admin staff and a number of visiting temporary experts
Eco-investors	<ul style="list-style-type: none"> • Find some money to allow you to fund early stage ideas with potential. You cannot compete with VCs, except at a very early stage. • Have a strategy with funding support for ideas within that remit, but for good ideas that fall outside this, provide good links to external support.
Common to the three segments	<ul style="list-style-type: none"> • The most expensive component is HR, so the positions should be defined precisely • Balance long-term and short-term goals • Find a way to fund collaborations • Have a strategy with funding support for ideas within that remit, but for good ideas that fall outside this, provide good links to external support

Next page shows the whole BMC including all the above listed components.

BUSINESS MODEL CANVAS

DESIGNED FOR: I AM GREEN project

DESIGNED BY: participants in 3rd Twinning Meeting

DATE: 22/11/2021

Identify Key Partners, Key Activities, Key Resources, Customer Segments and more. Learn more at <https://conceptboard.com/blog/business-...>



"Business Model Canvas" is a derivative of "The Business Model Canvas" by <https://www.strategyzer.com/canvas/busi...>
"The Business Model Canvas" is designed by Strategyzer AG.

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Figure 9: Business Model Canvas of the I AM GREEN Incubator Academy Model

5.2 Remarks on implementing the I AM GREEN BMC: The Product-Market Fit

An important aspect of any successful long-lived organisation, whether it is public or private, commercial or not-for-profit, is an understanding of what the organisation has to offer and what function its product or service has for the client or customer. In effect, to be sustainable, any organisation needs to understand its **product-market fit**, and this requirement is just as valid for the providers of support to Greentech entrepreneurs and start-ups, as it is for any other activity.

At the three Twinning Meetings that formed a critical part of the I AM GREEN work programme, the product-market fit aspect of the provision of support for Greentech start-ups came through several times. During the meetings, a series of invited expert support service providers and successful entrepreneurs described the following aspects:

- The restraints dictated by the limited access to time, money and expertise;
- The range of services that were provided or required and those that were not;
- The reasons behind the choice of services offered;
- The service gaps and the solutions to address them.

In short, the most important element that any entrepreneur support academy needs to consider and to understand in detail is the **filtering problem**. How is the vast number of ideas that need support reduced to the subset of those ideas where their needs are matched most precisely by the capabilities inherent within the academy? In other words, how can the academy's limited resources be applied to the maximum effect?

At the same time, picking winners is not a sustainable strategy because it is very difficult or potentially impossible to do, since identifying future success in an idea is very difficult. Both thriving and unsuccessful enterprises are founded by all types of entrepreneurs, in all regions of the world, in multiple sectors of the economy. Given the complexity of the task, the experts participating in the meetings provided I AM GREEN Consortium with some useful advice on how to add more value and increase the Academy impact.

- Understand the existential focus and the **motivation** of I AM GREEN Academy: is it set up by a national or local government? Is it commercial or not for profit? What perceived gap is the Academy hoping to address? Does the Academy have a specific goal? In this context it is important to define the sector of the business (Greentech, ICT, Biotech, etc.), the demographic characteristics of the entrepreneurs (female, youth, third level spin-out, etc.), the development stage of the start-up (definition, ideation, prototyping, testing, etc.), and the context where it is located (local, regional, national).

- Understand the “**product**” of I AM GREEN Academy from a physical point of view (e.g. where is it located and what are the features of the space?), in terms of personnel (e.g. understanding if there are any experienced experts, such as advisors, mentors and tech), in terms of financial features (for example, the funding available), and also by understanding how the ecosystem is structured and if there are any Partners with a specific roles (e.g. Academies, legal accounting, funding advice, etc.).

A clear vision of the Academy’s motivation and capability gives it a chance to determine where it can add most value. The idea is not to pick winners *per se* but to select ideas where the needs of the entrepreneur are best suited to the capabilities of the Academy, thus maximising the value added.

If we assume that the I AM GREEN Academy’s goal is to support entrepreneurs in progressing with their ideas, so that their start-up can become a sustainable and profitable enterprise, then the key problem is to identify who and when to help. Without a clear product-market fit, this difficult problem becomes impossible. To sustain a successful Academy, one must answer the following questions:

- What is your goal? What will success look like when you achieve it?
- What is your sustainable advantage, meaning: what do you do better than anyone else?
- What ranges of services do you offer the entrepreneur?
- What does your ideal customer look like and are there enough of them to sustain your costs?
- How and when do you move non-progressing clients on?

The more precisely these questions can be answered, the better the Academy’s Product-Market fit and the greater the likelihood that it will grow and flourish.

6. Peer learning methodology and lessons learned

6.1 Peer learning methodology of the I AM GREEN Twinning meetings

Despite the continuation of the COVID-19 pandemic, which made it impossible to hold face-to-face meetings, 3 Twinning Meetings were held, exploiting all the opportunities offered by web conferencing applications. Although the use of the online mode limited the opportunities for socialising and meeting the project partners, it also made it possible to involve a wider audience at each Twinning Meeting, collecting more points of view in relation to the topics discussed and gathering more good practices from the three countries involved.

The first Twinning Meeting was coordinated and organised by Sinergie. The second one was organised by Enterprise Ireland and the third one by Israeli Institute of Innovation. Due to the need for the three project partners and guests to collaborate in participatory activities and to present their good practices and benchmark results, an external facilitator – Prof Albert Schram – was appointed at the start of the project and chaired all three Twinning Meetings.

Methods used:

- The invited speakers presented 15 to 20-minute talks on their areas of expertise and experience.
- Discussion, including a Q&A session, was moderated by the facilitator following each presentation and, subsequently, feedback was collected on the presentations, the comments and Q&As, as presented in the Appendix to this document.
- Division of participants into breakout rooms in order to discuss some useful topics for the Twinning Meeting, and then report back in the plenary discussion.
- Participatory workshop on Business Model Canvas model, aimed at discussing and collecting ideas on the value proposition and implementation of the incubation and academy model of I AM GREEN.

The Twinning Meetings were interspersed with monthly Consortium meetings, in which the project partners planned the desk research activities and the results obtained and presented at each Twinning Meeting. In addition, it was decided how the results would be shared with the twinning participants. During the consortium meetings, the findings of the Twinning Meetings were examined with a view to their inclusion and elaboration within the DOP.

At the end of each Twinning Meeting, transcripts were produced from the video recording and became an integral part of the DOP. The transcripts of the three meetings form the Annex to this document, while a brief summary of the points discussed has been integrated into the text of the various chapters of the DOP to which the Twinning Meetings contributed.

Below is a list of stakeholders engaged within the I AM GREEN project, with whom collaboration and networking is expected in the future.

Country	Organisation	Description
Italy	PoliHub	Start-up accelerator of the “Politecnico di Milano” university.
Italy	ART.ER	ART-ER Attractiveness Research Territory is the Emilia-Romagna Joint Stock Consortium born with the purpose of fostering the region’s sustainable growth by developing innovation and knowledge, attractiveness and internationalisation of the region.
Italy	Start-up Geeks	Start-up incubator for early stage entrepreneurs.
Italy	E-Co work	Italian early stage start-up interested in synergies with international players.
Italy	MIPU Predictive hub	Accelerator/enabler to digital transition and data-driven business/production models.
Italy	Hub Innovazione Trentino	Innovation agency of the Autonomous Province of Trento
Italy	STEP Innovation Hub	Technology park and incubator focusing on green start-ups.
Italy (world-wide)	Impact Forecast	Technology solutions to assess climate impacts of business.
Italy	ARTI	Apulian regional innovation and technology agency.
Ireland	Sure Valley Ventures	Venture capital fund based in Ireland and UK aiming to fund early stage company’s growth and scaling.
Ireland	NUI Galway	Business science department of the University of Galway.
Ireland	South East Business Innovation Centre	South East BIC, a public private partnership, supports the generation and development of new innovative enterprises and assists existing SMEs to innovate and expand.
Ireland	Klearcom Ltd	Digital technology start-up.
Ireland	ArcLabs R&I Centre	Business incubator and start-up in South East Ireland.
Ireland	Guinness Enterprise Centre	Start-up coworking space.
Israel	Village in a box	Israeli ‘green’ start-up with an international vocation.
Israel	Trendlines	Incubator and investor in innovative start-ups.
Israel	Kinneret Innovation Center	Sustainable innovation hub and start-up accelerator. Investor, Hi-tech park and innovation academy.
Israel	LABo2	Early-stage fund and incubator located in Jerusalem.
Israel	3PEL Ventures	3PEL Ventures is a holdings and investments group investing in and working with early-stage companies.

Table 11 – Stakeholders engaged by the Partners during the I AM GREEN project

6.2 Lessons learned: SINERGIE

Sinergie has been able, through the 3 Twinning Meetings and related activities, to refine its positioning within the territorial innovation ecosystem and to expand its network for collaborations in new regions. As a training organisation, Sinergie can integrate its services and courses into the wider range of incubation and acceleration services available on the territory. In particular, Sinergie's training offer could be oriented towards different segments in order to fill the training gaps of aspiring entrepreneurs. To this end, the offer could also be differentiated in relation to the didactic methodology, ranging from e-learning or traditional classroom courses for basic training for aspiring entrepreneurs to actual mentoring services for start-ups, to which accompanying services for accessing public finance and private funds for business development could be added.

In terms of content, on the basis of the results of the three Twinning Meetings and this document, Sinergie will develop new training courses that will enrich its training offer and its course catalogue. More specifically:

New courses	Target	Partnerships	Training methodologies	Cost coverage
Entrepreneurship soft skills development	Entrepreneurs	incubators, accelerators, other innovation agencies	Role play	Commercial activity
1to1 mentoring and accompaniment to funding and finance	entrepreneurs/entrepreneurial team	incubators, accelerators, investors	mentoring/coaching	Commercial activity
How to evaluate investments in green start-ups	investors, public funders		e-learning package	Commercial activity and or funding through inter-professional funds
Financial literacy	aspiring entrepreneurs, citizens as a whole	other innovation agencies, schools, universities, companies	e-learning package and in-presence seminars	Funding through ESF and/or inter-professional funds
Social Skills for entrepreneurs - how to increase the start-up' social capital	Entrepreneurs	incubators, accelerators, other innovation agencies	In-presence workshop	Funding through ESF and/or inter-professional funds
How to communicate the value connected to the company sustainable objectives and attract investors	Entrepreneurs	incubators, accelerators, investors	In-presence workshop	Funding through ESF and/or inter-professional funds

Lessons learned from the corporate academy model: how to structure effective training for start-up teams	incubators, accelerators	Corporate academies	e-learning package	Commercial activity
Monitoring and evaluating environmental impacts	Start-ups, Consolidated companies	Specialised companies (e.g. Impact Forecast who participated to tw2)	e-learning package	Commercial activity

Table 12 – List of new courses that Sinergie will implement after its participation in the I AM GREEN project

From the point of view of business development services, Sinergie will strengthen its support activities for start-ups by creating new services linked to the assessment and communication of environmental impacts, accompaniment towards the acquisition of sustainability certifications and non-financial reporting, start-up/investor and start-up/consolidated companies matching, also through the organisation of competitions and business matching events in which consolidated companies will be invited to submit environmental problems to which start-ups, with their new technologies and innovative solutions, are called to respond by creating new opportunities for collaboration. This new activity will be based on the good practices collected during the Twinning Meetings, especially the experience of ARTI, which started a similar initiative in Apulia region.

As far as investors are concerned, while Sinergie will offer companies advisory services on how to assess and communicate their environmental performance in order to attract new investors, it will also offer them pre-screening opportunities to invest in green start-ups.

6.3 Lessons learned: EI

Enterprise Ireland’s High Potential Start-Up Division plays a pivotal role in Ireland’s start-up ecosystem. Its role is to provide funding, education and guidance to those entrepreneurs that choose to set up their new businesses in Ireland with a primary focus on job creation and export. As a government agency, their remit is broad, and their goal is to provide the most up-to-date, efficient and effective service that will sustain their efforts to make Ireland a great place from which to establish grow and scale a business internationally.

Enterprise Ireland’s participation in I AM GREEN has afforded the opportunity to work over an extended period with our partners in Sinergie and in the Israel Innovation Institute, allowing them to share insights across a continent. In addition, the project also allows them access to each other’s expert advisors and collaborators to broaden the talent pool. They have used this opportunity to test and ultimately to refine their model for entrepreneurship support through participation in:

- *Regular partner meetings*
 - During the early stages of the project, Partners spent an amount of time discussing the way that entrepreneurs in the green and cleantech space were sup-

ported in Italy and in Israel. They got to work with experienced support agencies with whom they had the opportunity to discuss the fine detail of start-up support. This offered all parties an opportunity to view start-up support through both a practical and a theoretical lens.

- 3 *Twinning Meetings*
 - In the Twinning Meetings they were then able to refine their 'product-market fit'. In these meetings, they had exposure to a host of start-up ecosystem actors who gave of their time to present the start-up ecosystem from their own varied perspectives and who patiently answered question after question providing all partners with further guidance.

The result of the I AM GREEN work has provided EI with several new ideas, the most important of which is a theoretical, international, broad based entrepreneurship model. This model will allow them to provide a framework which to underpin more specific and practical entrepreneur and founder team support structures that they and their support partners (see table below) implement around Ireland.

The I AM GREEN study directly and specifically targets the Greentech pillar within Enterprise Ireland's support structures, however the impact will go far beyond Greentech and it is our intention to apply the non-green-specific learnings to our other pillars, Deeptech, Engineering, Fintech, Food, and Lifesciences.

As the Government agency specifically charged with the support of manufacturing and internationally traded services companies that are headquartered in Ireland, Enterprise Ireland works with a host of organisations located throughout the country. It is their intent to tailor the I AM GREEN information to assist each of these organisations to support entrepreneurs and early stage companies develop to their potential as much as possible. A summary of the key support organisations with whom we hope to work with to disseminate our learnings is given in the table below:

Partner	Targeted Region	Targeted companies	Training methodologies	Benefits
Local Enterprise Offices (local Government) www.localenterprise.ie	31 offices located throughout the country. Focus is on local businesses	Local start-ups	Mentoring Meet-ups Activation funding	Provide a best practice support programme to local enterprise.
Business Innovation Centres (EI with Partners) www.irishbics.ie	4 regional centres based in Cork, Dublin, Galway and Waterford	Regionally based start-ups with potential to scale	Mentoring Coaching Access to funding	Provide best practice advice and guidance to scalable companies
New Frontiers (EI with Partners)	3 rd level college based early stage incubator but not restricted to college spin-outs	Entrepreneurs (as opposed to companies) with scaling potential	Mentoring Project learning Class based learning Meet-ups	Provide best practice entrepreneurial advice and guidance

www.newfrontiers.ie				
Accelerators and incubators (Various private with public support)	Countrywide	Companies with potential to scale internationally and that will need to take on equity funding to achieve this.	Mentoring Networking Funding	Provide a best practice robust framework to help assess potential at an early stage
Seed and Venture Capital (Various private with some public support)	Countrywide	Companies with potential to scale internationally and immediate requirement for equity funding to achieve this.	Networking Funding	Provide a best practice robust framework to help assess potential at an early stage
Founders Forum (Enterprise Ireland) Founders forum	Countrywide	Companies already in receipt of seed funding	Mentoring Networking Training	Provide a best practice robust framework to support growing companies
Technology Centres & College commercialisation. (EI/Third level collaboration) Technology Centres	Countrywide	High Tech spin-outs from the third level	Mentoring, Networking Guidance Research funding	Provide a best practice robust framework to support high tech start-ups.
Enterprise Ireland's HPSU Start and Accelerate programmes HPSU Supports	Countrywide	Companies that have potential to scale and to export. Development stages; pre-funding and seed round	Coursework Networking Funding	Provide a best practice robust framework to support EI's own development programmes.

Table 13 – Summary of Enterprise Ireland's dissemination activity resulting from the I AM GREEN project

Beyond offering a framework for identifying, engaging with and developing specific cohorts of entrepreneurs and their fledgling businesses, it is intended to provide the I AM GREEN framework as an entrepreneurship support playbook for general use. As a broad-based business development agency Enterprise Ireland is not linked to a specific sector or type of business, but rather a supporter of business development in its broadest sense. This means that it is in their interest to help disseminate business development thinking as broadly as possible and I AM GREEN has the potential to support this strategy. Not a prescriptive development manual to be imposed on the community but rather a check list to help ensure that entrepreneurs are not blindsided by foreseeable issues that might put the success of their businesses at risk. Such a broad dissemination will, at least, kick off a conversation and provide the basis for an open project that can be refined as we learn more and more from outcomes of individual interactions with the playbook.

Finally, as Enterprise Ireland has recently identified GreenTech as a market sector with potential to drive our economy into the future, they consider the I AM GREEN learnings as a significant input to their strategy for guiding start-ups in this important sector. The ambition for the sector is to provide strong leadership and support and achieve our best future by standing on the shoulders of giants.

6.4 Lessons learned: III

As an Ecosystem initiator, the Israeli Innovation Institute (III) has succeeded in expanding its offering for local SMEs from networking events to a 'hands-on' toolkit in the form of the start-up academy model that was developed under the I AM GREEN project framework.

The added value, gained during the 3 twinning meetings, is first and foremost, the exchange with cross-border peers who are main figures in the ecosystem of either Ireland, Italy or Israel. We are now living in the globalisation era which accelerated during the pandemic thanks to the increasing usage of online platforms to communicate. It puts us under the impression that we are beyond cultural gaps and differentiations. Therefore, it was fascinating to learn that, although we are using the same words, such as "ACCELERATOR," we are not necessarily referring to the same thing.

As part of the dissemination's efforts, III will promote collaboration with pre-existing government incubators and private accelerators to integrate the project's inputs into the DNA of the rapidly growing Israeli start up market. Among them:

Partner	Description	Targeted companies	Training methodologies	Benefits
Israeli Innovation Authority Incubators website	18 incubators located throughout the country. Focus is on deep tech start-up companies	Start-ups by topic	Mentoring Meet-ups Activation	Exposure of start-up companies to a the I AM GREEN model/
Start-up Nation Central https://startupnationcentral.org/	Local think tank that accumulates knowledge about the local industry	Early-stage start-ups that are already in the organisation's database.	Meet ups Blogging Networking	Provide best practice advice and guidance to early-stage entrepreneurs
Trendlines https://www.trendlines.com/	3 rd level college based early stage incubator but not restricted to college spin-outs	Entrepreneurs (as opposed to companies) with scaling potential	Mentoring Project learning Class based learning Meet-ups	Provide best practice entrepreneurial advice and guidance
Accelerators and incubators (Various private with public support)	Countrywide	Companies with potential to scale internationally and that will need to take on equity	Mentoring Networking Funding	Provide a best practice robust framework to help assess potential at an early stage

		funding to achieve this.		
EcoMotion (Israeli Innovation Institute) https://www.ecomotion.org.il/	A joint venture of the Israel Innovation Institute (NGO) along with the Smart Mobility Initiative (PMO) and the Ministry of Economy.	Companies with potential to scale internationally and immediate requirement for equity funding to achieve this.	Networking Funding	Provide a best practice robust framework to help assess potential at an early stage
Growing IL (Israeli Innovation Institute) https://www.growingil.org/	GrowingIL is a Government Initiative of the Ministry of Economy, the Ministry of Agriculture, the Israel Innovation Authority, and the Israel Innovation Institute.	Companies already in receipt of seed funding	Mentoring Networking Training	Provide best practice advice and guidance to scalable companies
DeserTech. (III with partners) https://www.desertech.org.il/	South of Israel	High Tech spin-outs from the third level	Mentoring, Networking Guidance Research funding	Provide a best practice robust framework to support high tech start-ups.

Table 14 – List of Israeli innovation Partners III is in contact with

With its well established alongside new communities the III is perfectly positioned to engage with both start-ups and corporates to provide them the knowledge of how to promote circular economy internally and how to find further collaboration for that end.

Additionally, following the I AM GREEN project, the III was able to further develop its business services on the national level alongside the European level (with collaboration with the local EIT office) and is now offers ecosystem management services for promoting a green innovative ecosystem. The 'Green Ecosystem' services are based on collaborations between the different players from both private as well as public sector - operating both online and offline to promote success of good transition to a green, innovation based, economy.

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ANNEX

1st Twinning Meeting Report

A Twinning Meeting is a meeting taking place between two or more entities, giving participants the opportunity to share problems, exchange views and discuss different points of view. The Twinning+ methodology facilitates the exchange of good practices among agencies and organisations, and provides the opportunity to design and implement better practices on a common innovation challenge.

Agenda | 29/03/21, 11:00-13:00 and 14:30-16:30

TIMING	TOPIC	SPEAKER
11:00-11:15	Opening and presentation of I AM GREEN	Giovanni Pede (Sinergie) + Albert Schram
11:15-11:35	Innovation ecosystem in Emilia Romagna: focus on incubation and acceleration services, and selection of companies	Lucie Sanchez - ART.ER
11:40-12:00	The experience of PoliHub in innovation and start-up acceleration. How this approach can foster the green transition?	Enrico Deluchi - POLIHUB
12:05-12:25	Presentation of Enterprise Ireland: experience, services, criteria to select start-ups	Enterprise Ireland
12:30-12:50	The investor point of view, how start-ups are selected and evaluated	Isabelle O’Keeffe – Sure Valley Ventures
12:55-13:00	Wrap-up of the morning session of the meeting	Albert Schram
13:00-14:30	BREAK	
14:30-14:35	Introduction to the afternoon session	Albert Schram
14:35-14:55	Presentation of Israel Innovation Institute: experience, services, criteria to select start-ups	Yoav Fisher - Digital Health Innovation Israel Innovation Institute
15:00-15:20	The point of view of start-ups / international vocation	Jonathan Haran – Village in a box
15:25-15:45	2 Breakout rooms	Chair: Albert Schram + Vittoria Fontanesi (Sinergie)
15:45-16:05	Plenary discussion of Breakout rooms’ findings	
16:05-16:15	Business ideas from the winners of a call for idea	Mario Moschetta (E-Co Work) and Fabio D’Albenzio (Mipu)
16:15-16:20	Questions	Albert Schram
16:20-16:30	Wrap-up of the afternoon session of the meeting	Albert Schram

The first Twinning Meeting was successfully held on the 29th of March 2021; each presentation was followed by lively a discussion on start-ups, acceleration, the roles of seed and venture capital, and the overall innovation landscape or eco-system for green innovation.

Case studies from Italy

First, we had a presentation from ART-ER on how, as a private network, the Start-up Unit is supporting start-ups in the Emilia Romagna region through a wide range of activities, accompanying them at all the stages of their development.

ART-ER (Attractiveness Research Territory) is the ER joint stock regional Consortium born with the purpose of fostering the region's sustainable growth by developing innovation and knowledge, attractiveness and internationalisation of the region. It was founded in 2019 from the merger of two pre-existing agencies: ERVET and ASTER, both created in the 1980s. They work all around the ER region.

At the moment, there are almost **1.000** innovative start-ups in ER, according to the criteria used at a national level (legislation from 2012¹), which represent almost **10%** of the total in the country. Most of them deal with **services**. Revenue is often less than € 100.000 a year, and only 20% have underlying patented technology – which is quite low. The majority of start-ups are connected to research organisations, and based in Technopoles / incubators / accelerators (mostly located in Bologna and Modena), but they can find support anywhere in the region.

ART-ER start-ups units offer support to start-ups at all stages of development:

1. Business idea definition
2. Feasibility check and team building
3. Start-up
4. Business consolidation

The **start-up department** is only one of ART-ER departments, whose mission is to support innovation and industrial research, but also to help the regional ecosystem to access EU funds. They also publish weekly **FIRST newsletter**, which is well-known at a national level.

¹ Start-up Act (Legge 17 dicembre 2012 e smi): the law set parameters and criteria that a start-up need to comply to in order to be considered "start-up innovative" (innovative start-up). The law specifies that the company should be created no longer than 5 years, should be resident in Italy or in the EU (with a seat in Italy), turnover < 5 mln €; profits are reinvested in the company; the company business is based on the exploitation of an innovative technology.

ART-ER Start-up Unit is at the core of ART-ER ecosystem, and here we will summarise its main tasks:

Providing technical assistance for the definition of start-up support policies	Coordinating the network of the start-up ecosystem	Representing the regional start-up ecosystem at regional, national and international level	Designing and developing strategic projects
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ART-ER initiatives in the last 2 years:

- [IN-ER](#): network organisation supporting start-ups in the region, which counts 27 organisations and allows for a broader and stronger leverage in the innovation ecosystem.
- ER made **policy investments** in regional start-ups in the last 10 years, provided funds for incubators to accommodate those companies, and offered entrepreneurship support based in universities (labs, scholarships).
- The web platform "[Emilia Romagna Start-up](#)" gives visibility to the start-up ecosystem and offers physical services: support network with targeted experts, organisation of meetings / calls / news / events dedicated to start-ups, start-ups database.
- **Training** on start-up development.
- Events and fairs (e.g. **R2B²**).
- [StartCUP ER](#): regional business competition dedicated to research, then winning experts compete at a national level. It is connected with a national competition called [PNI](#) (National Prize for Innovation)
- Incubator in Bologna main park, called "**Le Serre di Art-ER**", which can accommodate 7 start-ups.
- **Support programmes** based in Le Serre, usually dedicated to green economy, which last 3-4 months
- **ART-ER Mentor Board** – i.e. a group representing consolidated organisations and corporate companies in ER (e.g. Lamborghini, Bologna Airport, etc), who can dedicate some time to meet start-ups, answer their questions and try to solve specific issues. Usually there are individual meetings and networking events twice a year.
- [MATCH-ER](#): open Innovation programme (2019) + matching meetings. This year it will be dedicated to the green economy.
- Point of contact with the **Silicon Valley**: training and missions for start-ups in the US

² National exhibition for the research and innovation ecosystem (<https://www.rdueb.it/>)

- [Climate-KIC Start-up Accelerator](#), which lasted 10 year and was dedicated to green economy. It gives the possibility to provide grants, training and services to start-ups.

Questions:

- *Do you choose areas to focus on or do start-ups come from every sector?* It depends on the programme or initiative. E.g. in Le Serre di ART-ER they belong to creative industry & green economy, but in general they do not focus on specific areas. Having a programme that is not specific fosters collaboration because, if the sectors chosen are too narrow and similar, there can be competition between companies.
- *How do you promote and get the message out of all these initiatives you have at the moment? And how do you select the right companies?* There are different programmes with different objectives. Most of the initiatives are connected with one another: e.g. the Open Innovation programme is widely promoted among the companies who participated in accelerator programmes. ART-ER has also a great role in terms of network, exchange of best practices, organisation of trainings, etc.

We heard from PoliHub, a university incubator, how it has developed a focused strategy to incubate and accelerate high tech & deep tech companies, which need to have an important technological element (not only in terms of digital innovation).

PoliHub is the **Innovation Park & Start-up Accelerator of Polytechnic University of Milan**. Its mission is to promote the growth of new start-ups in the fields of science and technology, in order to produce a strong incremental economic value and generate new opportunities for researchers, entrepreneurs, partner companies and investors.

PoliHub is an incubator and start-up accelerator of the Polytechnic of Milan, it was founded in the 2000s and it focuses on **high tech & deep tech start-ups**. The incubated start-ups need to have a strong technology element. The accepted deep flow comes not only from the Polytechnic, but also from any possible source. PoliHub's **mission** is strictly connected to that of the university: they exist to enable the birth of deep tech start-ups managing to create an incremental value for society and the economy, towards a sustainable development model, by leveraging science and technology.

Vision: supporting people who will transform the future of humanity and contributing to the regeneration of the planet. Their strategy consists in discovering, nurturing and investing in the best deep tech start-ups, by leveraging a combination of human talent, access to knowledge, business and corporate partnerships and access to smart capital. For this reason, they count on important business and corporate partnerships. Moreover, they are the only university incubator in Italy which can count on **venture capital fund** (Poli 360) financing start-ups emerging from their impact flow. They want people who work with them respect their values and align with their code of conduct, which are strictly connected to UN's SDGs.

PoliHub creates an **environment** where start-ups and companies can **interact** with each other and play together on a B2B level, as this is win-win for both players: start-ups need to meet companies because it is there that they can test what they offer; companies need to stay as close as possible to open innovation opportunities because they usually lack resources to do research internally.

PoliHub takes start-ups from the early stage of their development (TRL = 4) and accompany them up to company creation and scale-up phase, by offering a set of services that include both acceleration programmes and incubation services. A start-up can engage with PoliHub in multiple ways, thanks to

the many opportunities offered (e.g. Business Idea Competition, Business Plan Competition, Corporate Programmes). They also carry out a number of activities with a **social impact** (e.g. Mompreneurs, Witech, FAST)

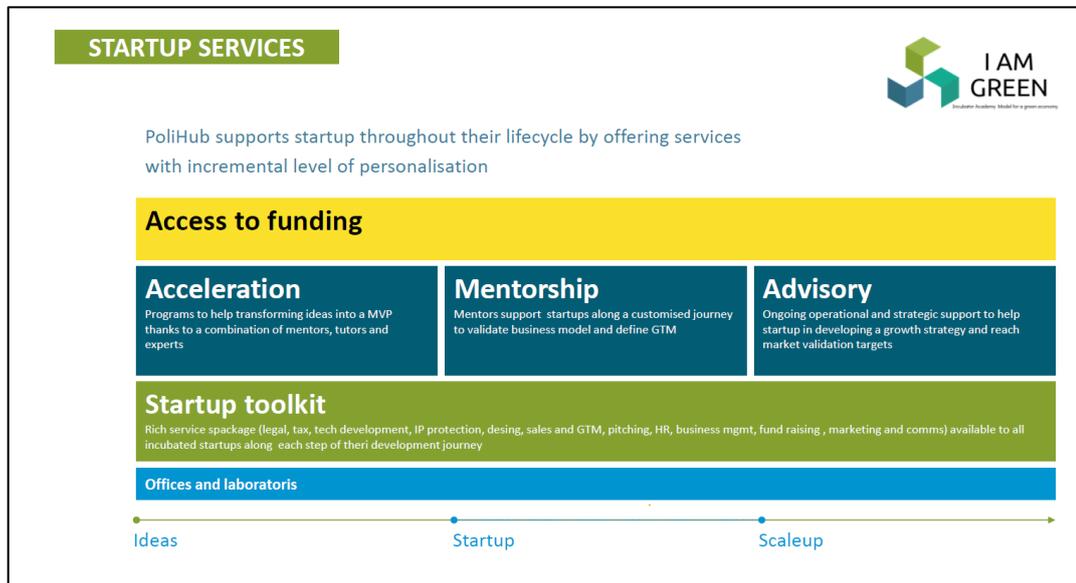


Figure 10: PoliHub support services available to start-ups

PoliHub greatest strength is working with people and creating connections with them, e.g. by following the Silicon Valley model in the sense of a **biological ecosystem targeted on humans**, who can truly accelerate innovation. For this reason, they introduced a membership programme which enlarges their community, and strengthens the idea that PoliHub is an **acknowledged platform** – i.e. a place that is both physical and digital, where people sharing the same set of values come together and share their views and opinions, by growing their knowledge assets and helping other people developing theirs.

They are connected with other players, first and foremost [Deep Tech Alliance](#) and [Cleantech Open](#) (West Coast of the US).

Keywords: **deep tech, people, quality**. They tend towards high quality start-ups, teams and project.

Questions:

- *Since you connect start-ups with established companies, how to you manage Intellectual Property (IP) in the deep tech scenario?* In the majority of cases IP is already properly managed and protected by the University or by the company itself before creating a match.
- *Are you limiting yourself only to deep tech software or are you focusing also on other topics? How do you choose them?* Since Polytechnic of Milan has 12 different departments, we see the deep flow coming from a number of different sectors. In case great ideas come from sectors that are not covered by PoliHub, they tend to redirect them towards different acceleration services. PoliHub focuses on data science, advanced material, electronics, photonics, robotics, drones, etc. They deal more with hardware than with software and their main focus is on the energy transition and industry transition, always with a focus on sustainability and green element.

- *How do you choose start-ups benefitting from your accelerators? Are there possibilities for international start-ups? The fact of being a hybrid incubator is a point of strength in Covid times?* Nowadays everything is done digitally. But contact and human presence are very important, nevertheless, as this is the way in which people learn. At the moment they are focusing on building international partnerships with other incubators and aim at becoming an excellence in the deep sector, not limit themselves to be the incubator of Polytechnic of Milan for its students.

Case studies from Ireland

From Ireland, we heard about the High Potential Start-ups Unit (HPSU) of Enterprise Ireland, a perspective from the state agency. The danger of “picking winners” was stressed and how the state can support start-ups transparently and fairly. It was noted that there are many similarities with the situation in Emilia Romagna and Lombardy regions in Italy. We further debated how can we filter and assess start-ups.

[Enterprise Ireland](#) is the government agency responsible for development and growth of Irish enterprises in world markets. They work in partnership with Irish enterprises to help them start, grow, innovate and win export sales in global markets. In this way, they support sustainable economic growth, regional development and secure employment.

The presenter described how EI identifies start-ups with high potential, where ideas come from and how the selection process works. In EI there is a Start-up support team that evaluates potential start-ups by considering:

- What is their niche?
- Why do/should they do it?
- Which ones are helped by scouting?
- Which ones are helped by training?

Strategy

National funding agencies are wary of unproven start-ups they are risky and they utilise scarce resources. But they are unparalleled sources of innovation and a means to modernise any economy so it is worth investing in them. The first thing to think about is: **what are your natural resources**, as a country? Each country has its own specificities and qualities. At the same time, each start-up needs to focus on what they can do.

Then, they need to consider their **motivations** / their drivers for potential: e.g. equity, technology and development, national pride, economic development etc. Without motivation, you don't have a strategy. At the same time, without focus you don't have a strategy either. The key is to recognise a motivation/opportunity match and focus on driving that forward.

Motivation

As a government organisation, EI needs to focus on the following aspects of Irish start-ups: SMEs with potential to develop innovative products or services, international markets and opportunity for export (even more important for companies originated in a country in an isolated location as Ireland), with the potential to create 10 jobs, achieve €1 million in sales within 3 to 4 years of incorporation, it needs to be less than 5 years old and be headquartered in Ireland.

Scouting

Once a start-up knows what it is going to do, it needs to look for a **team** of suitable people:

- Global ambition: EI podcast / print / broadcast ads
- EI offices: 10 in Ireland and 40 worldwide, all linked to an ecosystem and working mostly with established companies.
- Targeted funds: € 10m green funds just launched, to support cleantech
- Sponsorship: national start-ups award
- Incubators & accelerators: various sectors and regions
- Angel networks
- Third level: spin-outs, new frontiers
- Business incubation centres
- 30 local enterprises offices regionally dispersed for non-rapidly scaling start-ups

Filtering problem: in 2019 there were 17.000 start-ups registered, EI invested in 143 of them (1/100). The filter is not sector specific.

Supports

- Competitive start fund: competition for start-ups, which are growing at a quantitative level.
- iHPSU: co-founding seed round. EI needs to plant the seeds for the development of innovation and new businesses.
- Seed and venture capital support.

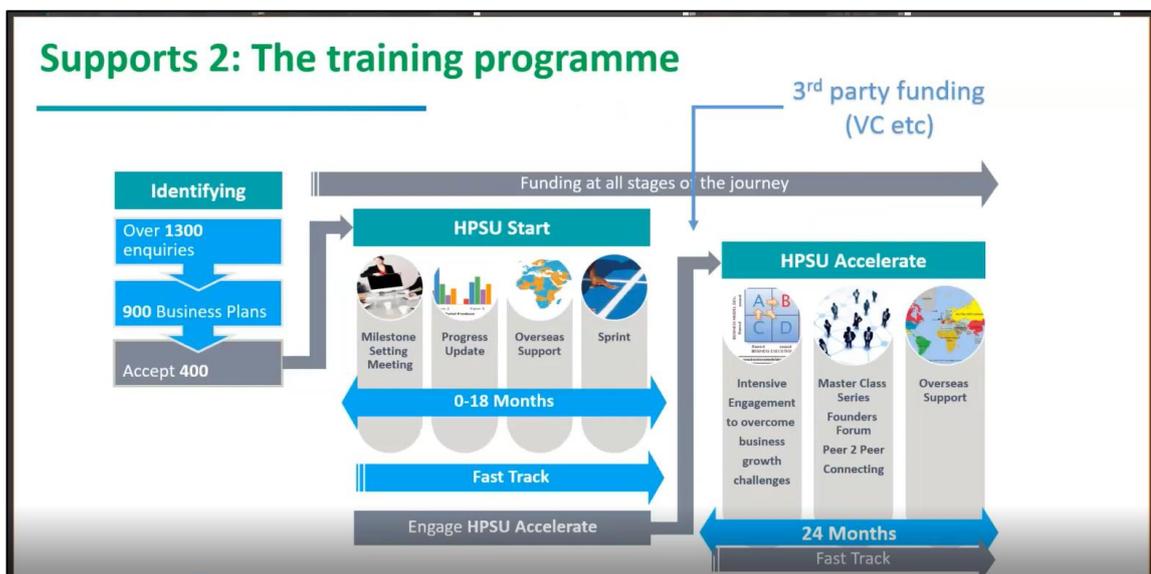


Figure 11: Enterprise Ireland's early stage filtering and training programme.

Team Tactics

Enterprise is agnostic to sector, but EI does group activities to promote networking.

- Bio & ICT:

- It suits Ireland national characteristics (small, isolated, strong in tech, export-focused). The cost for transportation is very low, for number of products.
- It links to colleges, established companies, ecosystem, research.
- Female entrepreneurs:
 - Because they are effective, but under represented.
 - EI offers dedicated calls, group support, highlighting role models.
- Overseas
 - There is more of them, and many companies based in UK are thinking of relocating to Ireland
 - EI offers a network of overseas offices
- Green
 - Because of universal predictions of a growing market, and Ireland has always been green.
 - EI offers global teams linking research, established companies and international businesses.

In the last 12 months, EIs focus on developing the national start-up ecosystem led to an investigation of **strategic partnerships with multinationals** (Google, LinkedIn, Microsoft, etc.). The goal is to identify support opportunities for their start-ups because, with Covid-19 crisis, many smaller seed investors, initial customers and opportunities to link to global markets disappeared. Relations with multinationals are managed by EI, although sometimes it is difficult to stick to the rules of engagement and other requirements of a large, multifaceted international organisations also concerned with the Covid crisis. As a result, at this stage the interaction is more like a strategic alliance than a fundamental collaboration but initial signs are positive on both sides and there is a likelihood that the collaboration will develop into the future. EI's concentration is on the benefit of EI's client start-ups rather than the multinational itself, for this reason and the fact that the alliance is in its infancy EI is very careful to choose only the most suitable opportunities.

Historically Ireland's links to the US tend to promote the **Silicon Valley model**, and then replicate it in the EU context.

Irish government is working hard to support start-ups through a number of incubators and accelerators, such national coordination and funding is required to prevent fragmentation with important differences observed between one region to another. In an ideal world, all local support agencies come together to support the client in a uniform fashion, thus enabling the start-up addressing the right support agency quicker, faster and effectively.

Questions

- *What is the difference between EI as an investor and private investors, especially in the seed phase?* This is the reason why EI invests in the seed phase: EI support of course helps a company but EI never leads a round and our equity stake in a company is limited to 10% max, the primary goal of our support is help start-ups to get money from the private investors.
- *How do you, as a public organisation, work in relations with multinationals?* Enterprise Ireland supports companies headquartered in Ireland, a sister organisation (the Industrial Development Agency, IDA Ireland) offers a similar service to companies headquartered overseas (Multinationals). Enterprise Ireland's role with Multinationals is to help

them add more to the local start-up ecosystem in return for an invitation to participate in that ecosystem. It's a symbiotic relationship that has many moving parts and in this the early stages we are carefully selecting examples of obvious mutual benefit, the in-depth collaboration phase is in the future (hopefully).

- *Concerning ecosystem, I found it hard to have an effective international ecosystem. How can we create together an ecosystem that has enough strategy and innovation to work at an international level?* There are many similarities across countries. Entrepreneurship means taking the general and making it specific. You want to support companies where it makes a difference. The key element here is making people focus on the **quality and intensity of their work**: we do not necessarily need more start-ups, we need more successful start-ups. Being an entrepreneur is a lifetime job but it's not a solo game and a significant source of failure is the lack of resilience of the team whatever the passion intelligence and talents of the entrepreneur.

From [*Sure Valley Ventures*](#), we got a perspective on how to screen and assess start-ups from the point of view of the seed capital industry.

[Sure Valley Ventures](#) (SVV) is an entrepreneur-led venture capital fund that invests in early stage software companies. It specialises in investing, growing and scaling breakthrough start-up companies in the following key progressive technology sectors: Artificial Intelligence (AI), Immersive Technology such as AR/VR, Internet of Things (IoT), Cybersecurity.

SVV invests in high potential private software companies dealing with "fourth wave" Immersive Technology (AR / VR), IoT, AI, Security platforms and products, and in general high growth companies where there is a proven concept and revenue generation.

The **investment team** has a strong technical and industry experience, and commercial acumen in the fund's investment area, and it developed an extensive network over the years not only in Ireland and the UK, but also across Europe and in the Silicon Valley. The **investment strategy** consists in finding new global winners in key emerging technology waves, and in accelerating company development through their platform for then returning a significant capital gain pay-out to their investors.

From the point of view of investment stage, SVV focuses on **seed funding**, leading the deals they are investing on, and bringing venture capital investors to later stages of the investment. SVV creates value through its platform, by helping companies and founders rapidly reach their KPIs, by increasing their success rate and reducing risk.

SVV funds are focused on a core set of **key technology sectors**, because they aim to find new winners ahead of the next big "Fourth Wave" (e.g. deep technology, new wave technology). For this reason, they managed to attract high quality co-investors and follow-on investors in their key target sectors. Since they focus on very specific sectors, they need to find the right / suitable partners with whom start-ups can develop and scale up.

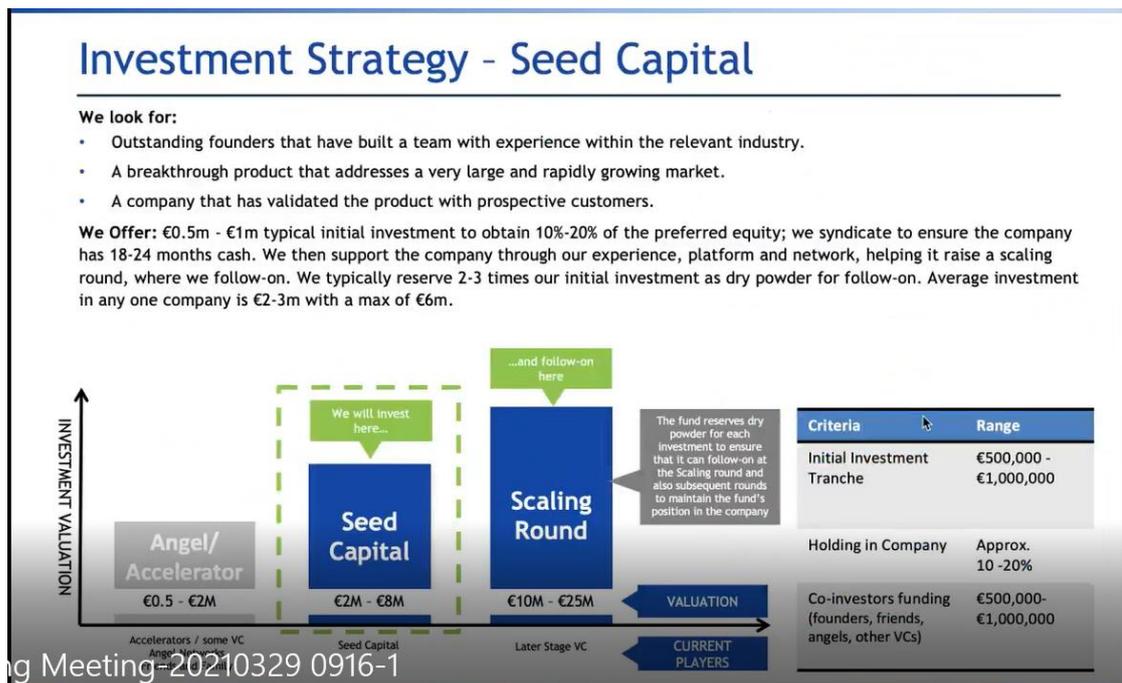


Figure 12: A schematic demonstrating Sure Valley Ventures' Investment strategy. SVV's strategic focus is on early stage and seed with the potential to follow on in subsequent rounds. Initial investments are in the €0.5m - €1m range and their target is a holding of 10% - 20% in the investee company.

SVV looks for the following categories on companies:

- The ideal founder profile is that of someone who come from an industry where they built a knowledge, an experience, where a plenty of gaps has been identified, which can be filled through their products or services.
- Business with a huge market potential.
- Already validated products, (to avoid taking too long to go to the market).

Value Creation Platform, aimed at accelerating the growth of portfolio companies from the point of investment to Series A, through a custom series of value-added supports. Many companies fail in the process, and their goal is to really help them fill-in these gaps. It implies a programmatic delivery of support ensuring that the right support is delivered at the right time. SVV platform is designed to help companies focus and hit their KPIs for Series A, and at the same time increase their chances of success and reduce the risk.

The **market opportunity for start-ups in Ireland** is developing quickly, and continues to grow despite the current economic backdrop. This start-ups growth is spurring increasing opportunities for entrepreneurs both within the capital and in various regions of Ireland. At the moment there are more than 5.000 start-ups in Ireland, half of them in Dublin, the others mostly concentrated around Galway and Cork. The ecosystem has a lot of support, with a number of incubators and accelerators: e.g. No-vaUCD, NDRC, New Frontiers, Propeller, etc.

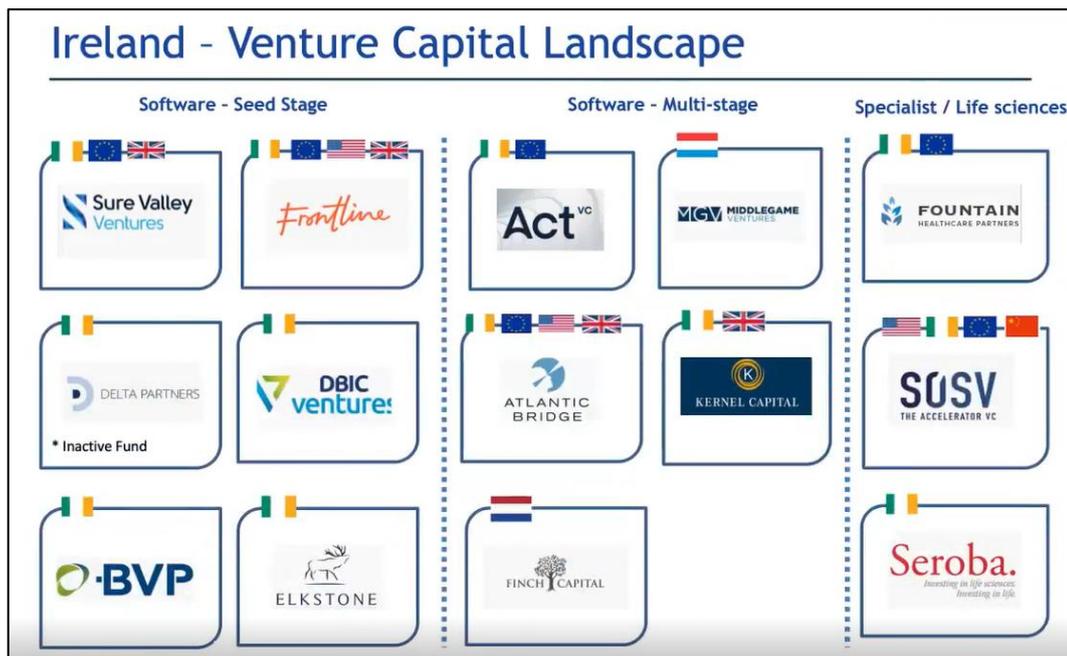


Figure 13: Sure Valley Ventures' summary of the venture capital landscape in Ireland indicating a number of international as well as local players

The focus of SVV is on the following 3 areas:

1. **Disruptive innovation:** SVV invests into companies creating disruptive innovations from their chosen technology areas: immersive technology, IoT, software security and cybersecurity, AI.
2. **Significant intellectual property (IP):** SVV invests into companies that have developed significant IP in product / platform.
3. **New markets:** SVV invests in companies that are creating new markets which may on the surface appear niche, but have very large growth potential.

In terms of SVV approach to **origination** (i.e. how they set deals in the market), they aim at having early visibility of start-ups and filtering according to their investment criteria. It is also important to establish and maintain a brand mindshare with the addressable market and establish a dialogue with the priority list:

- Digital / human networking
- Data driven approach to quickly scan the market
- Brand building to go back to the community

SVV process high volume deal flow at seed stage:

- From 1.200 + companies in the inbound stage, to 12 companies on which they actually invest, passing through various stages: formal meetings, a strict evaluation to the investment decision.
- They aim at getting companies from initial meeting to internal review in 3-4 weeks. **Speed** is very important at this stage.
- They are building an internal tech stack allowing to automate the process even further.

- The prioritisation process culminates at the “**Investment Committee**”, where the considered companies pitch to the partnership.

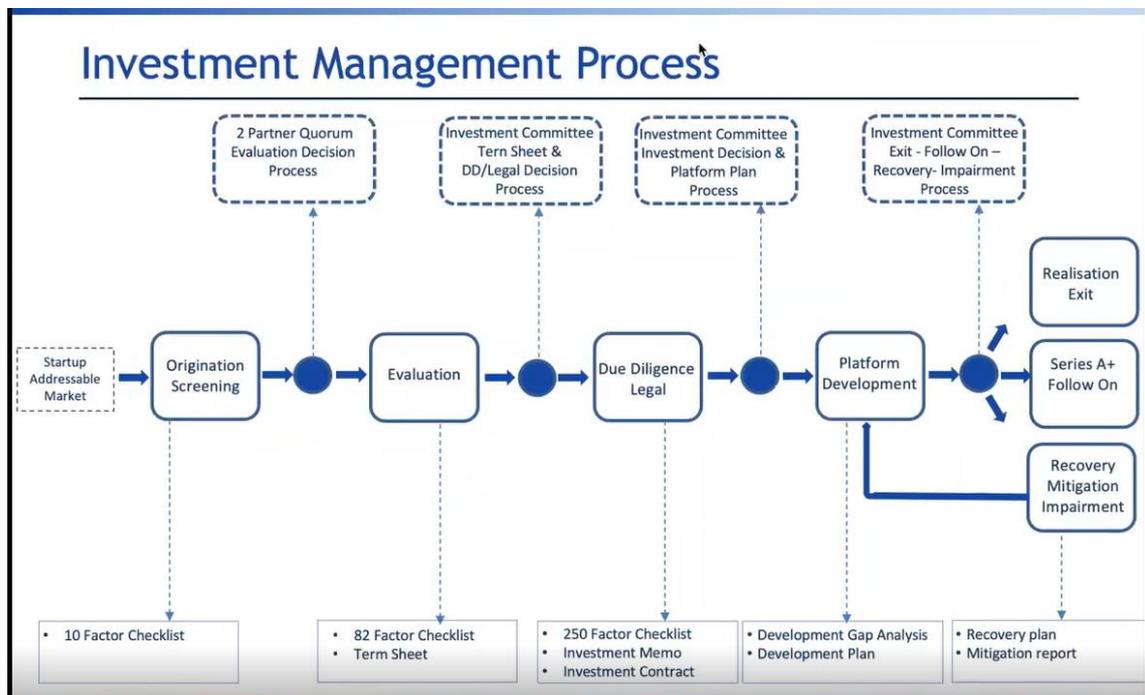


Figure 14: A schematic of Sure Valley Ventures’ investment filtering process

Questions:

- *Are you interested in investing in other locations, besides Ireland and the UK?* There are great opportunities in continental Europe and in other countries, such as Israel. In an ideal world, SVV would find the best deals all over the world, but at the moment this is still a nascent opportunity.
- *Could you give an overview on how the relations between SVV and EI work?* EI are extremely instrumental across the ecosystem and present companies on which SVV is going to invest. EI tends to be involved from the early stages and provides matching opportunities. EI focuses on export-driven companies.

Case studies from Israel

III provided some original and deep thinking on how to assess solutions beyond the technology and the team of a start-up, which can be considered as an already given prerequisite, by looking at specialties and technology components.

Israel Innovation Institute is a "non-profit think and do tank", bringing innovative technologies and knowledge to real-world frameworks. HealthIL supports innovation management for healthcare stakeholders, engages entrepreneurs in the field of healthcare innovation, and bridges the gap between the tech community and the public health sector.

III aims at creating impact in the public domain (healthcare, agriculture, etc.) and at solving global challenges with the integration and assimilation of technology.

The III is a governmental project and has a number of governmental partners supporting its work; every sub-group collaborates with a number of specific players and stakeholders (e.g., in case of HealthIL: corporations, healthcare organisations, pharma and technology companies, etc.).

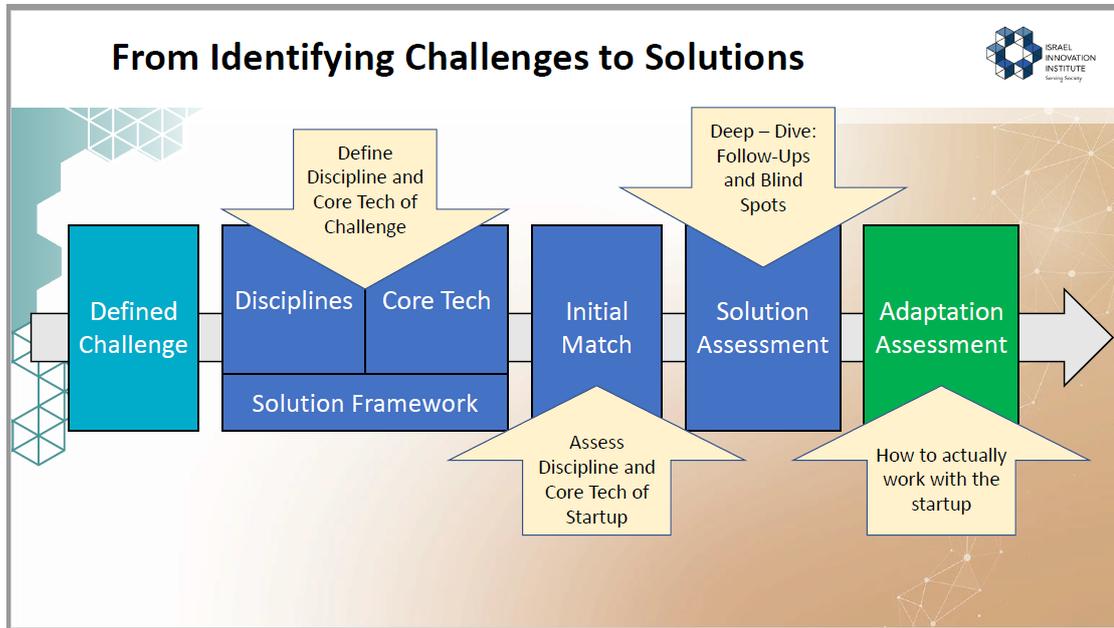


Figure 15: A schematic of the Israel Innovation Institute opportunity nurturing and guiding system.

The **process of assessing a start-up**, beyond just technology, from the perspective of the organisation itself. The main starting point is the organisation, its challenges and needs – from the definition of a challenge to the identification of a solution (i.e. the start-up). Regardless of the sector, this conceptual framework works and overlays on top of the technology and the team and allows a match to be achieved between the start-up with what the organisation is looking for.

The process has three stages:

1. **Defined challenge:** let's assume that the challenge/need has already been defined by the institution.
2. Disciplines/Core Tech/ Solution framework – Initial match – Solution assessment
 - **Discipline:** the main speciality within your sector that directly relates to a defined challenge. An organisation can have any type of challenge; each challenge can be broken down and distilled in different specialities (e.g. for healthcare: data integration, diagnostics, population health management, fitness and wellness, etc.). Any solution is dependent on 2 or 3 of these disciplines.
 - **Core technology:** what are core technological components required to address your challenge? This is important because every start-up can be broken down into 2 or 3 of them (e.g. apps, big data / analytics, cloud, etc.). All this happens even before looking at start-ups.
 - Building a **solution framework** beyond just technology, based on disciplines and core tech.
 - **Initial match** provided by start-ups, based on disciplines and core tech. Once you know them both, you can match that to the start-up.

- **Solution assessment:** regardless of the solutions proposed and of the team, what is really relevant to address the need of the organisation? Once you find a number of start-ups, you have to choose which one is more suitable. A good match does not imply that this is also a good start-up. The assessment is based on 3 criteria: **readiness, relevancy and reality** of what is going on.

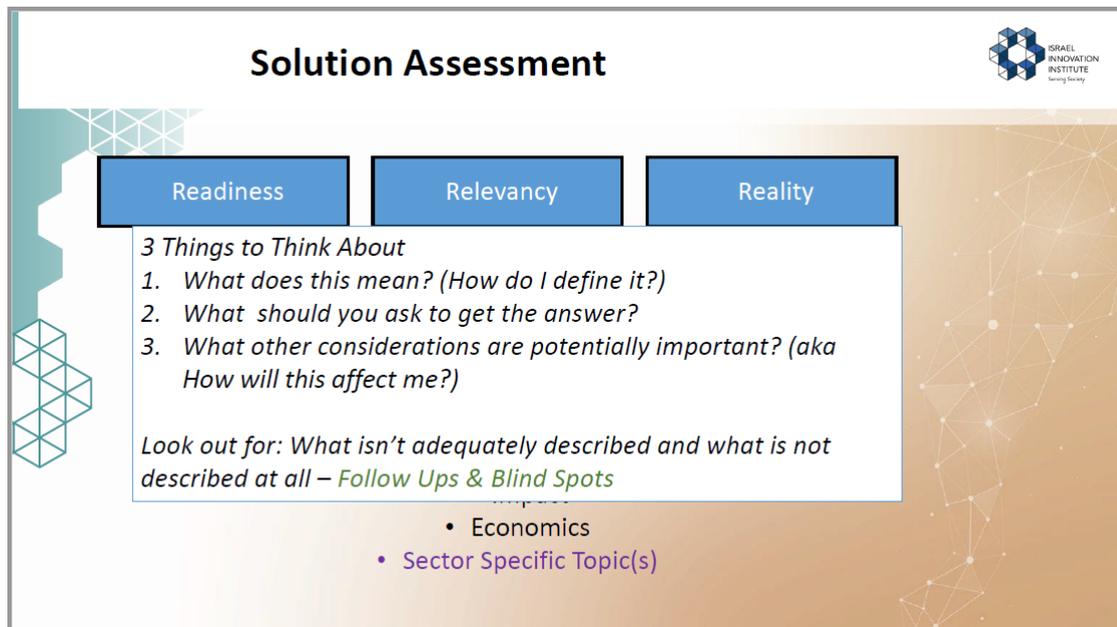


Figure 16: A schematic of the Israel Innovation Institute opportunity filtering system.

3. **Adaptation assessment:** how do we assess if it is possible to begin using the product / technology developed by the start-up? You should ask yourself the following questions, before deciding if it is worth working with a certain start-up:
 - **Stage:** has the product been tested in a real context? Have they shown verifiable and relevant results? Has the company shown that they can accurately measure relevant metrics, when compared to existing best practices? Has the company validated accuracy of these metrics in a controlled setting?
 - **Product:** who actually uses the product? What people are required to operate it? Does the product require training? How will this product integrate with my existing best practices? Does the product require any pre-existing infrastructure?

Questions:

- *As III, how do you identify and start with main challenges, also given that start-ups are considered according to specific sectors?* The bulk of III work follows a replicable framework and begins with people interested in technology on two fronts: a deep-dive assessment of their needs and challenges (which may be different from what the organisation wants); and assessment on how the organisation operates and what it can offer, whether they have resources. Once these two assessments are done, then it is possible to do a much more valuable match.
- *How do you prioritise requests?* There is an actual process of prioritisation based on a number of characteristics (economic, strategic, etc.), which are weighted and

ranked. It is thus important to add categories for each challenge in order to select the “winning” ones.

Start-ups case studies from Israel and Italy

Village in a Box (Israel) is an award-winning start-up developing technology for resilient, zero-carbon, circular and self-sustained cities of tomorrow.

We all know that globalisation and climate change are big problems of our times, and they drive us to the conclusion that we need to **transform our cities to become resilient and sustainable**. Is there a way to transform cities in a more systematic, efficient and scalable way? Yes, through **infrastructure**. Infrastructure is the vein of life for the cities, nourishing and supporting them by providing energy, water and food, and taking away our waste and waste water. Because of that, infrastructure also represents the main impact potential in terms of economic and environmental savings.

The existing **linear infrastructure** is not efficient, expensive, based on fossil fuels, and vulnerable to climate change. But we need it, to support our basic human needs:

1. Energy
2. Water
3. Food
4. Waste
5. Waste water

However, these five dimensions do not work together in a synergic way and do not share resources. If we imagine our cities in a circular economy model, we should also imagine **circular and self-sustained infrastructures**.

This model can work both in villages and in a city. In the **Resilient City Model**, next to the city there is a box called **Infrabox**, the hearth of the neighbourhood which supports its basic needs. This is the product sold by the start-up, allowing people to be self-sustained but still connected to the municipal energy network.

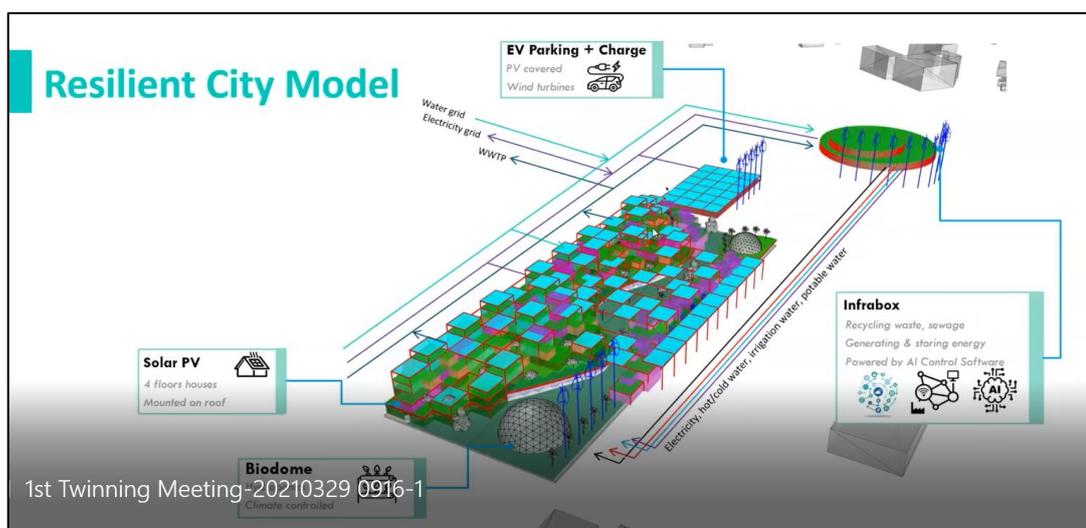


Figure 17: A schematic outline the Village-in-a-Box resilient city model emphasising the interconnectedness of the various inputs and outputs managed by the Village-in-a-Box solution.

The **Infrabox** is a set of commercially available systems, integrated into one smartly arranged building or package, and connecting these systems to each other. It is either put next to the neighbourhood or underneath a building. Their customers are real estate developers, owners of real estate, etc. It is sold with a software package controlling the system, its stability and optimization. In this way, real estate owners can become utility providers either to the residence or to the grid → Change of paradigm.

Timing and Engineering – All the systems need to work well and in synergy together (e.g. storage of energy to be supplied only when needed; conversion of energy in excess into other energy sources). It is also possible to strategically time the functioning of the system, so that it is able to supply energy in peak demand periods of the year (e.g. winter), or time of day (e.g. in the evening, when energy price may be higher). Village in a Box has a zero or even negative carbon footprint.

Another product they sell is the **Grid Management Software**, an AI software ensuring stability and optimization, and managing the grid remotely and supported by trained teams. Resources are recycled (e.g. waste to energy / water) and energy is used smartly to avoid relying on batteries as much as possible by moving energy when it is needed. The software has good and accurate prediction capabilities (94% accuracy), based on a secure and stable IoT capabilities, and manages energy storage in a smart way.

They want to take this project as a full commercial housing project in the southern part of Israel. At the moment they are developing the flagship project Mitzpe Ramon for a green neighbourhood. They also intend to put their infrastructure in an already existing campus.

[Mipu Predictive Hub](#) (Italy) is an e-powered solution for energy management and maintenance located in Salò, a small Italian town. Mipu is a group of 3 different companies, which brings prediction into factories and cities in order to reduce waste and inefficiencies, and boost performances, by respecting sustainability and job inclusion.

The base of their work is **data analytics**. Data are embedded in machines, assets and cities. But it is difficult to use them in order to take decisions and predict future scenarios. Mipu develops a unique mix of know-how, software and hardware, so they can really understand customers' problems and challenges, even from a technical point of view.

They offer:

- **Software:** Rebecca is a modular platform, easy to integrate, available in Saas or on-premise. It operates in the fields of AI, maintenance and energy management by connecting objects, which send data to the software. Data are collected, stored and historicized in order to become relevant for future prediction.
- **Support / consulting services:** a mix of engineers, data scientist and software developers, to help customers understand the value of what they are offering.
- **Training** in energy management, AI modelling and predictive maintenance.

They think that they are able to provide value to society as a whole, by allowing companies to pollute less and reduce their consumption in terms of energy and waste. They also create value as a company, first of all because it is a woman-led company, and also because it encourages youth employment,

with an average age of less than 30 years old. → Possibility to predict the future in order to make smart decisions.

E-Co Work (Italy) is an early stage start-up attracting **digital nomads** to populate deserted villages.

A world-level problem is the growing **urbanisation** of our society, with more than 66% of people living in cities by 2050. Cities contribute to 70% of global carbon emissions, while internal areas are depopulating and the quality of life is becoming worse and worse.

Another way of living is possible, allowing to save money, time, and live more healthily and things changed even more with the rise of remote working. The suggested solution is E-co work village: a win-win opportunity enabling a coworking network in rural villages. Their main target are digital nomads.

E-co workers will have the possibility to choose the place they are going to live in and the duration of their staying, and they will be offered an **all-encompassing experience**: being part of a community, a house, a coworking place (in historical buildings) and the access to a number of extra activities. In this way, the three principles of sustainability are respected: social, economic and environmental.

They are different from other competitors on the market because they offer a life-changing experience, and also because they will create value both for their customers and for the involved villages.

Insights from participants discussion

Despite differences in national innovation systems, which conditions or best practices can be identified to promote a positive environment for innovation supporting a green economy. What are the 3 major challenges for green innovation? What are the 3 major opportunities for green innovation?

The break-out sessions were productive and the groups discussed a number of important challenges and opportunities for green innovation.

Group 1 discussed challenges of climate change, energy transition, digital transition including e-working and telemedicine, sustainable living and affordable housing.

Challenges	Opportunities
Ecological transition to renewable energies.	Focus on villages, which are currently empty, and which are good destinations for digital nomads to repopulate them. Important to solve the problem of traffic, job creation and demographic balance.
Digital transaction (especially during Covid-19).	Have an affordable and sustainable house, from a climate point of view.
Making green buildings accepted by the population & retrofit existing buildings to be more resilient.	
Finding business models sustainable from economic and ecological point of view.	
Regulation and financing to make the transition possible.	

Table 14: challenges and opportunities identified by Group 1 – 1st Twinning Meeting

Group 2 discussed similar challenges, and focused on the opportunity of investing in sustainability as a long-term solution, in contrast to solutions for other challenges, which may be solved soon.

Challenges	Opportunities
Lack of know-how/ business model OR lack of technical skills / technology.	Vibrant innovation ecosystem and networking as a facilitating feature, as a profession.
Geographical differences within the same country or the same sector, resulting in difficulties in accessing the incubation services.	Access to the most suitable figures and professionals within the innovation ecosystem.
Lack of stability.	Awareness on sustainability: how to explain it to customers?

Table 15: challenges and opportunities identified by Group 2 – 1st Twinning Meeting

2nd Twinning Meeting Report

The second Twinning Meeting was successfully held on the 27th of July 2021.

TIMING	TOPIC	SPEAKER
11:00-11:10	Welcome and short presentation of I AM GREEN project. Introduction to morning session	EI + Albert Schram
11:10-11:30	International entrepreneurship models	Prof. John Breslin (NUI Galway)
11:30-11:50	Start-up support: prepare for launch	Domenico Uva (Startup Geeks)
11:50-12:10	Do investors really value green motives?	Sarai Kemp (Trendlines)
12:10-12:30	Green aspects of entrepreneur support	Cinzia Morisco (STEP)
12:30-12:50	INNOSUP projects about Open Innovation	Nicola Doppio (HIT)
12:50-13:10	Round Table	Chair: Albert Schram
13:10 – 13:15	Conclusion of the morning session	EI
13:15-14:15	BREAK	
14:15-14:20	Introduction to afternoon session	EI
14:20-14:40	Start-ups: who to nurture	Rosemary Ward (South East BIC)
14:40-15:00	Start-ups play to your strengths	Uriel Perman (KIC)
15:00-15:20	Environmental impact of start-ups: long-term VS short-term vision	Agnese Metitieri (Impact Forecast)
15:20-15:40	Round table	Chair: Albert Schram
15:40-16:00	Wrap-up of main results	Albert Schram
16:00-16:05	Goodbye and conclusion of the meeting	EI

The goal of the 2nd Twinning Meeting was to discover the best and most appropriate way of supporting entrepreneurs and start-ups in the countries involved in the I AM GREEN project. The results stemming from the meeting are included in a DOP (Design Option Paper), a sort of playbook for national organisations, aimed at giving young entrepreneurs the best information to launch their own business, so that they can start not really from the beginning, but at least from step n°2 with some knowledge already in their hands. The meeting started with more general aspects and then moved to more specific ones. Guests were invited to take the floor and present their own activity and contributions to the topic, and in the round-table at the end ideas were synthesised in something that might be useful to all.

I AM GREEN Partners had a great opportunity to bring their peer learning forward. The main conclusion from the last meeting in March was that, although in general most innovation today is already green, the specific are trickier. All Partners looked outside their main scope of activity towards more ambitious, global and long-term goals. On the occasion of the 2nd Twinning Meeting, they really considered what they could learn from each other and what was the best way to support green start-ups, despite limitations in terms of legislation and resources.

International entrepreneurship models | Prof. John Breslin, NUI Galway

Professor John Breslin provided a general overview of what people think about innovation and presented his **5 S conceptual framework** for start-up success: Spirit, Skills, Space, Support and Spondulix – that is financial support. During his intervention, he described the market segmentation of I AM GREEN customers and the main ingredients of the start-up ecosystem.

[NUI Galway](#) (National University of Ireland) was established in 1845 and counts over 17.000 students. It is one of Ireland's foremost centres of academic excellence, and ranks among the top 1% of Universities of the world (based on data from QS World University Rankings). NUI Galway has earned national and international recognition as a research-led community with a commitment to top-quality teaching.

[John Breslin](#) is a personal Professor in Electronic Engineering at the NUI Galway's College of Science and Engineering. He is also Director of various entrepreneurship organisations, focused on Agritech and General Technology. Finally, he is co-founder and director of PorterShed – Galway City innovation district.

Irish people claim that “entrepreneurship” is an Irish thing, because the term was coined by an Irish born person, Richard Cantillon (1730). The word derives from French, “*entreprendre*”. Cantillon defined entrepreneurs as “*non-fixed income earners who pay known costs of production but earn uncertain incomes, due to the speculative nature of pandering to an unknown demand for their product*”. This definition remains very similar to the current one. Another related definition of innovation by Edward Roberts (MIT): **innovation = invention * commercialisation.**

The 5 elements needed for an innovation ecosystem:

- Spirit, achieved through events
- Skills / education
- Space (staffed)
- Support (guidance)
- Spondulix (money)

Spirit

It is what makes people enthusiastic about being an entrepreneur. The Boulder thesis:

- Entrepreneurs must lead start-up community
- Leaders must have a long-term commitment
- Start-up community must be inclusive of anyone who wants to participate
- Start-up community must have continual activities that engage entire entrepreneurial stack

Events and the spirit of entrepreneurship are just one part of it and aim at making people interested, help them take the leap. There has been a surge in start-up founder events over the past few years,

but we need even more of these founder role model telling their stories in classes, at events, in the media. We need to increase the range of events.

Skills

For more structured / technical people, it is hard to figure out business skills without a method. The method of “disciplined entrepreneurship” provides an overview of a series of 24 steps that start-ups can work through. The path starts off with an analysis of who is your customer / What can you do for them / How do you acquire them, etc. There are many other areas, representing different steps or stages, the first one being market segmentation.

Disciplined entrepreneurship can be applied to I AM GREEN, in particular the fact of developing a playbook for start-ups in the green sector or in your region. More generally, this entrepreneurship framework can be applied to many types of start-ups, entrepreneurship, “intrepreneurship”, arts, etc.

The process follows a logical flow, from the idea to the business plan / investment. The concepts are similar to those of other start-ups methodologies. The **idea** is not everything, it is a key but rather a small part of entrepreneurship itself. You also need to be in the right market, a motivated team and an efficient execution.

How to deliver entrepreneurship skills to a broader base? These skills will be very useful in any kind of career, arts & humanities, STEM... so that all students will be able to go down the entrepreneurship path / start-up route if they want to. These skills are useful also for researchers and innovators, and for other types of jobs.

- How can we give structured skills to all of our entrepreneurs (new and experienced)? Programmes like TechInnovate, AgInnovate, BioInnovate teach structured entrepreneurship skills and processes.
- Can we deliver skills to researchers who are inventing technologies, but do not know if they can be commercialised and, if they are, what to do next with them?
- Can we broaden it even further so that all STE(A)M undergraduates take a venture creation / new enterprise module?

Entrepreneurship Education Framework: an open framework built for refinement, which can be tied to market segmentation of I AM GREEN customers. There are chunks / tiles of education delivered to different types of start-ups, depending of where they are in their life cycle, and move them along according to your needs and their stage of development: from early stage to full development. You can take the different tiles as you need them, as you move along their life-cycle.

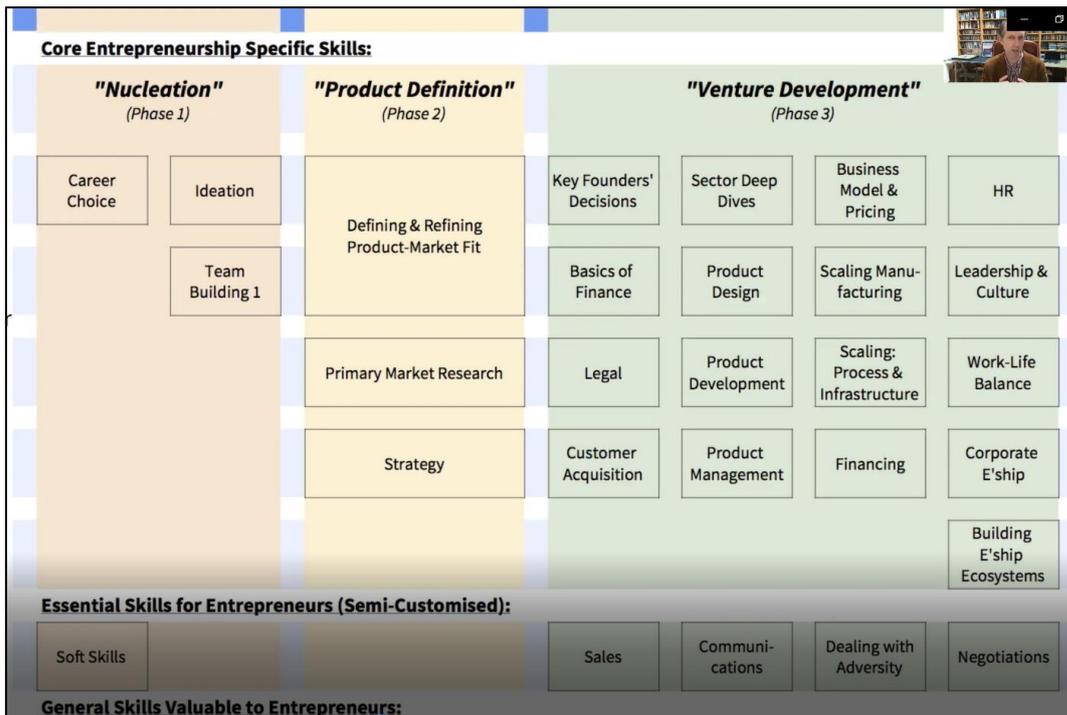


Figure 18: John Breslin's Entrepreneurship Skills summary

Space

Need to create a place where start-ups can collaborate, work together, meet people, attend events, etc. Innovation Districts are great examples of this: *"they constitute the ultimate mash up of entrepreneurs and educational institutions, start-ups and schools, mixed-use development and medical innovations, bike sharing and bankable investments – all connected by transit, powered by clean energy, wired for digital technology and fuelled by caffeine."* (Bruce Katz and Julie Wagner). In these areas, you have all the ingredients you need for start-ups to happen together and thrive.

Supports

It is very important that start-ups are able to access the support they need. This is quite difficult, and it is not always obvious to start-ups and actors in the ecosystem which supports are available to them

- Many great organisations in the 3 involved countries providing supports to start-ups. They help start-ups get more funding and access to European projects.
- Many start-ups don't know what regional / national / European supports are available to them: state, university, corporate customers, etc. Some guidance is needed: I AM GREEN playbook / DOP could be a great resource, but some human matchmaking is also necessary to make sure that right people get connected to the right resources.

Spondulix

19th century slang for money or cash, more specifically a reasonable amount of spending money. There are various schemes for companies to get initial funding, but it is always a challenge to raise the largest sum of money, especially in peripheral regions and not in the capital city, as there is always a bias.

- National and region-specific entities providing vital funding to start-ups scaling in our regions, regional accelerators, companies can avail significant grants from State and European organisations.
- Raising serious sums of money or funding is a huge challenge, and more needs to be done in terms of making sure that the various agencies and capital provider recognise the ambition and potential of the great start-ups in Europe

Segmentation

Analysis of start-up journey where the following 4 steps are identified:

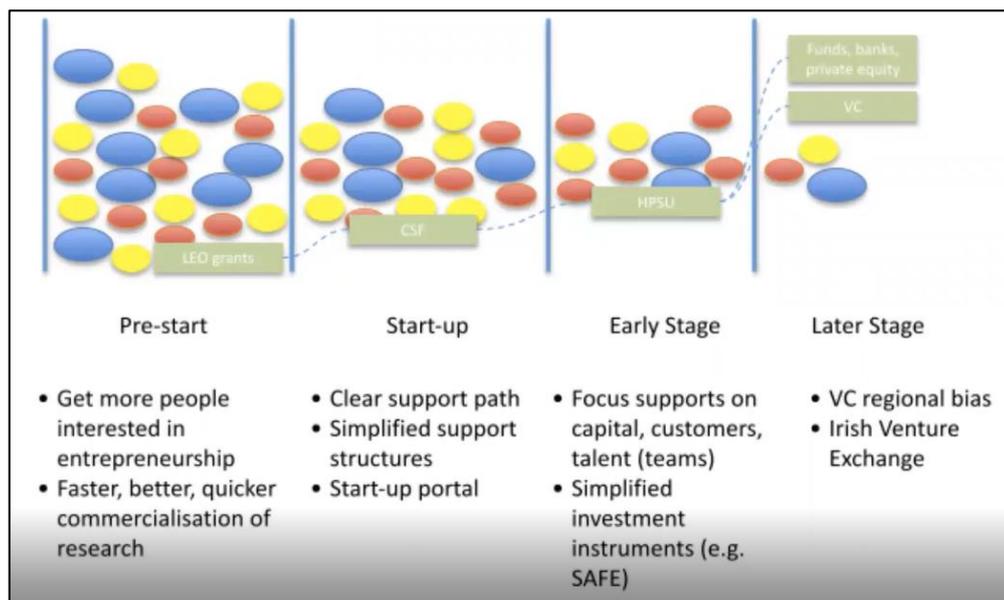


Figure 19: Start-up supporters need to tailor their motivations and activities depending on the stage of development of their target companies. (From John Breslin's presentation at Twinning Meeting #2).

This is a nice way to imagine start-ups and how they interact. Since the number of start-ups tends to decrease over time, as they move along the start-up journey, it is fundamental to understand what are the bottlenecks preventing their development.

According to the stage a start-up is in, you will have different levels in terms of skills, knowledge, access to support. It can be useful to do a market segmentation of the I AM GREEN playbook customers by describing their "persona" (who they are, their demographic, what is important to them, their dreams) and their needs at a higher level in the 4 stages: pre-start, start-up, early stage and later stage. When creating the playbook, consider their priorities as much as possible, and provide specific information and the resources they need.

Start-up support: prepare for launch | Domenico Uva, Start-up Geeks

Domenico presented how Start-up Geeks supports start-ups in practice at different stages; he stressed the importance of clearly defining a programme, and he confided in how they focus on getting entrepreneurs in the right mindset.

[Start-up Geeks](#) a community of Italian entrepreneurs and an online incubator, whose mission is to help entrepreneurs in transforming their idea into a business. As a "società benefit", it creates free contents to spread information on the entrepreneurship world. They also established a 12-weeks online incubation programme called "Start-up Builder", which aims at developing concrete projects starting from a general business idea, thanks to training, qualified mentors and a lot of work on the project itself.

[Domenico Uva](#) is Corporate Innovation Manager at Start-up Geeks. He has a background in Management and his mission is to help companies in creating internal programmes to foster innovation and supporting employees in finding their inner entrepreneurs. He also trains executives and managers to think lean and to meet a start-up mentality in order to approach bottom-up innovation and their way to disruption. Through the NGO Education Around, where he is President, he helps students finding their way in a complex society by helping innovating the university system. He is also a Global Shaper at WEF. He previously worked in Consulting in a Big Corp.

Who is Start-up Geeks?

- Community
- Start-up builder
- Corporate innovation

The mission of Start-up Geeks is helping the innovation system in Italy. They started as a Community, with the goal of helping entrepreneurs' network together, access to services, get feedback the one from the other. The Community raised the need for an incubator. After studying the market, they noticed that there was a gap in the Italian ecosystem: a pre-start incubator. In the pre-start phase, the most important part is the learning, the mindset, the culture. From this point of view, the incubator "Start-up Builder" was created and now they are dealing with the Corporate Innovation department – which represents a big challenge, as it implies offering the entrepreneurial vision to build a corporation.

Start-up Geeks tried to build an ecosystem by bringing together entrepreneurs, corporates, investors and accelerators and mentors.

From March 2020, they started 5 incubation programmes and supported 280 start-ups. In 12 weeks, start-ups that went through Start-up Geeks programme were ready to transform an idea into a project, go to the market and raise capital.

Start-up Builder:

- First, they incubate people then the projects.
- They have no interest in the success of the company, but are interested in founders' achievements in the entrepreneurship ecosystem.
- They do not take equity for the start-ups they incubate.
- Practical programme: first they learn, then they apply their knowledge on something practical and related to their projects. Start-up Geeks offers contents, templates, deliverables, feedback on the deliverables.

- Validation is always key, so all the programmes are based on validation of the problem, of the solution, of the market, of the investors' interest in the project.
- They believe in the power of mentorship and contamination. Start-up Builder was born after the community, all the participants of the incubator also participate in the community of Start-up Geeks. They have more than 100 mentors helping the start-up to succeed.
- To work in and with start-ups, you need to learn the culture and then the keywords: we need to teach the rules of the game and the right "slang" before starting the process.

The incubation processes

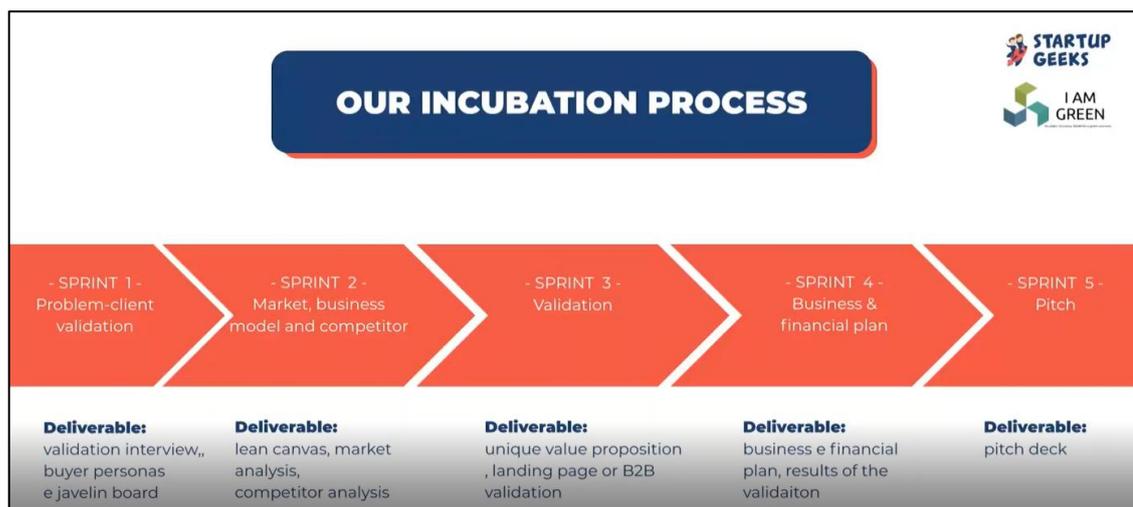


Figure 20: The Start-up Geeks incubation strategy schematic, indicating a deliverable expectation tailored to the stage of a company development.

The programme lasts 12 weeks, so in this time Start-up Geeks aims to take an idea and transform it into a project. The 2nd aim is to help teams and aspiring entrepreneurs to understand when an idea is not worth bringing to the market, as many start-ups launched their idea without sufficient validation and without knowing if it can work. The third reason why they created that process is that all the people that can help entrepreneurs (accelerators and incubators) want to see some **traction** before actually considering the idea and this is a problem because, if they have no idea of how the start-up ecosystem works, they can do irreparable damage.

With this process, Start-up Geeks wanted to offer something practical and quick and to teach people how to get to the final stage. All the start-ups are helped by 1 or 2 mentors matched at the beginning of the programme who help the start-up with guidance and strategy. Since the mentor community is key, Start-up Geeks train them to be mentors thanks to the "Train the Trainers" programme. The idea is to help them understand not only the contents of the mentorship programme, but also what it means to be a mentor and how to be one (guidance towards the right direction, providing strategy and motivation).

1. **Problem-client validation** | They consider the idea, ask the founder questions to better understand some parts. If it can work, they take them in and give them contents to understand the problem, the client (customers' journey, the importance of validation...). This means validating the programme more than the idea (problem remains, ideas can change) and validate the person's willingness to be an entrepreneur, because many people do not understand that being an entrepreneur is not a joke.

2. **Market, business model and competitors** | They give them content and lectures to listen to, provided by some of the most successful start-ups in Italy. This means understanding the right mindset and, since they lack experience and knowledge, do a lot of research, study, network and talk with people.
3. **Validation** | This is the most important sprint of the whole programme. At this stage entrepreneurs have talked to their potential clients, have gone in depth with the problem, have understood the market, the business dimension, the business model mapping and their competitors. They need to validate. So, they will put the unique value proposition down and understand if the model is more B2B or B2C and there are different ways to validate. Start2Impact helps them build a landing page and an advertisement strategy, allocate budget for the advertisement and see the traction of it, in order to understand if there is a need and where is it. Any of the start-ups they incubate pivotal this stage. In that case, they need to go back to step 1 and repeat the actions. This means validating the entrepreneurs' assumptions and supporting pivoting or fine-tuning the idea.
4. **Business and financial plan** | At the end of this sprint, Start-up Geeks help entrepreneurs build their business and financial plan. This means put everything down on paper, understand if what entrepreneurs are doing makes sense and rationalize.
5. **Pitch** | They help entrepreneurs with a training session on pitch, they pitch with experts, get a feedback. The 15 best start-ups will pitch on a special day event, where many investors are also invited. The goal is to give each start-up at least one introduction with an investor. This means helping people feeling proud of the results achieved and getting them out of their comfort zone to talk with investors about their idea in order to make it successful.

All this is done within the Start-up Geeks platform where the process can be monitored and the entrepreneurs given content and deliverables and also if possible to get feedback from start-up analysts.

Results at the end of the process

For start-ups having documents and deliverables stemming from the incubation process is important, and it is important for the investors, as at the end of the process they will be presented with some practical results from the incubation.

- Javelin boards and interviews
- Market analysis and dimension
- Competitor analysis
- Landing page
- Validation data
- Business model prototyping
- Business plan
- Financial plan
- Pitch

Questions:

- *Models are great because they are not concerned with practical limitations and always work. Then you look at your pitch-deck with its 5 steps, do you have an idea of how long this process*

will take? And if I want to have 10 pitches, how many people do I need to start with in the first stage? It depends on the participants. The more people worked in a professional way and the more experience they have, the more they will focus on the objectives to be reached at the end of the programme, so they tend to prepare themselves over the course of the programme to get there. Most of the time, they focus on the deliverables they need to get to the investors, which is not the best way to act. The younger they are, the more de-structured they are, the more they will focus on every single deliverable.

- *How early do you need to start preparing for the investor's day?* In our process, we start with 75 start-ups and in 12 weeks we get to 15 start-ups – 10 of which perform well. But here we are talking about very early stage start-ups. Since we let people fail, some of them leave the programme before the end. The idea is to let them understand if they are wasting time or if we are actually accelerating them. If it's going to be no, fast is better.

Support of incubators' portfolios. Do investors really value green motives? | Sarai Kemp, Trendlines

Sarai's presentation outlined the framework for financial support, which is a combination of private equity, national and international and standardised subsidies offered by the Israeli State.

[Trendlines](#) is an innovative commercialisation company that invents, discovers, invest in, and incubates innovation-based medical and agricultural technologies to fulfil its mission to improve the human condition. As a hands-on investor, Trendlines is involved in all aspects of its portfolio companies, from technology development to business building.

[Sarai Kemp](#) is a tech venture capital specialist at Trendlines Agri-food. In the last 10 years, she has been working with start-ups across the agri-food supply chain as an investor, mentor and advisor, spanning from deep tech to B2C apps and products. She is based in Israel and works for Trendlines, an investment company where she does early stage investments. Her role is to the deal flow for some of Trendlines investor funds.

Trendlines is an Israeli public investment company traded on the Singaporean Stock Exchange, which invests in medtech and agrifood companies directly and through venture funds. It has been active for 13 years and currently it has 58 active companies. Trendlines started out as an incubator licensed by the Israeli government, they also have an innovation centre based in Singapore, and an internal innovation unit (Trendlines Labs). In recent years, they also establish the investment fund to support their seed-stage portfolio companies.

There are many reasons why start-ups do not succeed and, apart from the team, a significant barrier is the lack of funds, because there are not many venture funders willing to invest at this stage of the company, when the risk is so high.

The Trendlines Model

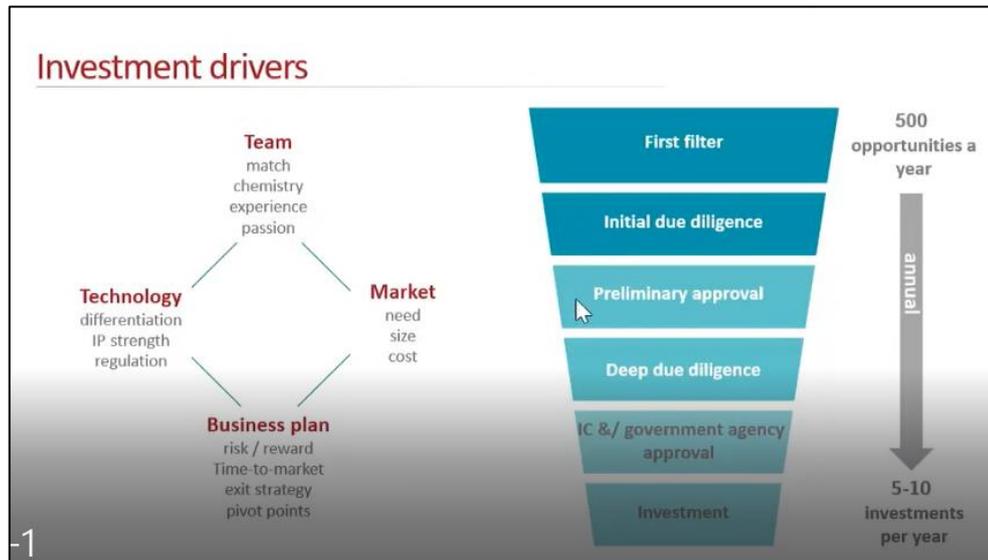


Figure 21: A schematic outline of Trendlines' investment strategy outlining how they consider several factors in the goal of filtering 500 opportunities to 5-10 investments they observe in a typical year.

Trendlines innovation investment committee works in parallel with governmental agencies for innovation. In case of seed stage companies, if the government does not invest, they will not invest because the risk is too high.

- The team is very important: there are cases in which they did not like the team and they decided not to invest in a certain company, although the other factors were OK.
- Technology is fundamental, too, because the Israeli government will not invest in companies that are not innovative from a technological point of view, so Trendlines has to show a valid proposition from an innovation perspective.
- The market needs to be huge. For them, Israel is not a market, but more of a beta site. So, from day 1, Israeli start-ups look internationally for other companies as their potential market and design the product accordingly.

Proven, focused company-building timeline

- Need / ideation: physicians, engineers, farmers, tech transfers, labs. In some cases, Trendlines does the co-creation either by working with entrepreneurs, or by taking technology out of the academia and creating a company from scratch out of the licensed technology.
- Due diligence: market assessment, business cases, technology assessment, leverage funding, investment. This happens if the person is already an entrepreneur.

If we talk about seed stage investment:

- Year 1 | Fundable proof of concept: R&D to prototype, regulatory plan, IP strengthening, market research, accounting & legal, HR management
- Year 2 | Follow-on funding, which can take up to 1 year: preclinical / clinical trials, regulatory submission, marketing activities, "A" round funding. In this case, it is usually new investors who join in the round.

- Year 3 | Path to exit: governance, follow-on funding, business development, commercialisation, investment banking

Capital leverage of the Trendlines model

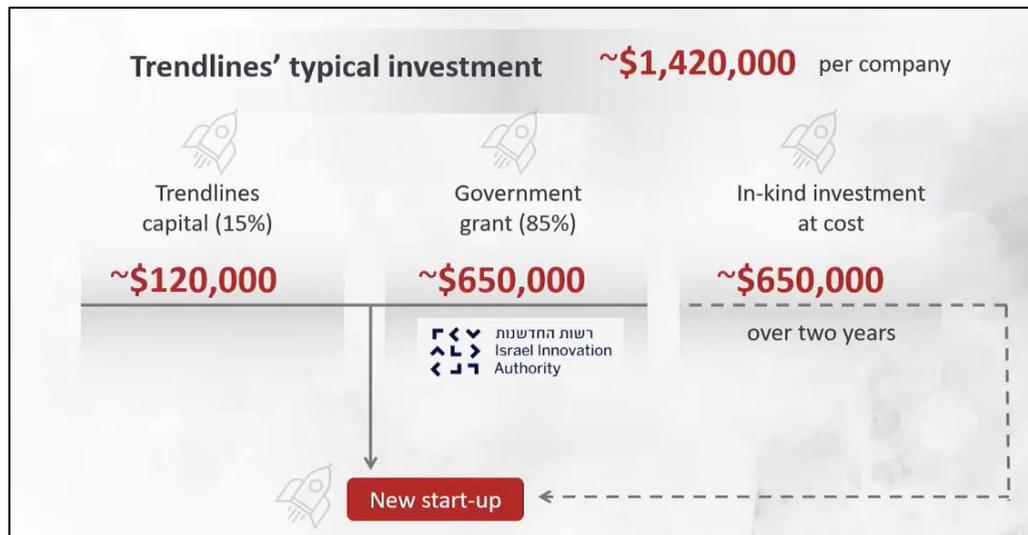


Figure 22: A schematic outline of Trendline's typical investment highlighting the interplay between a number of funding sources.

Numbers may change, for example if the start-up is located in the peripheral area the public funding from the government tend to be higher, while in the central area it is lower.

The in-kind support provided by Trendlines is based on the following items:

- Business development: creating effective connections with different strategic customers, Partners and investors.
- Market research: ongoing in-depth tests to identify trends in relevant markets.
- PR, marketing and communication: targeted support in advancing business goals.
- Facilities and infrastructure: well-equipped facilities for Trendlines companies, especially in the agrifood sector.
- Finance: significant network investing in Trendlines portfolio companies.
- Technology development: CTO works closely with each company, Labs team consultants & problem-solvers.
- Operations & administrative support: accounting, legal, purchasing for the 2 years they are in the incubator.
- Financial structuring: building a financial structure for each company.
- ESG impact: creating value proposition to be presented to potential investors.

Do investors really value green motives?

Sort of... It depends.

There are many challenges in measuring green values:

- Impact valuation has no standard measurement unit, especially for start-ups whose impact on the environment and on social goals is only in the future and cannot be measured

now because there is still no product. There are tools available, but they only work for already existing companies, no tools assessing the methodological impact of a start-up.

- No social / environmental accounting standards. There are not many impact investors per se and the majority of the market does not calculate these parameters as they are not compulsory.
- How do you forecast a start-up impact in multiple parameters?

Questions:

- *One of the critical aspects when deciding on an investment for a start-up is the team, as a good team rarely has a bad idea. When you find that the team is not optimal, are there ways to fix that? Sometimes we will pass on the opportunity, but it really depends on the structure of the company – how many co-founders are there. If there is only 1 founder, it is easier to negotiate which role he will cover and then other roles will be found externally. If it is a more advanced / later stage company then it's tricky, and you will need other investors joining your coalition.*

Green aspects of entrepreneur support | Cinzia Morisco, STEP Tech Park

Cinzia Morisco presented the perspective of an accelerator, STEP Tech Park, and the activities they are currently promoting with the goal of achieving climate neutrality in 2050.

[STEP Tech Park](#) is an Innovation Hub that helps start-ups, researchers and technological pioneers to realize their green tech projects. Their mission is to create an impact for the planet earth and our common future, and they firmly believe in the centrality of values and ethics, and in the fact that technology can be used to inspire virtuous behaviour. For this reason, they aim at reducing by 5 million tons CO₂eq emissions in the atmosphere over the next 5 years.

[Cinzia Morisco](#) is an Innovation and Green Funding specialist at STEP Tech Park. With a 10-years' experience in EU projects, she is an expert of European funding opportunities for research and innovation, supporting companies interested in these opportunities and managing projects funded by several European programmes (Horizon 2020, COSME, Interreg Central).

STEP is an Innovation Hub supporting corporates and SMEs in their open innovation projects and trying to find the meeting point between innovation, sustainability and profit. Being both an incubator and accelerator, STEP supports start-ups in implementing green tech projects. They are what in Italy is called a "Società Benefit" (see an explanation of this structure in Section 3.1 above, i.e. they do not only work for profit, but they also aim at creating a positive impact for the society and the environment. All of their profits are reinvested in the technological park located in Treviglio (BG), 20 minutes from Milan, where the founder decided to create an innovation hub from scratch.

STEP hosts start-ups coming from every sector, not only the typically green-related ones (e.g. renewable energy, energy efficiency, etc.), because you can contribute to cut CO₂ emissions by being active in a lot of different sectors. Besides the normal requirements for start-ups, they also ask for:

- High carbon reduction impact
- Disruptive technologies, with a high impact, protected by patents
- Excellent teams in terms of skills and dedication
- Economic and financial sustainability

- Scalability and replicability of the solution at a global scale

They have a growing corporate network and mentor groups, supporting them in working with start-ups' needs and market definition.

STEP really believes in creating an ecosystem because, by doing open innovation, they need to be open towards the innovation environment, universities, other hubs, corporates and start-ups. They believe in collaboration and work together to create a collaborative environment, that's why they are collaborating in several initiatives: they work with incubators in Europe and in the US, with Universities and other start-ups, with hackathons and similar initiatives and also with institutions (e.g. Chamber of Commerce in Milan).

Concerning the environmental impact, STEP supports its start-ups to measure this. When they evaluate a start-up, they also evaluate its environmental impact. This means measuring impact from an organisational point of view, in terms of products and services, and they also measure the impact of the change that they bring through their activity.

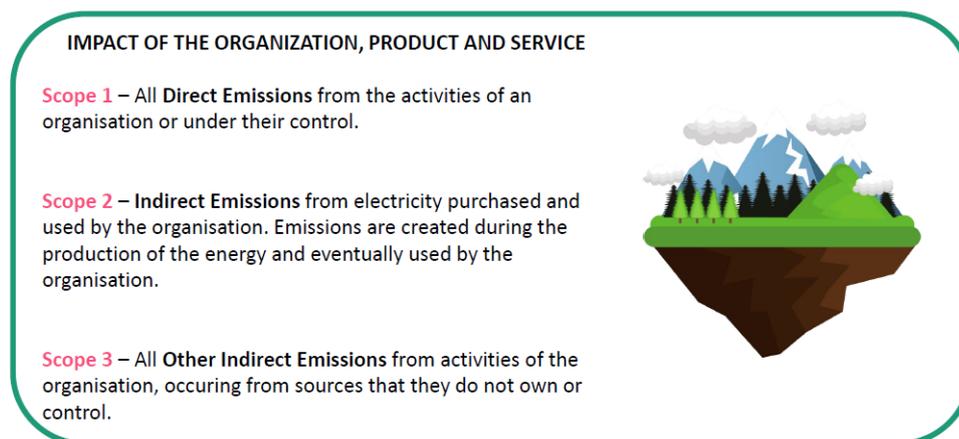


Figure 23: A schematic outlining STEP Tech Park's classification of a project's emissions footprint based on the origin of these emissions and the project's control over their optimisation.

Then, they measure the impact of the change that start-ups can produce in the world, which can be direct or indirect, i.e. the reduction of emissions directly or indirectly linked to the proposed solution.

- ANNEA, dealing with the maintenance of wind energy plants and turbines (direct)
- NOICOMPENSIAMO, who works with regenerative agriculture and through their its they can improve the CO₂ stored in the soil (direct)
- BLOK-Z, using blockchain to ensure that the green energy sold to consumers is really green (indirect)

Also, all activities related to **culture** are all indirectly contributing to the reduction of emissions, but they are important because they can bring a change to the market.

STEP also uses the knowledge deriving from the start-ups they get in contact in its service to corporates "STEP 2 ZERO". They support corporates in cutting CO₂ emissions by applying technologies and through their associated start-ups. It is a very long process, which also includes design thinking workshops and a deep analysis of the company characteristics in order to provide the best possible solution. Finally, STEP identifies the start-up that can potentially be introduced to the company. It is

true the EU aims to achieve climate neutrality by 2050, but the truth is that current technology available on the market is not yet ready (i.e. sufficiently mature), so it is necessary to accelerate these opportunities for corporates and merge the two areas (start-ups for corporates).

Questions:

- *How do you feel about European Innovation Council's new programmes and the minor emphasis they are putting on start-ups and SMEs and more on later stage companies in the digital arena?*
It can be misleading and I think there is still a problem on the design of that tool. Also, in all the focus that it puts on disruptive innovation and non-bankability. EIC's funding is really positive, because it helped lots of IT companies from Italy and Israel as well, it was very useful for start-ups and SMEs that were funded by that, but it still needs to evolve a bit and not leave behind other start-ups that really can support the ecosystem, and in our case the green transition, but are left out because of this focus.

INNOSUP projects about Open Innovation | Nicola Doppio, HIT

Nicola Doppio presented the work of HIT (Hub Innovazione Trentino), which established an excellent collaboration between the region, local authorities, the University and foundations for which Trento is rightly famous. Then he elaborated on the topic of innovation prizes, which have been in existence for many centuries, but that today have a special relevance and need to be effectively designed in order to reach their objectives.

[Hub Innovazione Trentino](#) promotes and enhances the results stemming from the research and innovation ecosystem of the Trentino region, with the goal of fostering the development of local economy. Its main activities include: catalysing innovation and technology transfer, scouting innovation opportunities for the Partners and – indirectly – for the territory at a national, European and international levels. HIT is formally a Foundation founded 2016 by the University of Trento, the development agency Trentino Sviluppo, and by two research centres, i.e. Bruno Kessler Foundation and Edmund Mach Foundation. Their goal is to foster technology, IP, know-how transfer between researchers and companies / the market in Trentino. They work in cooperation with tech transfer offices and they also engage with companies and industries. They try to pull industry needs within the research.

[Nicola Doppio](#) is Innovation Officer at HIT, where he designs and manages research-industry open innovation initiatives at a regional and EU level. With a background in social research, his experience ranges in the following fields: innovation management, user-centred design, service design, research-industry technology transfer, open innovation, new product development, innovation contests and Horizon 2020 projects.

HIT is very active in European innovation and collaboration projects: it is active in a number of S3 (Smart Specialisation Strategies), and it is part of 5 EIT KICs (manufacturing, digital, raw materials, climate and food). HIT is structured in 3 main units:

- Innovation & Tech transfer: they deal with existing partners and create new collaborations between researchers and companies.
- Start-up & Acceleration and pre-incubation programmes
- Innovation ecosystems, both at an Italian and European level.

In 2017 HIT wanted to launch some programmes allowing them not only to push results from researchers to the market, but also to do some problem-solving by using knowledge from researchers to help companies tackle their system development programmes and issues. So, they started to look into the concept of **Open Innovation**: i.e. support companies in sourcing external knowledge and some inputs to their innovation and R&D processes, by involving researchers. HIT started launching hackathons, OI prizes / contests, i.e. initiatives that award the best solutions to a given challenge. These initiatives have been run through centuries with the intent to facilitate collective solutions to big societal challenges.

HIT wanted to scale down the impact and the methods of innovation prizes in a smaller format, so that the actors could apply at a regional level:

- Researchers could act as problem solvers – i.e. people who bring the ideal solutions
- Start-ups and SMEs could be the seekers – i.e. actors seeking a solution

They came up with a new format of innovation contests: HIT wanted to support a consistent number of SMEs by sourcing ideas and solutions in product-development processes by involving some solvers, most of the time University students or young researchers acting locally / regionally.

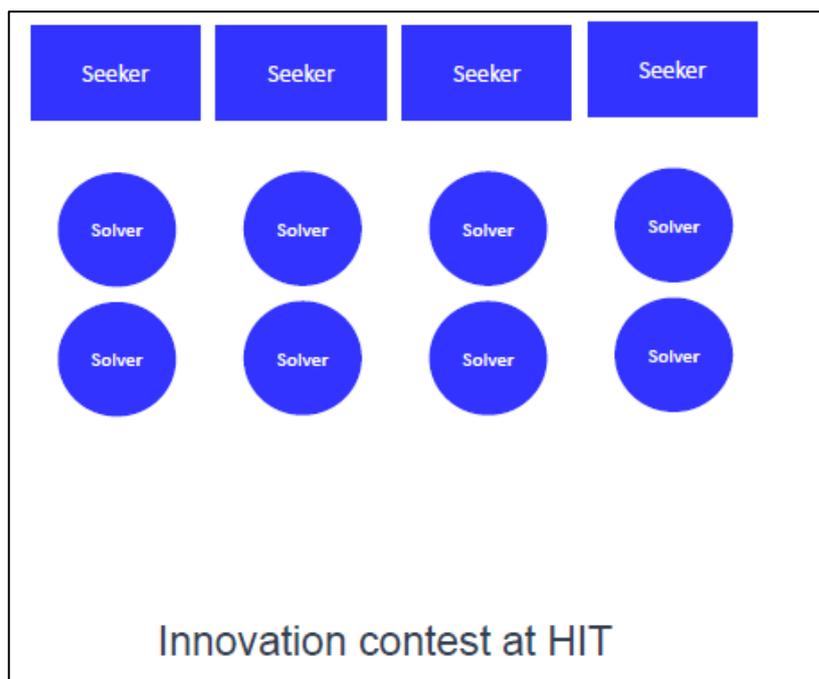


Figure 24: A schematic outlining of Hub Innovazione Trentino’s problem/solution matching service where they take in problems and endeavour to source appropriate answers from within their ecosystem.

Some examples of Innovation Contests at HIT:

- UX Challenge: [2-days hackathon](#) about testing and redesigning the user interface and interaction design of digital products (apps, software...). HIT launched an open call and selected 5-10 companies (SMEs, start-ups), and in addition some young talents (university students). They created teams, matched them with the companies and facilitated their cooperation. The output, which is a 5 phases design sprint including a user testing, consists of prototyping of newly designed interfaces. Also, real citizens are selected and take part in the testing process.

- 200 SME Challenge ([INNOSUP project](#)): the goal of this project was to replicate the UX Challenge in 7 European countries with a similar format. 200 SMEs were involved: some were provided with the challenge, some were not (control group) and at the end the differences in the impact on knowledge of user-centred design methodology were measured.
- Proto Challenge: [innovation contest](#) connecting SMEs with University and PhD students. The goal here is to analyse and re-design mechanical components in a way that it will allow companies to produce them with additive manufacturing techniques (e.g. 3D printing). Since most of SMEs do not have the skills to understand whether it is feasible or not, HIT created a 2-months long innovation contest where each company has a team of Industrial and Mechanical Engineering students, PhD and professionals acting as **mentors**. Outputs are very tangible: 3D CAD designs optimised components. The IPR are owned by the companies, because we want them to industrialise the result of the challenge.
- [INNOSUP project](#) established around the Proto Challenge contest called INNOADDITIVE (supporting innovation agencies to accelerate the adoption of AM technologies in SMEs).
- Industrial AI Challenge: artificial intelligence applied to industrial challenges. In this case, HIT wanted to match young talents with SMEs in order to allow companies to exploit and make the best of existing data to improve their processes and products in the industrial domain. It is about applying AI to existing datasets provided by companies, with the goal to develop predictive models. Here start-ups act as facilitators. At the end of the 2 months, SMEs acted as seekers to keep collaborating not necessarily with the solvers (i.e. students) but with the mentors who can support the companies with the provision of market-ready services and solutions, to really make innovation happen.

Added value of Innovation Contest

For companies:

- Sourcing innovation input
- Boost awareness of existing technologies and innovation methodologies
- Talent scouting
- Networking

For students:

- Learn in practice
- Career development
- Study credits
- Prizes

How to design an Open Innovation contest?

It is really complex and HIT started doing it from scratch in 2017. In 2018 an INNOSUP project "[Inno-Challenge](#)" was funded, whose main output was a canvas (The Innovation Challenge Design Canvas), which supported the design of an innovation challenge, by identifying the building blocks and addressing one at a time. E.g. What is the reason why you want to ideate this innovation contest? What

are its goals? Who are the seekers, meaning companies or other institutions who are seeking for a solution? Who will benefit the most from the open innovation contest? Who are the solvers? The canvas comes with a guide, which can be downloaded from the project website, designed to be used by innovators, intermediaries and of course facilitators.

Questions:

- *You presented programmes involving SMEs, which are very important actors in Italy in order to create an ecosystem. What are the characteristics that SMEs participating in HIT innovation contests need to have? How do you spot them? There are many barriers for SMEs who want to join innovation programmes. HIT has to put some work upfront in order to receive applications from the “right” SMEs. In HIT there are innovation managers and tech transfer managers who speak 50% of the time with researchers and the remaining 50% with companies, so they are not strictly academics and know how to speak with SMEs. They go to the company and do a periodic assessment. We know that usually the SMEs do not care about open innovation contests, but more about revenues etc. So, you have to sell the benefits of these programmes to SMEs and help them understand how it is beneficial for them to take part in these initiatives. When they send their application forms, they may be filled in in a very rough way and we accept them anyway. We filter companies which are not engaged enough, who do not have enough ambition or the bottom line capacity. We try to keep it as simple as possible, but we also want companies to develop.*
- *Are your programmes and activities open only to regional competitors or also to international ones? In your replication effort, do you do cross-national programmes? Formally the calls for selecting companies and solvers are open to people from outside the region, and possibly internationally. But we want primarily to impact on companies from Trentino and facilitate the knowledge transfer within the region, so we put selection criteria in a way that they facilitate the selection of regional players. As for international collaboration, the project 200 SME CHALLENGE was about replicating the UX Challenge in 7 countries, which we made with success, but again seekers and solvers were selected at a regional level because we wanted UX Challenge to impact on those local realities. But you can also open it up: in fact, the University of Trento is part of a Consortium of Innovative Universities (ECIU) and, in that context, sometimes innovation contests are launched locally, most of the time by City Councils and public authorities, and then international teams of students from all the universities of the Consortium team up and provide solutions to those challenges, but this is harder to manage. If you create challenges on a regional basis, it is easier and more practical: students can go into the company, visit it and share experiences, meet face to face with entrepreneurs. Not only is this more feasible, but also creates a greater impact.*

Start-ups: who to nurture | Rosemary Ward, South East BIC

Rosemary Ward discussed extensively the support that South East BIC offers during the whole start-up journey, and questioned how to select the potentially successful start-ups and how to nurture them. She emphasised the importance of quickly getting to the stage of having an MVP (Minimum Viable Product).

[South East Business & Innovation Centre](#) supports the generation and development of new innovative enterprises by providing tailored business consultancy services; it is active in counties Waterford, Wexford, Carlow, Kilkenny and Tipperary in the South East of Ireland. There are BIC headquarters in other parts of Ireland (Dublin, Cork, Galway), so as to cover the whole country. BIC supports early stage companies, existing SMEs, by working closely with other State supported Development Agencies across the country. It is also a member of EBN (European Business Network) of 200+ BICs across Europe.

[Rosemary Ward](#) is a Start-up Business Consultant at South East BIC, specialised in investment preparation, business planning, sales & marketing for high potential start-up companies in the South East of Ireland. She has a demonstrated experience in working in sales, marketing and consultancy, and strong consulting professional skills in Business Planning, Marketing, Sales, International business and Investment preparation.

South East BIC gets clients both at a local level from LEO (Local Enterprise Office) and at an international level from EI (Enterprise Ireland). Their goal is to get the client through a journey, to a point where it can receive early stage seed funding. At that point, they step away and the company is taken over by EI, through the upscaling phase and towards growth. BIC support start-ups through virtual and actual incubation, business planning and modelling support, by evaluating the projects at an early stage and helping them identify the right funding sources.

Despite political difficulties, the Climate Action and Low Carbon Development Bill were approved this year in Ireland, in order to support the country's transition to Net Zero and achieve a climate neutral economy by 2050. The bill put in legal form the binding framework and targets of EU Commitments. This puts into perspective the support that start-ups will receive in the future to improve their environmental impact.

South East BIC's main goal consists in supporting entrepreneurs, with a special focus on:

- The start-up journeys
- Who to nurture / who are the companies that have the greatest chance of success? Start-ups need to internationalise very quickly because they have no chance to scale if they limit themselves to trade only with Ireland, where the market is too small.
- How we nurture

Start-ups development phases

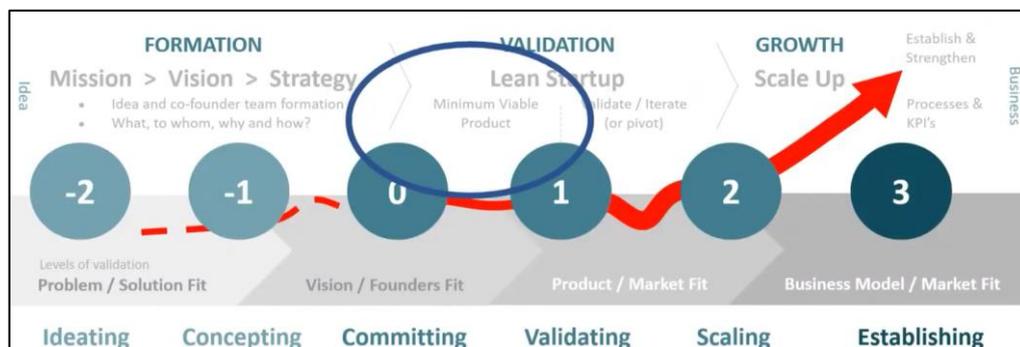


Figure 25: A business development model describing an idealised route from an idea to a business highlighting the key foci for attention at each stage

How does BIC support start-ups from the idea to the business, from concept to commercialisation?

The MVP (Minimum Viable Product) can be seen as a divide right in the middle of the start-up journey. BIC filter its clients through a “funnel” and the ones that manage to get to the stage of an MVP are actually the ones who succeed.

South East BIC target clients:

- Innovative start-ups. Entrepreneurs and scaling SMEs
- Referrals – EI, LEO, etc.
- Participants on the New Frontier Programmes, Accelerators, etc.
- Spinouts from Corporates or Institutes of Technology
- EI criteria for HPSU, i.e. companies that are companies which are going to scale, internationalise and grow to at least 1 Million € turn-over by their 3rd year in operation, employ at least 10 people, and have a clear path of export and growth and a scalable project.
- Climate action focus

The start-up funnel

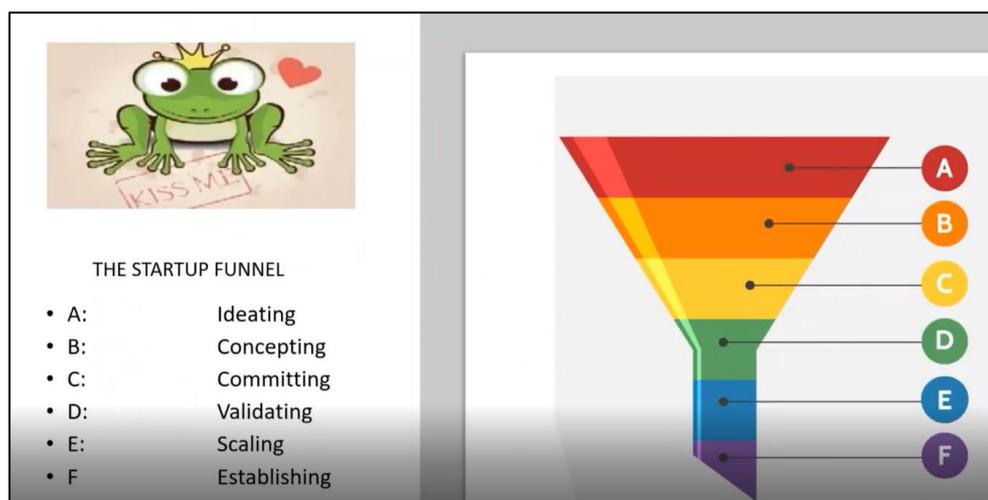


Figure 26: South East BIC’s start-up funnel used as a strategy for filtering opportunities at all stages

BIC has to deal with a lot of clients at the top of the funnel (i.e. ideation phase). In order to avoid consuming much time, it is very important to develop the tools and the skills that ensure to get quickly through the funnel. But before getting to the MVP trial with potential customers, it is necessary to filter the clients by testing them through specific tools, in order to identify who is going to make it down to the end of the funnel.

How to spot who will succeed?

Necessary features:

- Those who have done it before need to be specifically singled out, e.g. entrepreneurs who exited their previous companies and re-entered again. They jump in halfway through the funnel, as they know the pitfalls and accept advice and support.

- Teams, not individuals: when there is more than one founder, they are more likely to be founded because they are commercially focused and accept the go-to-market process. They are not solely technically focused, as can happen in the case of the single entrepreneurs.
- Commercially focused founders
- Developing a product/service that is responding to severe pain
- Deep domain knowledge, industry experience
- Strong advisor / network / board

Important features:

- Passionate visionaries, with clear experience
- Team builders, not just individuals
- Coachable people / listeners who will respond to constructive support
- Goal-driven doers
- Not afraid to sell
- Not afraid to work hard

South East BIC client journey

- Initial contact
- Business modelling
- Business planning / validation / pre-seed funding
- Investor readiness / seeking funding
- Seed funding secured

Formation: Ideation (A) + Concepting (B)

In this phase where there is a huge volume of start-ups: some great or OK, others are rubbish. In order to filter, they are put them through a process / homework as a way to understand who is truly motivated. The plan consists of facilitated sessions of business modelling using the Business Model Canvas and of value proposition design (pains/gains) with validated feedback from customers. Finally, there is a strategic intent phase (“what is this company going to look like in 3 years?”). Action plans come out from these 3 facilitated sessions. At that point, the MVP is still under development, but now the company is almost ready to have a validated product in response to a project, problem or idea.

Validation: Committing (C) + Validating (D)

Now that companies have their MVP, the challenges are:

- Building up the business model and testing it
- Getting the investment phase ready by preparing a financial and investment summary, creating and practicing the investor pitch
- Starting to enter the next phase of strategic planning

At this point, fewer and fewer clients remain on the journey and BIC now has a cohort of start-ups that will be brought to the end. Now the emphasis is on validation, customers and investor readiness preparation with a focus on commercial aspects.

Growth: Scaling (E) + Establishing (F)

- MVP testing is now complete and the first customers have been acquired. There is a great need of seed funding. Companies are now ready to pitch to potential investors.
- It's now time to scale.
- Start-ups getting to stage F are actually hiring, contributing to the Irish economy and to the labour force in Ireland, which is what matters most.

Questions

- *What is the survival rate of start-ups, from the start of the process up to 2 years after?* In general, it is less than 5%. But start-ups who participate in accelerators and incubation programmes have a survival rate that is 15-20% higher than those who did not work with BIC. This is a proof that programmes like BIC's really help.
- *Since the team is very important for start-ups, are there any team coaches / supporting programmes available?* Usually people do not communicate clearly, sometimes a psychological support is needed in order to fill-in the gaps in terms of lacking skills by matching different individuals, and to bring the team more rapidly through the funnel. Usually entrepreneurs come from the technology domain but do not know how to run a company, therefore incubators and accelerators need to invest in the business and provide commercial skills which are lacking. Start-ups need to know who they are missing in their team; which skills are not represented by the founders and need to be filled-up quickly. Team building is more for post-funded projects, after post seed funding.

Start-ups play to your strengths | Uriel Perman, KIC

Uriel Perman shared the history of the Kinneret Innovation Centre in Israel, in which a College of Engineering, agricultural companies and factories all cooperate. They also offer start-ups what they need, depending on their stage of development.

[Kinneret Innovation Centre](#) is an entrepreneurial community and innovation lab specialised in sustainability, in particular: Agritech, Food Tech and Water Tech. It started as part of an academic centre located in the North East of Israel, which is a rather peripheric and largely agricultural area with no big corporates and very few graduated students who stay in the area. KIC created the concept of "living lab" for the development of unique practical and profitable solutions to feed the world in a responsible and sustainable way. The Centre also offers a unique opportunity for early stage investments in qualified innovative Israeli technology companies and start-ups, especially in the agricultural domain.

[Uriel Perman](#) is Head of Innovation at Kinneret Agrotech Innovation Centre. He has a background in the high-tech industry; in 2014 he founded his first start-up in the fintech industry, which was then acquired 3 years ago. He started to contribute to more start-ups as a consultant and volunteering at the Kinneret Institute and in 2019 he became part of the founding team of KIC

KIC ecosystem includes:

- Academia
- Venture capital funds
- Technology transfer offices
- Accelerators and incubators
- Multinational companies

- Corporates
- Agricultural communities / cooperatives

This ecosystem helps entrepreneurs and start-ups to grow their business in the area through KIC platform. There are multiple players both in Israel and at an international level in the agrotech ecosystem. All those actors help KIC to build a customised solution for entrepreneurs / early stage start-ups, which fits their needs.

After 2.5 years in business, they met more than 300 start-ups all around Israel, prepared customised solutions for 30 of them and invested in 6 of them. 97% start-ups are in the agrotech food-tech sector. They also provide an acceleration programme.

KIC offers an example of how the community, corporates and academia can work together.

Questions:

- *KIC offers an opportunity for graduated students at the Kinneret Institute to remain in the area, take the information from the college and apply them to the agricultural community. Is that right?* On a regional perspective, creating a platform is not enough. For qualified students to stay in the area, they need to have jobs and high-tech industry. In our case, KIC aimed at is handling both sides: supporting students in becoming more innovative entrepreneurs, pushing farmers and cooperatives to innovation. Most traditional industries (and farmers are no exception) do not know to innovate and do not invest time in doing it. Both sides are treated by the KIC platform, which ensures to reach a tangible output from an idea and satisfy all the involved parties.
- *For people working with start-ups and trying to attract climate-related projects, what has been the most successful way to attract such projects in your organisations?* Each entrepreneur has different needs, according to the stage it is in. The most demanded resource for early stage start-ups is time. As long as you can provide some value proposition that can accelerate their process and do not waste their time, this is welcome by start-ups. As long as you create a platform providing value and accelerating the start-up process, you will attract them. Also having successful stories will help.

Environmental impact of start-ups: long-term VS short-term vision | Agnese Metitieri, Impact Forecast

Agnese Metitieri presented Climate Impact Forecast, an online tool which compares a baseline scenario of climate impact with the consequences of specific innovations within the start-up or company.

[Climate Impact Forecast](#) is a tool to help reduce the carbon footprint of business ideas in the start-up phase, which can be used by companies to calculate the CO₂eq. reduction potential of their innovation, and by incubators to evaluate and select start-ups they want to finance. The CIF training can be used by educational and entrepreneurial programmes to teach their participants how to innovate for impact.

[Agnese Metitieri](#) is one of Climate Impact Forecast trainers and a sustainability and circular economy consultant. She is also Project Manager and Communication Specialist at A.SPIRE, the European association committed to manage and implement the SPIRE public-private partnerships.

CIF (Climate Impact Forecast) includes a group of trainers scattered all over the world, who help start-ups and ecopreneurs measure and improve their climate impact, by making data open and available to everyone with an easy online tool, accessible workshops and impact expert 1:1 coaching and validation sessions, reports that can be shared, CIF showcase and pitching. It is a new opportunity for anyone interested in assessing the climate impact of their idea / solution, since impact is not easy to understand and it is difficult to implement solutions.

The structure is based on 3 pillars:

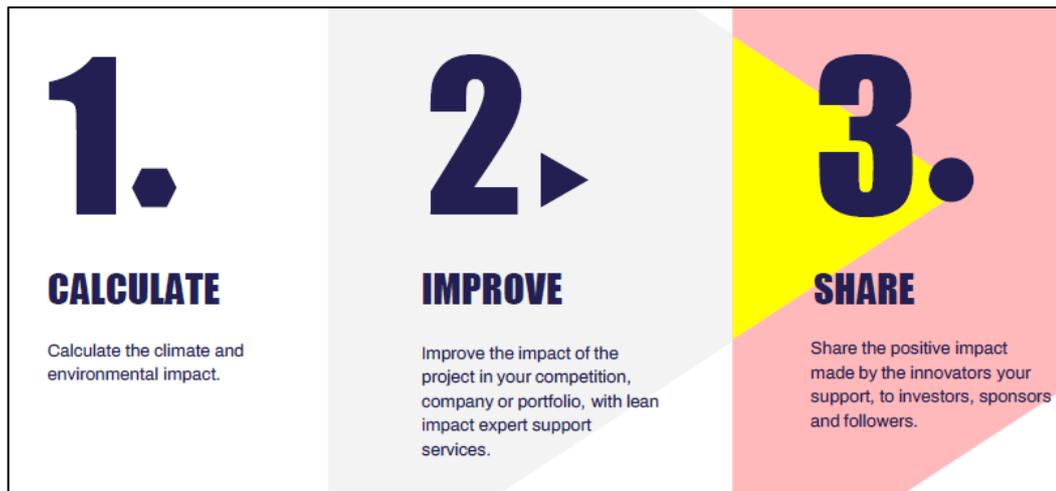


Figure 27: A schematic illustrating the 3-step model used by Climate Impact Forecast to identify and ameliorate the climate impact of any company, activity or project.

Entrepreneurs are thus made responsible for the calculation of their climate impact and for how to improve the solution proposed. They are also empowered to create a storytelling out of the impact they achieve, as numbers can be easily shared in applications and pitches.

CIF offers a number of cross-sectorial services for different TRL levels, or even for initial ideas around clean-tech solutions, for the different actors and goals of a programme:

- Impact hypothesis: the 1st step to be taken at an early stage when thinking about the impact of a specific solution: "What is the potential climate impact of this project in CO₂ eq?"
- Climate Impact Forecast tool: an online tool to calculate the climate impact of innovations at any stage of development. It is based on LCA³ and streamlined to make impactful decisions, with limited time and expertise. The tool is very visual, interactive, transparent and easy to

³ Life Cycle Assessment: evaluation of a product or a process or a service environmental impacts in their whole life cycle (i.e. cradle to cradle or cradle to grave).

understand, as it clearly shows what are the areas that can be improved. It also offers a measurement of eco-costs and resource depletion deriving from the application of a particular solution. This allows to give a quick feedback on a certain idea, and gives the entrepreneur the possibility to compare his idea to the current scenario. This CIF can be used with projects making climate impact in 3 different ways:

- Mitigation project, acting in their own system to cut CO₂ / GHG emissions deriving from innovation and business operations.
- Enabler project, where the start-up will act as an enabler: thanks to the start-up idea and the suggested strategies, it will be possible to reduce GHG emissions in another system.
- Adaptation project, which helps a community adapt to the consequences of climate change protecting people, assets and species.
- CIF workshop, where many examples on best practices are provided, helping entrepreneurs feeling inspired and empowered. They are also given the basics of LCA.
 - Demo webinar
 - CIF workshop
 - Impact pitch, a 2-hours meeting helping entrepreneurs to create the narrative to communicate the impact of their own concepts, ideas and products.
- Expert Coaching: either a 1:1 coaching session with a trainer who goes in depth with the client's CIF profile, or a coaching session enabling some peer to peer interaction. They provide both expert validation from the trainers and validation from LCA experts, assessing their CIF report.
- Expert validation or impact projection, which allows start-ups to go from the short-term to the long-term scenario, and this is particularly useful for start-ups who want to have an environmental impact
- Reports: application, programme, jury, impact.

CIF was originated in a Climate KIC session in 2015 and experienced a fast and organic growth. Its network of experts includes 26 experts worldwide, fluent in 12 languages, who offer guidance and expertise.

Questions:

- *Do you find a resistance to the idea of a climate impact forecast, which may show the drawbacks of an idea?* Usually entrepreneurs are eager to learn about their impact, as they assume they are acting for the best, but CIF gives them a hint that they are not acting as well as they think. They are given data supporting this assumption. These entrepreneurs are people who are already used to thinking about their climate impact, there are not many industries interested in forecasting for the sole purpose of green marketing.
- *Can I use CIF platform to say that my company uses half of the resources than my competitor, as a way to self-promote it?* Yes, climate impact metrics can also be used as an information to be given to potential investors, as they may improve the start-up reputation.
- *Do you include environmental factors other than climate change, in your impact forecast?* It is possible to assess other indicators (e.g. water footprint, soil consumption, etc.), but

currently the main focus of CIF is on CO₂ emissions and at the moment they are not calculating other indicators.

- *Is it possible to estimate cost saving through CIF platform?* On the platform you can come out with some eco-costs (expressed in € or in \$) linked to a reduced use of toxic material, so yes there is also an economic component.

3rd Twinning Meeting Report

The third Twinning Meeting was successfully held on the 22nd of November 2021.

TIMING	TOPIC	SPEAKER
11:00-11:10	Welcome and short presentation of I AM GREEN project. Introduction to morning session	
11:10-11:30	Irish Incubator UVP – from the customer point of view	Liam Dunne (Klearcom Ltd)
11:30-11:50	Irish Accelerator UVP – the offering	Aisling O’Neill (ArcLabs R&I Centre)
11:50-12:10	Workshop – I AM GREEN UVP: Defining together with the guests the IAG Incubator’s UVP	Moderator: Albert Schram
12:10-12:30	Cross-border partnerships for incubators	Annamaria Fiore (ARTI – IN-CUBA project)
12:30-12:50	Key activities of an Israeli incubator	Yishai Binnes (Labs/02)
12:50-13:10	Workshop – IAG Partnerships for High-Level activities strategy: Defining together with the guests the IAG incubator’s partnerships and main activities	Moderator: Albert Schram
13:10 – 14:30	BREAK	
14:30-14:35	Introduction to the afternoon session	
14:35-14:55	A sustainable model for an incubator	Eammon Sayers (Guinness Enterprise Centre)
14:55-15:15	Italian Incubator UVP – Mission Statement and Incubator’s DNA	Stefano Marastoni (ARTI)
15:15-15:30	Lessons learned: challenges in the way of a successful incubator	Eliran Keren
15:30-15:50	Workshop – IAG cost & revenue: Defining together what is the cost structure and revenue stream	Moderator: Albert Schram
15:50-16:10	Wrap-up of main results	
16:10-16:15	Goodbye and conclusion of the meeting	

The 3rd Twinning Meeting of the I AM GREEN project was hosted by Israeli Partner III – Israel Innovation Institute. The main goals of the event were:

- Analysing the feasibility and the sustainability of the business model of the incubator developed in the context of I AM GREEN.
- Identifying the best practices supporting the implementation of the model.
- Creating a Business Model Canvas template for the I AM GREEN incubation model, and envisaging a roadmap for its implementation.

- Carrying out a SWOT analysis and understanding how the model is positioned according to the result of the value proposition analysis.
- Collecting feedback for drafting the last chapters and the conclusion of the Design Option Paper.

The meeting included 7 interventions from different speakers distributed across various countries and 3 interactive and hands-on workshops to create the elements of the Business Model Canvas.

After an almost 12-months journey, the main objective of the 3rd Twinning Meeting was creating a BMC that represented the basics of the I AM GREEN incubator model. Partners and hosts designed together a value proposition which existed not only on writing, but also in terms of a sustainable idea, a project that could be spread throughout the channels of the EU, so that more organisations can adopt it and train their start-ups to become greener and more sustainable in their eco-system.

“Irish Incubator UVP – from the customer point of view”, Liam Dunne | Klearcom Ltd

[Liam Dunne](#) is the CEO of [Klearcom Ltd.](#) – a high-potential start-up client of EI. In his speech, he identified the main factors of success for a start-up from his point of view: a shared culture among the founders, fast execution, identifying the unknowns beyond key competences, the local element, creating confidence locally among customers and investors, finding suitable Partners.

Klearcom is a customer call path testing platform, whose AI based tool will analyse the full customer call path, benchmark performance and alert on every issue through the IVR (Interactive Voice Response) and network to the agent. The goal of the company is testing and validating IVR, detecting problems and identifying solutions to solve them.

Klearcom is a **business**, not just an idea. Since its origin, it was all about generating an income for the founders and the wider team, and ensuring a ROI for investors who contributed to fund the journey. The founder team included technical, economical and operational experience, but lacked a notion of what to do with all that experience. One of the major kicks was the **culture of the founder** within the team: the three founders liked to approach everything with a systematic mindset and wanted to understand the best approach for establishing a start-up. They have always wanted to participate in an accelerator programme.

What motivated us? **Families and dependencies** of the founders created the need to execute fast, and this is one of the cornerstones of their culture. The accelerator path they found in ArcLabs offered an intensive training programme and that was respondent to their needs, because it met the requirements of the family background. The main motivators were: the culture, the fact that everyone of us had a family to support, their (middle) age - that created the ideal conditions for the business to succeed.

They knew their core competences, the market, their technical capabilities and the needed operations, but they also knew that they needed to identify what these areas were, so that they could identify and cover the unknowns. They wanted access to the **best accelerators and knowledge**. Another key factor for wanting to participate in an accelerator was time: it was critical for us to **do it fast and well**.

Since the beginning of their participation, it was evident that they lacked experience in three main areas:

- Financial modelling (how to put a clear financial model in place?)
- Investors & funding (how to build an attractive proposition / pitch for investors?)
- Validation of proposition (everything they thought about the market was in their head, but no one had ever validated their assumptions).

These three factors are all **interconnected**. The key component in the accelerator experience was to learn fast and move on.

The end of the accelerator experience is also their **origin**. What was important for us was participating in a **local accelerator**, because they did not want to perpetuate the message that the only way to be successful was being located elsewhere. By choosing a local accelerator, they proved that three normal guys with a normal background, by learning effectively, can build up from an idea and create a company attractive for VC investments, which is now we working in the large export market.

During the pitch day organised by the accelerator, they partnered with the very first VC that answered to our request. They wouldn't have got their funding and their clients without participating in the accelerator and filling the knowledge gaps. For them, it is all about creating **high value jobs**, now they are a team of 11 people, all from the local area.

Questions and observations:

- *How did you decide to which accelerator to join? Which was your parameter?* The fact that it was local and that the learning course was effective, intense and condensed in a short period of time.
- I AM GREEN is a European project which investigates how it is to go beyond locally. It is important to create a culture of collaboration among start-ups, with the right access to the services, creating credibility also in terms of location in a particular headquarter (leveraging the brand).
- *How much information can be found externally?* Liam was quite aggressive in wanting as much knowledge as he could, so he rang everywhere and spoke to everybody because, at his stage in life, had had to make decisions as quickly as possible.

"Irish Accelerator UVP – the offering", Aisling O'Neill | ArcLabs R&I Centre and Incubator

[Aisling O'Neill](#) is the manager of [ArcLabs](#) R&I Centre and Incubator for the South East of Ireland.

ArcLabs exists since 2005, and is the **Business Incubator of WIT** (Waterford Institute of Technology), which is a University-level higher education institution located in the South East of Ireland. They got a grant from EI to expand their services, which gave them the opportunity to double their incubation spaces in 2019. It is co-located with the Waterford Institute and represents a unique **ecosystem of innovation and entrepreneurship**, bringing together research expertise, innovation, technology infrastructures, skills, business ideas, and the support needed to entrepreneurs with brilliant ideas to succeed and convert these ideas into thriving commercial businesses.

ArcLabs supports enterprises established in the area, fostering innovation and **creating high quality jobs to keep people in the South East region**. They take part in multiple initiatives and partnerships, to gather all the stakeholders able to make ArcLabs succeed and grow.

So far, they have incubated more than 70 companies, which proved themselves successful and contributed to make the South-East of Ireland a **cluster** of technology and software development, to develop the ecosystem and make it attractive for people to start and scale businesses. They had a number of knowledge-transfer projects, with innovation partnerships supported by EI. The ecosystem is formed by more than 400 scientists, engineers, researchers, entrepreneurs and professionals. EI New Frontiers programme was based in ArcLabs, showing the strong foundation in enterprise support. They also foster student entrepreneurship.

Challenges in establishing ArcLabs ecosystem:

- The concept of having researchers, academics and businesses together in one site in the same building was ground-breaking in Ireland and in Europe, so it was difficult to get government to **understand the concept** and support it.
- **Communicating** the ArcLabs concept and contribution to the wider innovation system was challenging, leading to internal and external issues in WIT in the initial establishment of ArcLabs, and sometimes the actual concept and work of ArcLabs still remains unclear. The uncertainty derives from the fact that sometimes coworking spaces classify themselves as innovation centres, further confusing the message.
- They do not get base funding; **all funding is won on a competitive basis** and this presents plenty of challenges. Now they are merging with another institute, hoping that this will give it further advantages.
- Given the separated location from other parts of the University, most lecturers and students do not know about ArcLabs / what they do.
- Local government do not fully appreciate the impact of ArcLabs and only recently started to ask for inputs to develop innovation in the region.
- In terms of sustainability South East BIC needs to work hard to build and maintain a strong community of Alumni a work in progress at this time. They have lot of support from EI and internal stakeholders, but ArcLabs is definitively a lean operation with only 2 staff members.

ArcLabs strategy:

- Foster a collaborative, creative environment among all these different individuals (researchers, entrepreneurs and academics) through co-existence and facilitated interaction.
- Be a leader in developing a regional system of Open Innovation, by addressing barriers to movement and sharing of Knowledge, Human and Capital Assets, and creating a cluster effect.
- Enhance the enterprise development support system from idea generation to investment stage. This is where the critical nature of the accelerator comes to play, as it needs investment and support.
- Interconnect ArcLabs concept with academic teaching and facilitate enterprise culture in academic programmes.
- Increase the capacity of the ecosystem through an expanded footprint, broadened input by alumni, stakeholders and advisors into governance and alignment with the strategic objectives of WIT.

It is very important for ArcLabs to engage with students and youth entrepreneurship, as a way to activate its capacity and also show people that there is a place to make their ideas real. (e.g. through Investment Prizes, Student Entrepreneur Award, etc).

It also engages in strategic networking activities, to connect with chambers, local enterprise offices, South East Development Office, South East BIC.

Enhancing the enterprise **development support system** from the idea generation to the investment stage. A key to entrepreneurial success is the landscape of support that works with entrepreneurs to validate the identified problem, define their market, ensure that they are actually answering the market needs and facilitate the development of the technology. This is done by ArcLabs through a number of different programmes, which bring in people who are interested in participating to some kind of experience, such as an acceleration programme. They activate ideation bootcamps, pre-accelerator programmes, enterprise development programmes, accelerators and access to the Technology Gateway knowledge and infrastructure. There is also the regional Accelerator NDRC, which was based in ArcLabs in 2018-2020 with 22 ventures supported (among those there is also Klearcom).

Fundamental National programmes of support → **EI Technology Gateway Programme**, which delivers innovation expertise and solutions for Irish industry. WIT hosts 3 technology gateways, one of those is co-located with ArcLabs with the aim to investigate futuristic next-generation technologies, verify their capabilities and applicability in today's society, and work in collaboration with industry to ensure their commercialisation. Through these gateways, industries can access the infrastructure and the knowledge of the Institute (as a way to de-risking innovation and have access to very interesting technology). Other opportunities are **innovation vouchers and partnerships**, as a way to work with companies of multiple projects using the support of EI.

In terms of the regional system of OI in the South East of Ireland, **ArcLabs is a leader in developing a regional system of OI** by addressing barriers to movement and sharing of Knowledge, Human and Capital Assets, as a way to fill the skills gap and ensure that we have an interesting ecosystem and so many companies that are operating and active in promoting the region.

Questions:

- *How do you differentiate the projects that come in to be evaluated? What are the key differentiators that you have learn over the years that differentiate ArcLabs from all the other innovation centres?* The key is the getting the outcome right, and being able to tell the story of the ICT ecosystem that has developed in the South East. The fact that we have built this foundation of companies based here, and a baseline of talented professionals, the fact that the centre developed sustainable employment opportunities for the region is the key thing that shows why ArcLabs needs to continue to do the work that has being doing because that can only grow. The key is providing real solid examples of employment that has been created in high valued jobs, as a result of the ArcLabs initiative and activity.
- *What is the value proposition of ArcLabs?* By being based in this area, you will have access to entrepreneurship programmes, world-class academic researchers, industry-focused innovators, the technology infrastructure to help de-risk the development of technology, you will be part of a Community with a connection to EI and to the regional stakeholders. Creating this is very valuable for entrepreneurs.

“Cross-border partnerships for incubators”, Annamaria Fiore | INCUBA project

The third presentation was made by [Annamaria Fiore](#), leader of the [INCUBA project](#) and Lead Economist for the strategic area “Economic Research and Statistical Information” at ARTI – the Regional Technology and Innovation Agency for Puglia Region.

ARTI is the strategic Agency of the Apulia region for Economic Development, Innovation, Education, Training and Employment. Operative since 2004, as a public entity it has several institutional functions, by covering the whole policy cycle for innovation and education.

Some figures about Apulia region:

- About 4 million inhabitants
- GDP per capita is about 18,2 k €
- High unemployment rate (14%), especially referred to young people and the NEET phenomenon
- Export is about 2% of Italy with the leading factors being means of transport, pharmaceuticals and agrifood, the core of the INCUBA project.
- 632 innovative start-ups + 106 innovative SMEs

Among ARTI’s activities for Apulia region, there is the participation in many European projects. INCUBA project is financed by the Interreg Greece-Italy programme 2014-2020 under the priority axis “Innovation and competitiveness”. The goal of the project is to **support enterprises of the agrifood sector through the provision of innovative services for new entrepreneurs, especially young ones, in Puglia and Western Greece regions**. One of the main goals of the project was creating **cross-border partnership between incubators**, in order to offer training and counselling support services for start-ups, but also to develop and ideal business model for collaborative ideas.

Main activities of the INCUBA project:

- Creation of a new model of incubator, as a result of participatory workshops, sharing of experiences / best practices / competences among innovative actors (cross-border innovation network).
- Application of the new model to the two existing agrifood incubators (in Patras and Bari), in order to support them through the activation of new ICT services and tools for the creation and internationalisation of start-ups through an incubation process.
- Elaboration of recommendations to strengthen young entrepreneurship policies, especially targeted to young people who want to become entrepreneurs in the agrifood sector, which drew on all the data, information and suggestions collected throughout the project. → **Evidence-based approach** with different methodological steps, both participatory and analytical. They considered especially qualitative data and fostered the discussion among Partners and stakeholders; but they also developed some analytical activities: benchmark analysis between different incubator models, data collection in the agrifood sector, innovation business survey launched online.

Analysis of Start-up Ecosystem in Europe > Despite a growing attention towards innovation and business creation process, start-ups development in Europe still has a very low impact on employ-

ment, especially when compared with the same ecosystem in the US. Mainly due to the lack of structured private investment funds which leads European public policies to “force” the development of business creation through financial support and grants.

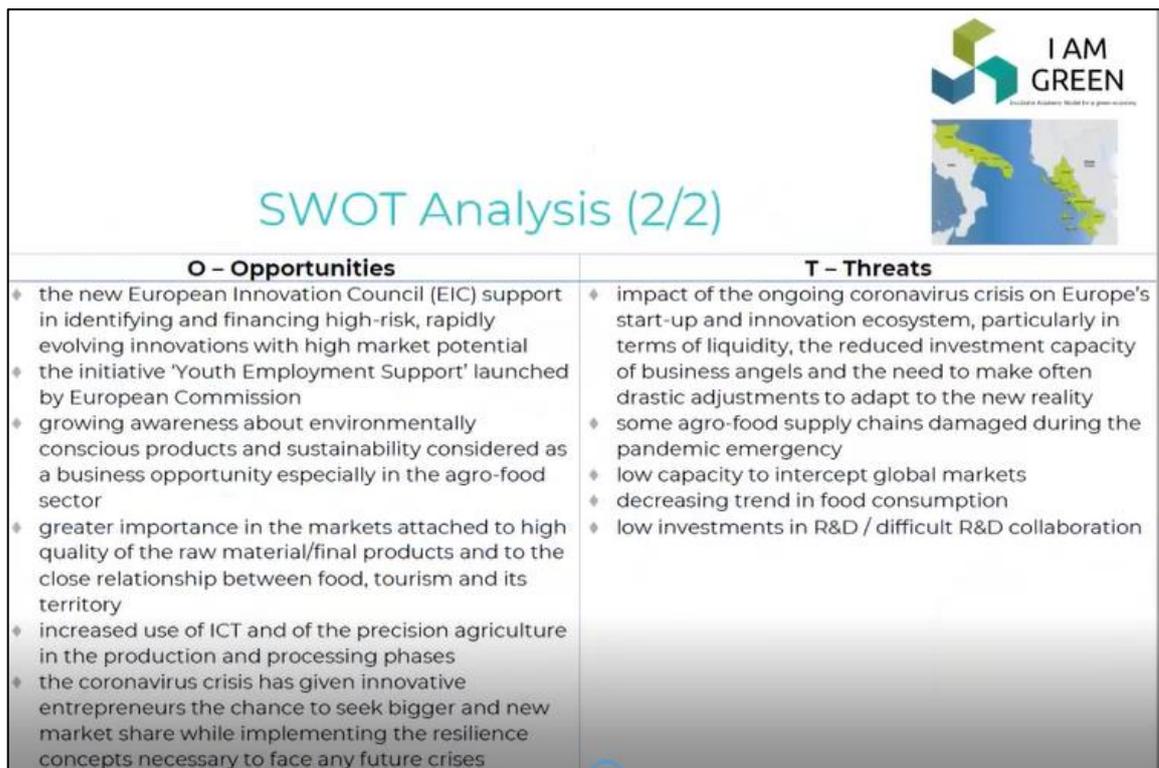
5 main challenges for European Start-ups:

1. Europe is not a single market
2. Lower supply of late-stage capital, meaning that there is more fund from pre-seed and seed phases for the start-ups, but not so much for the later stages.
3. Lack of pervasive business culture, and difference in how failure is considered: in the US it is natural to do a lot of entrepreneurial activities, and failure is part of the game.
4. More difficulties in attracting talents.
5. Low concentration in terms of capital, knowledge, talent in the innovation “super hubs”.



SWOT Analysis (1/2)

	S – Strengths	W – Weaknesses
	<ul style="list-style-type: none"> ◆ high participation rates in tertiary education (13.9%) ◆ high employment rate in agriculture (21.2%) ◆ high technology and knowledge-intensive occupations concentrated in agriculture sectors (27.4%) 	<ul style="list-style-type: none"> ◆ NEET (23.7%) ◆ modest contribution to national GDP ◆ low employment rate (50.1%) ◆ high long-term unemployment (17.5%)
	S – Strengths	W – Weaknesses
	<ul style="list-style-type: none"> ◆ high share of agricultural services offered on the total agricultural output (11%) ◆ high birth rate of enterprises and of relative survival rate (after 3 yrs.) ◆ good growth rate of employment in manufacture of food products sector (3.3%) 	<ul style="list-style-type: none"> ◆ low participation rates in tertiary education (2.2%) ◆ NEET (33.4%) ◆ modest contribution to national GDP ◆ low employment rate (45.5%)
		



O – Opportunities	T – Threats
<ul style="list-style-type: none"> ♦ the new European Innovation Council (EIC) support in identifying and financing high-risk, rapidly evolving innovations with high market potential ♦ the initiative 'Youth Employment Support' launched by European Commission ♦ growing awareness about environmentally conscious products and sustainability considered as a business opportunity especially in the agro-food sector ♦ greater importance in the markets attached to high quality of the raw material/final products and to the close relationship between food, tourism and its territory ♦ increased use of ICT and of the precision agriculture in the production and processing phases ♦ the coronavirus crisis has given innovative entrepreneurs the chance to seek bigger and new market share while implementing the resilience concepts necessary to face any future crises 	<ul style="list-style-type: none"> ♦ impact of the ongoing coronavirus crisis on Europe's start-up and innovation ecosystem, particularly in terms of liquidity, the reduced investment capacity of business angels and the need to make often drastic adjustments to adapt to the new reality ♦ some agro-food supply chains damaged during the pandemic emergency ♦ low capacity to intercept global markets ♦ decreasing trend in food consumption ♦ low investments in R&D / difficult R&D collaboration

Figure 28: SWOT analysis of the innovation ecosystem and start-up environment in the two regions considered by the INCUBA project: Apulia (Italy) and Western Greece

Apulian entrepreneurs' innovation needs: launch of an online survey to investigate the ecosystem in Puglia:

1. Description of the core business
2. Relative importance of 19 different innovation needs
3. Specific innovation needs for agrifood start-ups
4. Most effective modalities to meet the innovation needs
5. Proposal to strengthen regional policies in support of youth entrepreneurship

The survey was also important to know the innovation needs of young entrepreneurs in the agrifood sector in Apulia, the most important ones being financial aid and marketing solutions.

6 main recommendations at the end of INCUBA project:

- **Strengthening the ecosystem:** from the policy point of view it is important to reduce the networking costs between stakeholders and increase the capacity building, in order to create the critical mass and an opportunity for contamination effects and spill overs between projects.
- **Rationalisation and promotion of various initiatives,** through a well-structured value chain supporting the start-up ecosystem, but also by aggregating all information about support measures and policies (now they are available in multiple sources and it is difficult to collect them all). For example, they noticed that there a lot of measures supporting start-ups in the early phases, but not so many in the late stage, so policies must be rationalised.

- **OK incubators, but also look at the accelerators.** They are not the same, and there a lot of incubators, but not so many accelerators in Apulia region. Accelerators must be developed, with a special attention to laboratories and HR: Technological evaluation and validation of new business ideas; from proof of concept to intellectual property; infrastructure adequacy; skills for mentors and coaches (“train the trainers”).
- **Customisation of policies, as start-ups have different needs:** differentiated funding strategies, already implemented policies must be carefully evaluated, a sustainable follow-up of the initiatives.
- **Entrepreneurial culture must be reinforced,** with a strong training in risk management and global entrepreneurial education, but also in “execution competences”, e.g. by including it in University curricula.
- **Reinforce internationalisation and linking local products to tourism,** e.g. through joint actions to encourage the Mediterranean nutrition and a focus on the production of local products.

Questions:

- *What were the main outcomes of the innovation needs survey?* It was important to understand the real need of the entrepreneurs, as a way to advance recommendations for policies supporting them.

“Key activities of an Israeli incubator”, Yishai Binnes | Labs/o2

[Yishai Binnes](#) is Senior Associate at [Labs/o2](#), an early stage venture-capital and incubator backed by OurCrowds and Reliance Industries. In his intervention, Yishai stressed the importance of local specialised knowledge for creating cutting-edge, high value companies.

Labs/o2 is a VC and government incubator, which actively invests in **cutting-edge technology** succeeding in shaping the future. To do this, it invests in a lot of different kinds of companies, and in outstanding and highly motivated founders, and leads them with a hands-on, **mentorship-driven approach** that creates significant underlying value. The incubator’s programme is designed as a boot-camp, to help founders jumpstart their companies towards success. Labs/o2 differentiated approach leverages **government money** on top of its investments to provide highly accretive equity value to its stakeholders. One of its branches is specifically dedicated to **cybersecurity in healthcare** based in Be’Er Sheva (South of Israel), which looks at the technology that can be productized.

- Labso2’s team has significant expertise in successfully utilizing government incentives as part of a seed investment.
- Labso2 benefits from a special government license intended to support deep technological development.
- The license provides up to **85% leverage** on the investment in the form of a non-dilutive grant. However, Labso2 investment is larger. Given to the kind of technology they invest in, Labso2 also raises an additional fund. The government does this because it is considered a really good way to create deep technology companies and bring them to market.

The kind of companies Labso2 invests in is cutting-edge and has a **very high-risk level**, which means that it is difficult for them to raise funding, and it is where the **IIA (Israel Innovation Authority)** focuses its attention. Whether the start-up fails or succeeds, the result will be a set of knowledge that will continue to exist within the country and that, otherwise, would be very hard to develop and to get private funding for. The idea behind the companies Labs/o2 invests in is that they create an **ecosystem of knowledge**. For Labs/o2, it is a win-win situation: in terms of private sector, they invest in companies that are going to be very successful thanks to their significant technological differentiation, that are difficult to emulate but at the same time very risky.

Focus areas, which answer the IIA's requirement of bringing up the technology that is new on the market.

- Big data
- Analytics
- Neuroscience
- Cyber
- AI
- Digital health
- Computer vision
- Quantum

Labs/o2 looks for **partnerships with industry leaders**, and also have 2 key institutions: [Reliance Industries](#) and [Yisum](#). This kind of partnerships means that a lot of value can be created for start-ups, which will have a lot of potentially interesting collaborations, and an insight into what organisations at this scale are looking for. When they make their investment, they have a direct line with the **Academia**, as they help productizing academic knowledge. We help PhDs understand and refine their ideas, identify the markets where they can bring it on, what parts of that technology need to be perfected, help them establish and launch their company. [OurCrowd](#) has connections with multinationals all around the world.

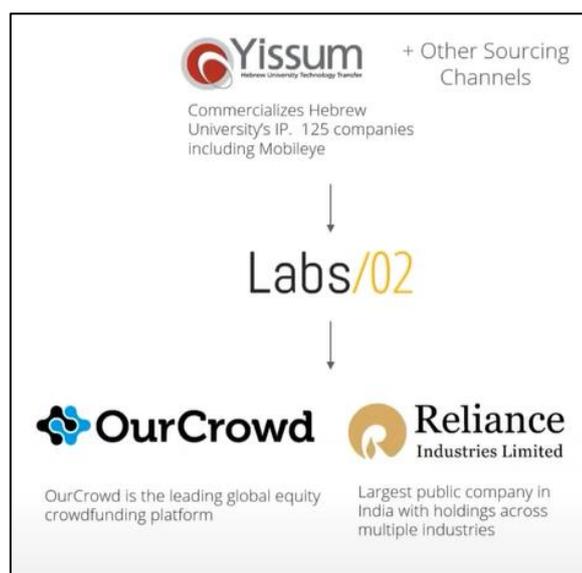


Figure 29: A schematic outlining the structure of Labs/o2 and its immediate ecosystem

These Partnerships make clear that the role of an incubator is to **bring the money, foster production, and help new companies come to market**, support them in the journey on build their business network, and find investors.

Labs/02 is managed by a team of veteran entrepreneurs and industry specialists with international experience.

Since starting operations in late 2017, Labs/02 has already invested in 17 companies, which are exactly the types of investment the incubator was created for: deep-tech platforms with extraordinary founders, providing innovative solutions to real world problems (more than half of them are from Academia). It anticipates investing in 6-8 companies per year.

Questions:

- *I'm interested in how you can put government funding in a non-diluted sense into such early-stage start-ups. If you can support start-ups at this level, how do you publicise what to do? And when they come to you, how do you not discourage them?* Nothing is too early, provided that it meets our basic criteria of deep technology. We help companies coming to us without a very clear idea, but a strong technology in mind, with a vision we really believe in and a market that is suitable for this structure, and we will help them finding the right technical team and in the overall journey of ideating the company.
- *Do you take a stake in the company?* We take an equity stake in the company, but it is up to the incubator. Right now, in Israel the innovation ecosystem is experiencing an enormous growth, and even early stage companies find it easier to raise capital than in the past. The IIA is now trying to make the incubators relevant, keep them on track on what they want to do. Now they are letting incubators invest without the set amount of equity. In the past, the company and the chosen incubator needed to be located in the same area, now it is no longer like this because the goal is to create new areas that have some kind of innovation flavour all over the country. But now, after the Covid pandemic, they changed the incubator model so that now you can work from anywhere – it is no longer necessary to work from the incubator offices.

"A sustainable model for an incubator", Eamonn Sayers | Guinness Enterprise Centre

[Eamonn Sayers](#) is the Manager at [Guinness Enterprise Centre](#), one of the largest and most successful innovation centres in Ireland. GEC was named n°1 University associated business incubator in the world in 2018-19 (**UBI Global**). Governance-wise, GEC is a not for profit. In mid-1990s, they started making people redundant, so it started speaking with some of the stakeholders and they moved the headquarters from the city centre to the storehouse where it is located now.

Current stakeholders: **Enterprise Ireland, Dublin City Council, DIAGEO, Dublin BIC, Local Enterprise Office**. They all contribute to the implementation of an innovation hub, which helped the creation of more than 3000 jobs.

Enterprise Ireland ran a programme called **Regional Enterprise Development Fund**, which invested in several hubs all across the country and in start-up initiatives one a regional basis. GEC was on of the winners in the 1st round of RDEF. They got a fund from EI and other governmental public initiatives,

which were used to make the building where GEC headquarters are located more sustainable from a climate point of view.

What makes GEC different from other hubs, is that GEC focuses on **creating your own private space** – while most other hubs across Europe involve open-plan spaces, GEC believes that companies need to start creating their own culture from earliest stages. So, they focus on creating the best environment for entrepreneurs to attract good people to join their company. They can create their own culture beyond their own front door, but at the same time they can be part of the community at GEC. If a company is still co-working after 6 months, they need to justify GEC why they are. They believe entrepreneurs need to **work full-time on their own company** at a certain stage, as a way to encourage entrepreneurship. As soon as a company reaches more than 10 people, they have to leave GEC. The average staying at GEC is 2 years and 10 months, and they have an internal policy that if a company stay there for more than 5 years, they will have to pay a 10% addition on market rates – as a polite way to encourage companies out of the building.

Home to:			
	Companies	Co-Working Companies	Number of Employees
Existing	85	130	400
New	75	90	350
Total	160	220	750

Figure 30: The Guinness Enterprise Centre in numbers

GEC aims at enabling 1500 direct jobs in the inner city (a relatively deprived area of Dublin) in the next 5 years. GEC encourages more and more of its early stage companies to establish their location in that area, in order to contribute to its development and upgrading.

Partnerships and collaborations



Figure 31: The Guinness Enterprise Centre ecosystem

GEC has been involved in the start-up ecosystem not just in Dublin and in Ireland, but also across the world. They are also getting more and more involved with industry, since when they upgraded its building and made it more suitable for working from there. They are also engaged with Academics.

When they talk about companies in GEC, they run 3 monthly programmes:

- **Founder meet-up / leadership groups**
- **Tech meetings** where CTOs join together and talk through the challenges they are facing
- **Sales and marketing meet-up**

GEC works close with **government agencies** and is also involved in the local community.

In 2017, GEC started a programme where it partnered with companies and hubs across Ireland so that they can all get access to the same services as start-ups, and this initiative went very well. They also extended this programme was extended internationally, with **regional partnerships** with other hubs. The idea is that partners can have access to Dublin-based programmes, without being physically in the city.

They also partner with **top-level universities** globally, primarily at MBA level so that students can take up the business challenges encountered by start-ups in their everyday administration: e.g. from the design of a pricing strategy, to an analysis of the competitors, to internships programmes. The next stage is to extend that University programme into other colleges.

GEC has a team of **7 people** at the moment, very focused on their costs being kept at minimum so that they can provide significant value to their clients.

Currently the GEC is working on multiple projects:

- Making their building more sustainable
- Becoming Ireland's circular economy hotspot
- MOU with St. James's Hospital for creating an innovation centre at GEC (digital healthcare companies – with companies being able to create their own wet labs, working directly with medical schools within Universities)
- Corporate Innovation teams that can be placed on-site at GEC headquarters.

Video: <https://www.youtube.com/watch?v=PvXeRgKHLgE>

Questions:

- *One of the things we were talking about in the I AM GREEN project was setting up an incubator – which is different from running it. What advice do you have about establishing an incubator that has longevity?* For us, it is about creating the best environment for an entrepreneur in terms of financial resources, and you also have to create a culture allowing you to manage your resources better. Ask each entrepreneur in the building: "How can we help you?" is the starting point, an open question with a lot of positivity in it. It is more about building a strong relationship with entrepreneurs, than getting financial support.
- *What additional value does having a certain corporate structure, being part of the GEC, for the start-up community?* The environment in itself, the involvement of entrepreneurs from large companies (Coca Cola), mentoring programme for some of our start-

ups on supply chain and how to market your product, financial help. Working with large companies the problem is that – if they take you on – they want to take you on globally.

- *How do you manage the partnership with large companies and the peer-to-peer learning / how do you promote the culture internally?* Entrepreneurs meet up monthly and there are several leisure activities entrepreneurs are engaged in, aimed at promoting social interaction and networking, creating a community, regular visitors (academics, government delegations...), making introduction to people on a constant basis is part of their culture.

“Italian Incubator UVP – Mission statement and incubator’s DNA: the ‘Talents Mining’ case”, Stefano Marastoni | ARTI

In the last 14 years, [Stefano Marastoni](#) has held the position of Senior Economist in the area of technology transfer policies at ARTI (Regional Technology and Innovation Centre for Puglia region in Italy). Established in 2004, ARTI supports the regional government in designing and managing economic development, innovation, education, training and job policies. In particular he focuses on the initiative “Talent Mining” through which ARTI funded customized paths supporting teams of aspiring entrepreneurs in multiple innovation areas.

The main goals of [ARTI](#) are:

- Analysing the regional context from a socio-economic and innovation point of view
- Policy-making proposals
- Animating the territorial development
- Managing innovative tenders and international projects
- Monitoring and evaluating regional policies and measures

How the “Talents Mining” intervention originated

Public investments in innovative start-ups and University spin-offs in Puglia region started in 2005 and saw a rapid growth, with ARTI designing and managing several of these actions. During the implementation of these support activities for innovative entrepreneurship, they found **common criticalities among start-ups**, which are linked to insufficient execution capacity of the entrepreneurial team, to difficulties in establishing business alliances, and to the deficit of risk capital and connection with investors and industrial partners. Therefore, support based on entrepreneurial know-how skills and human capital within the team was much needed. Moreover, they also found **structural weaknesses on the supply side (services for innovative entrepreneurs)**: e.g. the scarcity of services for business incubation and acceleration in Puglia, especially if the number and the quality of start-ups originated in the territory is considered. There is also insufficient integration between the skills in the local incubators and those present in the most advanced entities at a national and European level.

Call for Factories

On the basis of the context analysis and the criticalities of Puglia start-up system, the Talent Mining was developed within the **European Social Fund**. The goal was to select the best skills in the field of entrepreneurial support / business incubation and acceleration, by integrating the skills present in the Apulian incubators with those operating outside, and by attracting to Puglia the most qualitative service providers. Thus, they launched an **international call to establish PPPs (“Factories”)**, which had

to demonstrate they were qualified in the field of entrepreneurial support, and be available to establish their headquarters in Puglia.

Call for informal entrepreneurial teams

The goal was to **select the best teams of aspiring innovative entrepreneurs, to guide them towards the market** and offer a support over a 3-year period (2019-2021). To do this, ARTI aimed at discovering new local entrepreneurial talents, and attracting aspiring Italian and European innovative entrepreneurs to Puglia, in order to strengthen the capacity of the regional system. For this reason, the call was open to actors from all over the EU. The suitable Teams were provided with personalized entrepreneurial support courses (300 hours); they also had the opportunity to choose the Factory they deemed the most suitable for their goals, and they undertook the ethical commitment to set up their business in Puglia. The intervention provided for a total customization and differentiation of the paths based on the need of the Team and the stage of maturity of the entrepreneurial project.

Before starting their entrepreneurial support path, each team received a screening to evaluate the maturity stage of their business ideas. This allowed the factory to establish a personalised path for each team. In practice, Factories drew up a plan of activity consistent with the proposed business idea and the outcome of the screening.

Experimental activities:

- Cross-contamination event with the Teams involved in the various stage of the Talent Mining initiative, with the goal to foster networking and lay the foundations for creating possible entrepreneurial synergies.
- Business matching initiative with the Teams, in order to facilitate the meeting between supply and demand of innovation between companies and start-ups, with a focus on open innovation.

Some final thoughts:

- ARTI transferred an international standard delivered by private business incubators & accelerators to a public measure, despite regulatory and administrative difficulties.
- They ensured the maximum customisation of the services provided.
- The management of actions and documentation produced, and the checks carried out took place at “zero paper” through a web platform.
- They adopted a solution of standard costs and simplified reporting acquired by relevant legislation.

So, the Talent Mining action was born, which can be placed in the 1st segment of the **chain to support innovative Apulian companies**. Puglia region prepared a real chain of regional public measures to support new business projects, coordinated with each other and providing specific support to each stage of maturity of the entrepreneurial project:

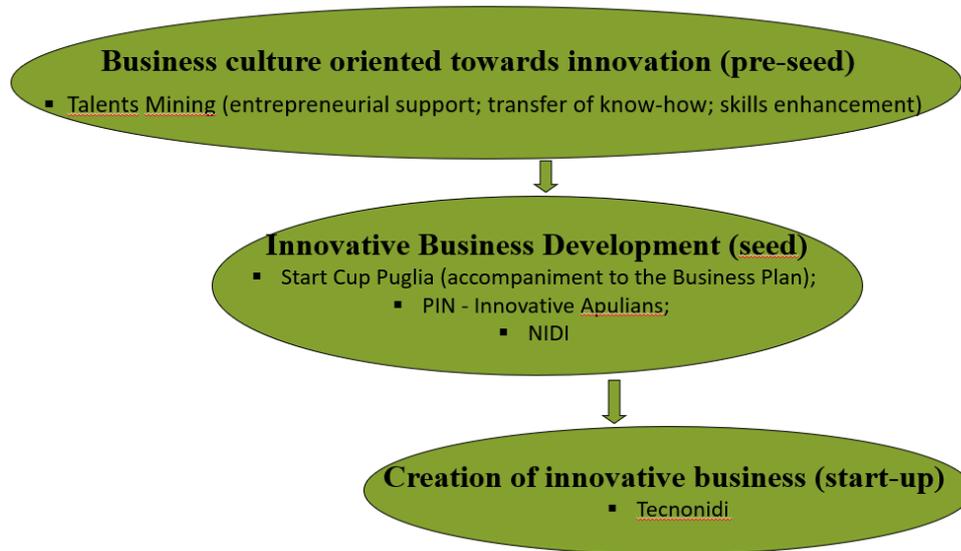


Figure 32: A schematic presenting ARTI's Talent Mining start-up strategy

Questions:

- *It is very interesting and you seem to have a long-term vision of what needs to be done. Has the strategy or the specialization of any of the factories changed over the period? In Puglia there 3 strategic areas related to Smart Specialization Strategy (S3): i) Sustainable manufacturing, ii) Human health and environment, iii) ICT and digital. We ensured that the public investment would be very strong in the future. These general long-term goals remained the same over the period.*

“Lesson learned – challenges in the way of a successful incubator, Eliran Keren

The final presentation was made by [Eliran Keren](#), who stressed the importance of having an overarching strategy and making choices for specific areas, and who also touched upon many successful examples of innovation agencies and experiences in Israel. Eliran is a serial entrepreneur, specialised with the thick line between tech-innovation-business, with over 15 years of experience; he has a broad experience as a senior economist with an emphasis on financing projects, and is well practiced in corporate innovation initiation and building innovation centres and accelerators for early-stage entrepreneurs. He is CEO and founder of [3PEL Ventures](#), holding management group investing and working with super talented companies. He was the general manager of an impact fund aimed at spreading the start-up nation of Israel.

He talked about **incubators in Israel** and gave some examples of the initiatives he was involved in in the last 2 years, during this impact fund lifetime, the difficulties and the takeaways he learned from this.

Innovation vs. **disruptive innovation**, which is a way of thinking Israel is very proud of. In the Israeli dynamic innovation ecosystem there are 7000 start-ups, 300 accelerators and 650 investment funds and organisations. It is estimated that a start-up is established every 6 hours, and a start-up stops operating every 7 hours.

Israel is experienced with initiatives and innovation activities and is located in the very high ranks with some indicators, such as: high-tech density, concentration of researchers, quality of scientific research institutions, investment per capita in R&D, collaboration between academia and industry. There are a lot of reasons for that, with the **Israeli government** being a key player in the ecosystem, and the existence of a lot of funds targeting untapped and high-risk markets (agriculture, bio-convergence, digital health, etc.).

Israel ranks **3rd (out of 137 countries)** in the global innovation ranking.



Figure 33: A summary of the major pillars of the Innovation support in Israel

From 2008 to 2018, there was a huge change in the world from more conservative industries to software companies, and this is very familiar to the Israeli ecosystem.

What makes Israel successful? An **innovation ecosystem** made from the effective combination of the following factors:

- Start-ups
- Academy & Education
- Government and public organisations
- Investments & Funds, concentrated in the big cities such as Tel Aviv. We want to find a way to make them operate also elsewhere – as we noticed that start-ups are attracted to the areas where there are more investments.
- Growth Companies
- Multinational companies
- **Local clusters** (security forces, hospitals, industries). This is the most important point, as every region should ideally have its local cluster. If you operate from a place where there are a lot of old / traditional industries, this would be a good place to start with new industries, such as: cybersecurity, IoT, AI, etc. All those buzzwords can be implemented and operated in traditional industries.

Israel is characterised by the presence of different thematic clusters in the **Tech Landscape** – as different expertise was found in different areas of the country:

- Artificial Intelligence
- Fintech
- Cybersecurity
- Transportation
- Industry 4.0
- Digital Health
- E-commerce
- Food-tech
- Agritech
- Communications

Incubators Program, funded by the Israel Innovation Authority, which represents a success story as the Israeli government allocates investments that are 6 times those of the private companies. These funds are targeted to a place that needs to be incentivised.

KKL TECH – Innovation Tech Network

Its main purpose was integrating the periphery into the “Start-up Nation”. The innovation ecosystem, in fact, mainly operates from Tel Aviv (90% of the start-ups are located there). This brings demographic and sociologic problems, economy issues and unbalanced spread of success, and we want the periphery to be part of the innovation explosion.

So, they made the Food-tech cluster in the Northern region (Galilee), Medicine in the Western part and Agritech / Biotech in the South-West, Defence and Cyber Industries in the Southern region.

The KKL TECH approach was built in order to achieve double impact along live circle and touch all those aspects, starting with local clusters and abilities & opportunities: Settler (on timeline between education and employment); Employer (on timeline of size and life-cycle of the company).

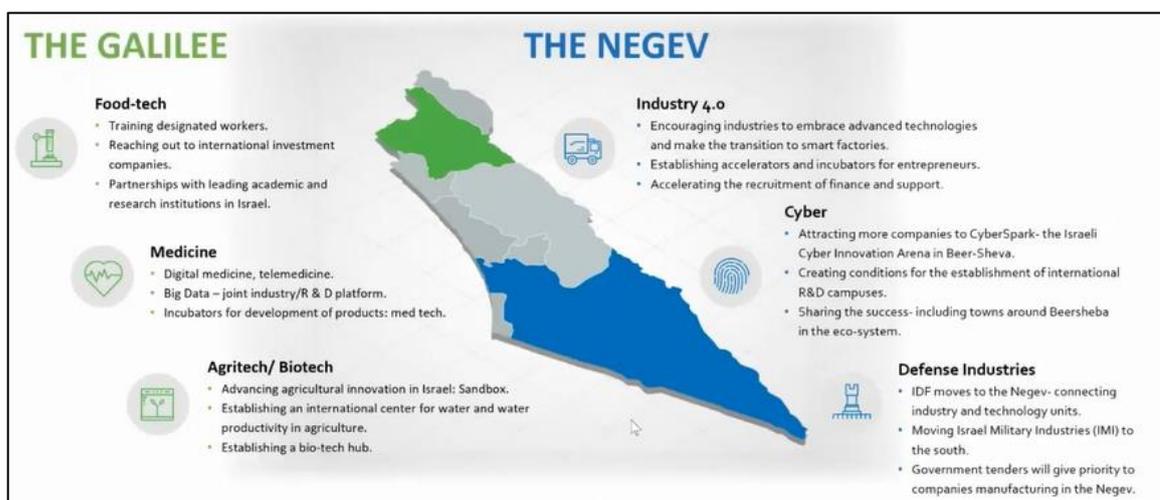


Figure 35: A cluster map of Israel outlining regional industry specialisation within the country

The key success factors of KKL TECH are, showing that you can bring **money + talent + access to the market**, which are the three key issues start-ups look for most often:

- Right location
- Academy/ Industry partners
- Lot of weight to the Management Team, with deep understanding of technology
- Theme / Clusters
- Education
- R&D
- Acceleration Programs
- Co-working space
- Development centres
- Impact investment funds

Examples:

- Be'Er Sheva Innovation Hub: big but isolated city in the South of Israel. Now there are more than 250 start-ups, helped by this innovation hub with 3 cluster: Desert-Tech, Digital Health, Cyber Security. Also, the Government is an important key player in this ecosystem, fostering a positive impact of these start-ups (especially in the cyber security sectors).
- KIC (Kinneret Innovation Centre): Israel's leading tech-hub for agriculture, water and sustainability. It is located in the North of the country.

The map of incubators in Israel: small country, lot of activities and a lot of incentives. A national and strategic coherent approach is something all countries are in constant need of and should look at this example.