eit Manufacturing

Co-funded by the European Union

DOCTORAL School

Innovation & Entrepreneurship Program in Manufacturing 2022 - 2023

EIT Manufacturing Doctoral School

Business Creation track

Year 1:
How to develop a business idea
April – December 2022

Year 2:
How to validate a business idea and prepare for a launch
April – December 2022

DOCTORAL School

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At a glance

DOCTORAL School

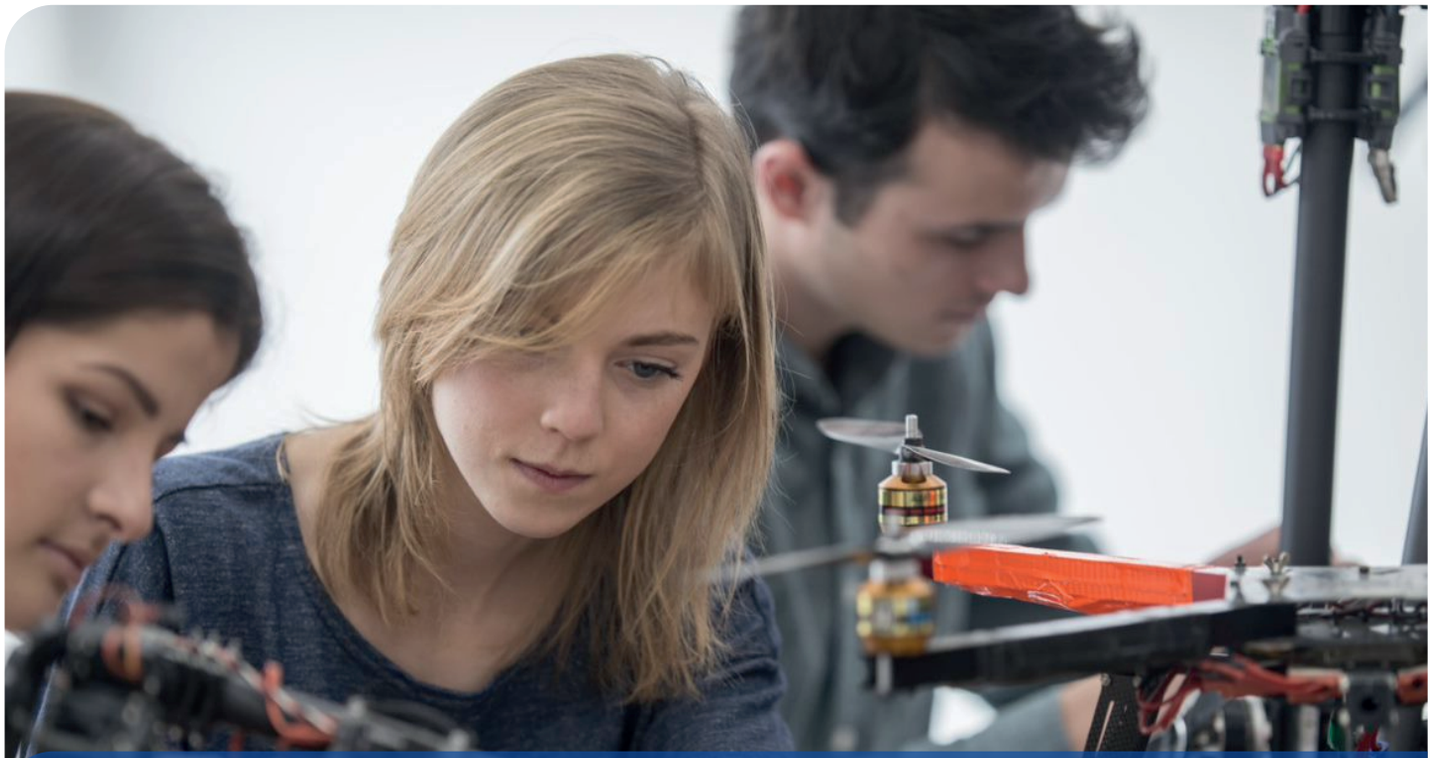
Duration
April – December (27 weeks)

On-site
3 on-site events in EU

Online
22 on-line events
(always a 2h session on Monday
or Friday morning + a one-week online program)

Credits
15 ECTS

Language
English



Global manufacturing innovation will be led by Europe

EIT Manufacturing's mission is to bring European manufacturing actors together in innovation ecosystems that add unique value to European products, processes and services and inspire the creation of globally competitive and sustainable manufacturing.

The European Institute of Innovation and Technology (EIT) is an EU body created in 2008 to strengthen Europe's ability to innovate. Today it is Europe's largest innovation ecosystem with over 2,000 partners.

The EIT supports the development of dynamic, long-term thematic partnerships (Knowledge and Innovation Communities, EIT KICs) among companies, research and higher education institutions, to face specific societal challenges. Together with their leading partners across Europe, the EIT Community offers a wide range of innovation and entrepreneurship activities:
Entrepreneurial education courses, business creation and acceleration services and innovation-driven research projects. The EIT Community helps innovators turn their best ideas into cutting-edge products, services and jobs for Europe.

Unique EIT model highlights:

- Provides access to a community that powers innovators through the entire innovation journey, from education to lab to market.
- Embraces disruptive and incremental innovation and embeds entrepreneurial education activities in its innovation activities.
- Business-oriented with strong focus on financial sustainability.
- Delivers a pan-European network strongly anchored in local innovation ecosystems.

EIT Manufacturing is an Innovation Community within the European Institute of Innovation & Technology (EIT) that connects the leading manufacturing actors in Europe. Fueled by a strong interdisciplinary and trusted community, we will add unique value to European products, processes and services - and inspire the creation of globally competitive and sustainable manufacturing.

EIT Manufacturing's approach is designed to immediately and forcefully address specific economic and societal challenges, leveraging opportunities to maximise the impact for successful European manufacturing.

Our vision is that global manufacturing innovation is led by Europe.

Our mission is to accelerate faster innovation with the potential to improve everyday life globally, help meet Europe's ambitious climate goals, and ensure that its workforce is ready for tomorrow's challenges.

Program description

Business Creation Track

The Innovation and Entrepreneurship Program at the EIT Manufacturing Doctoral School allows Manufacturing PhD students to gain and develop the skills and capabilities needed to valorize their expertise and research in the market. The version of the I&E Program that is called "Business Creation track" is meant for those PhD students who want to valorize knowledge, research findings, and related market insights, and are ready to become an entrepreneur or intrapreneur. The track consists of two one-year programs: In year 1 the participant starts with learning "How to develop a business idea", and in year 2 the participant continues exploring "How to validate a business idea and how to prepare for a launch".

Year 1 program: *How to develop a business idea*

During the first year, the PhD student will go through three different phases that will guide him/her in the development of a business idea.

Self-discovery (April-May)

Explore their own/team potential and define the ecosystem that would best suit them to start an entrepreneurial or intrapreneurial manufacturing project

Market exploration (May-July)

Explore the market for societal, economic and environmental problems that can be solved by manufacturing research.

Ideation (Sept-Dec)

Develop a solution that solves the problem(s) students discovered, for the benefit of the sector and society.

Year 2 program: *How to validate a business idea and prepare for a launch*

In the second year, the PhD student will go through two different phases that will ultimately prepare them to launch the business idea that has been developed in the first-year program.

Validation and iteration (April-July)

First, they will learn how to validate their value proposition, solution, and related business model in the market through the use of lean experimentation techniques.

Pre-launch strategy (Sept-Dec)

Then, they will build their plans and materials to prepare for the launch of their business project. Teams with a feasible project at the end of this phase can apply to the Business Creation Pillar of EIT Manufacturing to continue the incubation and realization of their entrepreneurial project.

The PhD student will be offered a toolbox and methodology to be applied directly on a real business project that has been developed or is going to be developed during the Venture Building Program. This part of the I&E Program prepares the researcher to become an entrepreneur or intrapreneur, and to be ready to launch their business idea.

- You now are reading the brochure on the year 2 program -

Methodology

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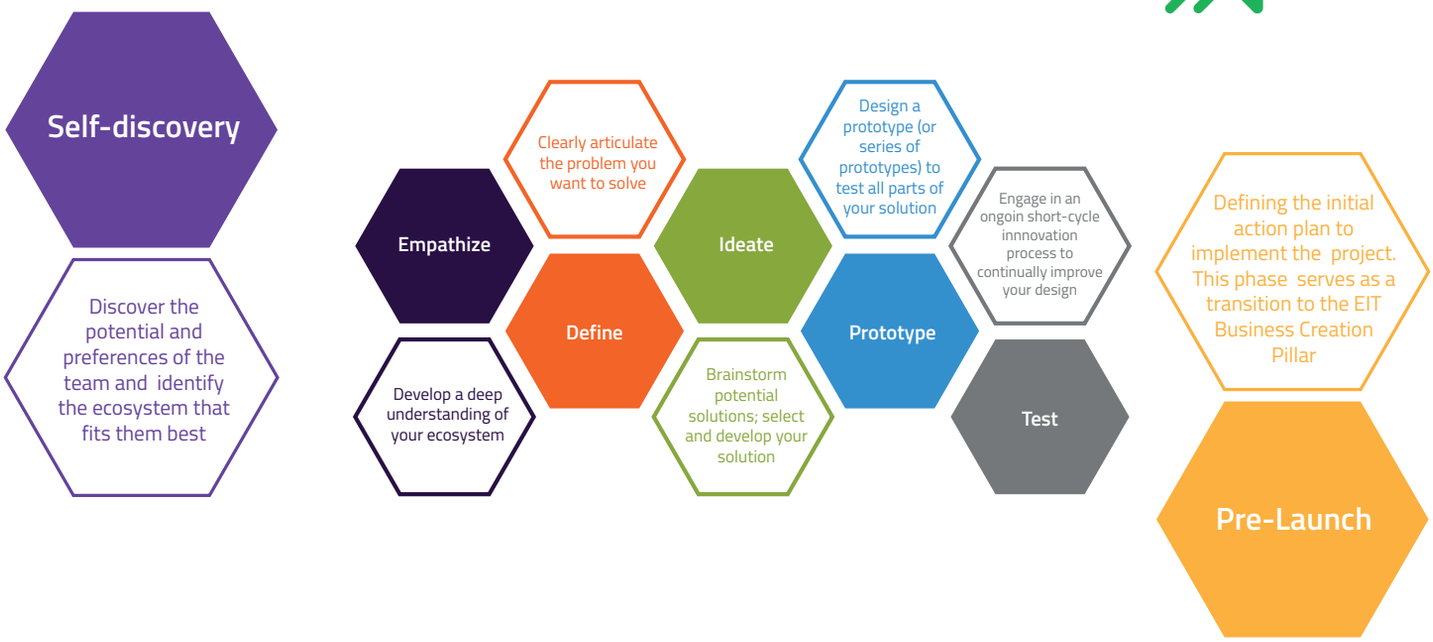

The methodology of the Innovation and Entrepreneurship Program in both years is based on Design Thinking principles. The five phases, from empathizing to testing, according to the Stanford d.School methodology, are reflected in our program. In addition, we have added two more phases to our roadmap: self-discovery and pre-launch. Within those phases, business creation methodologies are complemented with manufacturing scientific and technological knowledge and practice. Manufacturing mentors are also assigned to the students/teams to support them along the innovation process. This makes our program unique, all-embracing and specifically manufacturing focused.

All learning sessions will be taught in a two-hour format and will always be preceded by some resources to be studied before. Then, after 'class', your instructor will give you an action plan in which you apply the learning objectives on your entrepreneurial or intrapreneurial manufacturing project. If you still do not have a business project, you will be asked to reflect how you could valorize your research project in the future. The same instructor will meet up with each of the participants some days after the session for a mentoring session, during which questions can be asked related to the learning objectives and the results of the action plan will be reviewed.

Instructors and experts:

All our instructors and mentors are business and academic experts connected to the world of manufacturing, innovation, and business design. The following expert disciplines have been included in this program:

- Green Manufacturing Expert
- Business Designer
- Lean Coach
- UX Designer
- Communication and Storytelling Expert
- Pitch Evaluator - Expert from business incubator / accelerator
- Product Designer
- Brand Designer
- Sales Expert
- Strategic Design Expert
- Legal Expert
- Financial Expert
- Investment Expert

Calendar 2022

Business Creation Track – How to validate a business idea and prepare for a launch

Validation and iteration (April-July)

Pre-launch strategy (Sept-Dec)

On-site event

Innovation focus in 2022: GREEN Manufacturing

April

21 - 22	Welcome ceremony I&E Program
22	Seminar: intro to validation and iteration phase
22	Seminar: business concept & blueprint
22	I&E team building activity and closure
25 - 29	Recuperation and consolidation of business concept

May

02 - 06	Recuperation and consolidation of business concept
06	Webinar: pitching and storytelling
09 - 13	Recuperation and consolidation of business concept
13	Webinar: validation and lean experimentation techniques
16	Start Venture Building Program
16 - 20	Prototyping Bootcamp
23	Start sprint 1 lean experimentation

June

03	Pitch round: presenting increments sprint 1
06	Start sprint 2 lean experimentation
10	Webinar: prototyping design constraints and industrial feasibility
17	Webinar: green manufacturing
20	Start sprint 3 lean experimentation
30	Pitch round: presenting increments sprint 2 and 3

July

04	Start sprint 4 lean experimentation
11-13	Summer School
11-12	Hackathon event
12	Presentation of validation results
13	Pitch round: presenting increments sprint 4
13	Closure validation phase and Summer School

September

16	Webinar: building your product demo
23	Webinar: product roadmap
30	Webinar: designing a brand

October

07	Webinar: how to develop your sales plan
14	Webinar: how to develop your organization plan and project GANNT
21	Webinar: how to deal with legal issues
28	Webinar: how to develop your financial plan

November

04	Webinar: how to develop your investor deck
11	Webinar: pitching and storytelling II

December

01-02	Winter school
01	Opening Demo Day Venture Building Programme
02	Pitch event (and submission investor deck)
01	Networking event
02	Closure OI / Venture Building Program

Syllabus: April - May

DOCTORAL School

Validation and iteration (April-July)

Pre-launch strategy (Sept-Dec)

On-site event

April

21 - 22	Welcome ceremony I&E Program
22	Seminar: intro to validation and iteration phase
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22	I&E team building activity and closure
25 - 29	Recuperation and consolidation of business concept

Welcome Ceremony I&E Program (on-site)
The official two-day opening of the I&E program at EIT Manufacturing in Paris: participants of all four tracks will kick-off with a program introduction, two seminars and a team building.

- **Seminar: intro to validation and iteration phase**

Introduction to the first phase of this track by the program leader. Also giving an explanation of the meaning of market validation and lean experimentation principles based on the Lean Startup method

- **Seminar: business concept and blueprint**

A workshop with a business design expert in which participants are going to learn about how to structure the business idea they developed at the end of the year 1 program as a business concept that will be ready for the validation process. This structure will be based on the business blueprint tool.

- **I&E team building**

The welcome event will be closed with a team building activity to create bonding among the different participants of the I&E Program.

Recuperation and consolidation of business concept
During the next three weeks the participants will consolidate their business concept and recuperate elements if not all learning objectives of the year 1 program have been met.

May

02 - 06	Recuperation and consolidation of business concept
06	Webinar: pitching and storytelling
09 - 13	Recuperation and consolidation of business concept
13	Webinar: validation and lean experimentation techniques
16	Start Venture Building Program
16 - 20	Prototyping Bootcamp
23	Start sprint 1 lean experimentation

Recuperation and consolidation of business concept
For two more weeks, the participants will consolidate their business concept and recuperate elements if not all learning objectives of the year 1 program have been met. The concept will be structured as a business blueprint.

Webinar: pitching and storytelling
In this online workshop, the participants will practice pitching with a communication and storytelling expert, preparing for the three pitching rounds that will be organized during the validation phase.

Webinar: validation and lean experimentation techniques
The participants will get an introduction during this online session from a Lean Experimentation Expert, showing how to carry out a market validation process according to Lean Startup techniques

Start Venture Building Program – Prototyping Bootcamp
After having defined the business concept, and attending a couple of introductory Webinars, the participants will start the venture Building Program with the online Prototyping Bootcamp that will be held over the course of a week. In this Bootcamp, the participants will learn how to visualize their business concept in order to be able to start the week after with the validation process, testing these visuals and the related business model. The validation process consists of four different two-week sprints during which the lean experimentation stages will be carried out, guided by a Lean Coach.

Syllabus: June - July

Validation and iteration (April-July)

Pre-launch strategy (Sept-Dec)

On-site event

Innovation focus in 2022: GREEN Manufacturing

June

03	Pitch round: presenting increments sprint 1
06	Start sprint 2 lean experimentation
10	Webinar: prototyping design constraints and industrial feasibility
17	Webinar: green manufacturing
20	Start sprint 3 lean experimentation
30	Pitch round: presenting increments sprint 2 and 3

July

04	Start sprint 4 lean experimentation
11-13	Summer School
11-12	Hackathon event
12	Presentation of validation results
13	Pitch round: presenting increments sprint 4
13	Closure validation phase and Summer School

Start sprint 1, 2, 3, 4
The participants will start each sprint with an online session with a lean coach, who guides them in determining the test objectives for the lean experiments that will be carried out. At the end of each sprint, the participant will meet again with the lean coach to review the test results.

Pitch rounds: presenting increments
During an online event at the end of sprint 1, 3 and 4, the participants will present the latest status of their business concept, having applied the iterations based on the validation process. Each pitch round will be moderated by a Pitch Evaluator, an expert from a business incubator or accelerator.

Webinar: prototyping design constraints and industrial feasibility
An academic expert will guide the participants in defining the different design constraints caused by industry and manufacturing, in order to obtain a feasible solution design and to consider the constraints during the validation process.

Webinar: green manufacturing
An academic expert will give participants an immersion in the importance of green manufacturing, a top priority theme from EIT-M.

Closure event validation and iteration phase (on-site)
The closure event of the validation and iteration phase will be organized in the same venue in Bratislava as the closure of the two-week Summer School for the year 1 program. This to let the participants of the year 1 program see what their colleague researchers are doing one year later in the I&E Program. The closure event consists of the following parts:

- **Presentation of validation results**
  Participants will present the results of the four sprints during which they have been testing their business concept in the market.

- **Pitch round: presenting increments sprint 4**
  A last pitch event before the summer break in which participants will present the latest status of their business concept, having applied the iterations based on the validation process. This pitch round will be moderated by a Pitch Evaluator, an expert from a business incubator or accelerator.

- **Hackathon event**
  The participants of the OI / Venture Building program will also participate at the Hackathon event that forms part of the year 1 Summer School to encourage networking and synergy among the two talent pools.

Syllabus: September - October

Validation and iteration (April-July)

Pre-launch strategy (Sept-Dec)

On-site event

September	
16	Webinar: building your product demo
23	Webinar: product roadmap
30	Webinar: designing a brand

Webinar: building your product demo
An online workshop in which the participants will learn how to build a product demo in video format that includes a clear user story line and that shows how the different user problems have been solved through functions and features. Input will be received from both product and UX Design experts.

Webinar: product roadmap
The Prototyping Bootcamp, the various iterations during the validation phase and the product demo have resulted in a series of user stories and backlog that have to be translated into a detailed product roadmap. With a Product Designer the participants will learn how to develop this roadmap.

Webinar: designing a brand
In every solution design it's of utmost importance to integrate an adequate brand design. With a brand designer, the participants will learn in this online session what elements and principles should be considered to develop a strong brand.

October	
07	Webinar: how to develop your sales plan
14	Webinar: how to develop your organization plan and project GANNT
21	Webinar: how to deal with legal issues
28	Webinar: how to develop your financial plan

Webinar: how to develop your sales plan
In this online workshop, the participants will learn from a sales expert how to develop a successful sales plan with typical elements such as inbound / outbound funnel, lead nurturing, list building, sales Projection, and sales metrics and KPIs.

Webinar: how to develop your organization plan and project GANNT
In this online session a strategic designer will help the participants to write their organizational and operation plan with a special look at the development of a detailed GANNT chart.

Webinar: how to deal with legal issues
The development of an entrepreneurial project has a lot of legal implications. In the year 1 program the participants learned already about how to protect their business idea. In this online workshop, a legal expert will guide the participants into a broader legal framework that has to be taken into account when launching a business.

Webinar: how to develop your financial plan
In this online workshop, a financial expert will elaborate on the principal financial statements, ratios and metrics that should be considered in the development of an adequate financial plan.

Syllabus: November - December

Validation and iteration (April-July)

Pre-launch strategy (Sept-Dec)

On-site event

November	
04	Webinar: how to develop your investor deck
11	Webinar: pitching and storytelling II

Webinar: how to develop your investor deck
In this online session, the participants will learn from an investment specialist how to develop an investor deck that will convince any business angel or investor to participate in the entrepreneurial project.

Webinar: pitching and storytelling II
After the online workshop on pitching in the validation phase, the participants will get an extra training on how to communicate and convince their audience of their unique business concept. The Webinar will prepare the participants for the Demo Day in the beginning of December.

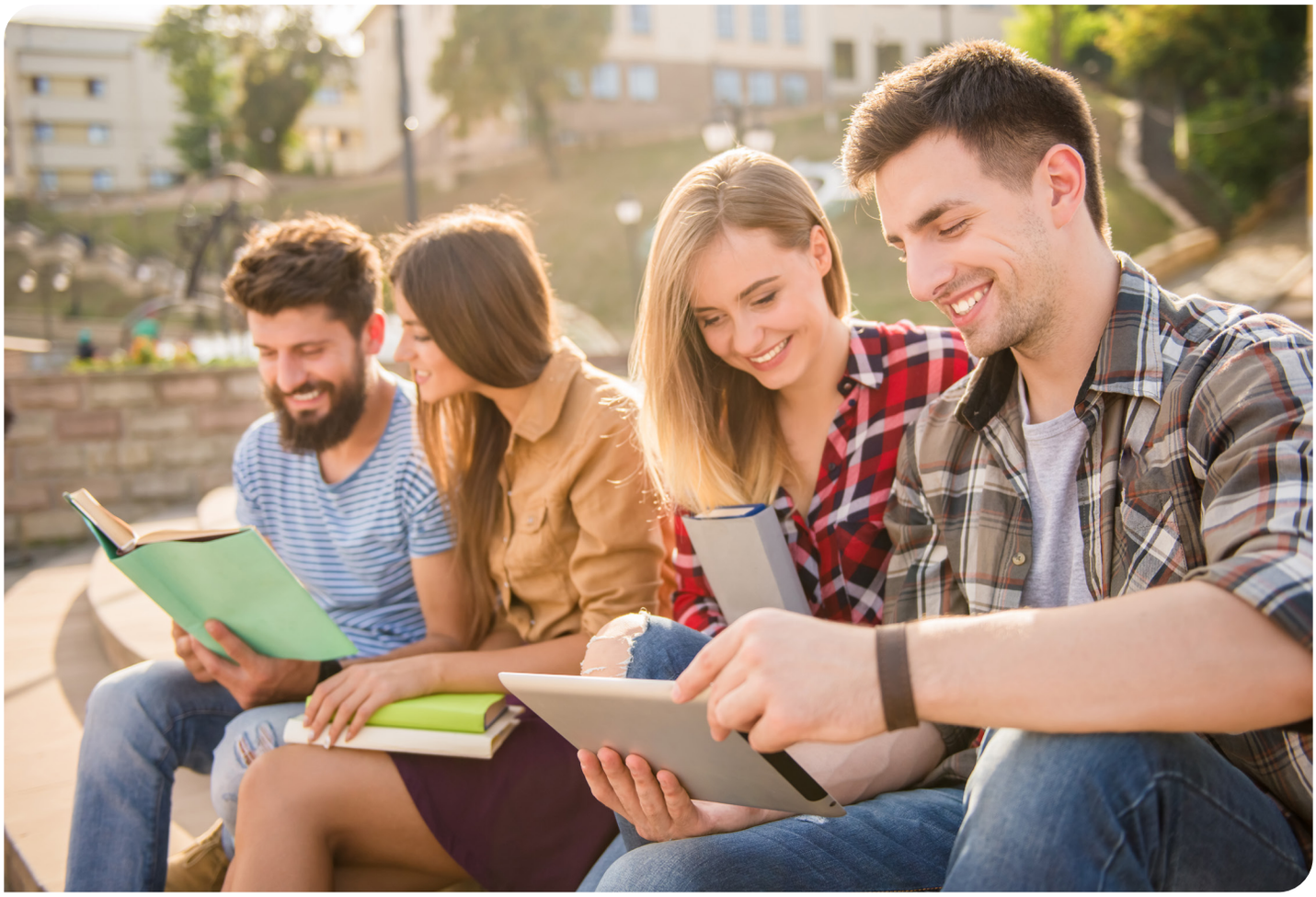
December	
01-02	Winter school
01	Opening Demo Day Venture Building Programme
02	Pitch event (and submission investor deck)
01	Networking event
02	Closure OI / Venture Building Program

Opening Demo Day OI / Venture Building Program (on-site)
The Demo Day of the OI/ Venture Building Program will be organized at the same venue as the end of the two-week Winter School program for year 1 participants. This to let the participants of the year 1 program see how their colleague researchers finish the I&E Program at the end of year 2. The Demo Day consists of the following parts:

- **Pitch event**
A broad audience consisting of all stakeholders of the EIT Manufacturing ecosystem, including companies and investors, will enjoy the final presentations of the two-years I&E Program, listening to the projects that have been developed in the Venture Building Program. For this event an investor deck has to be submitted by the participants and will be shared with interested stakeholders (of course after signing a non-disclosure agreement).

- **Networking event and closure OI/ Venture Building Program**
The host partner university of the Winter School will organize a network event in which the participants of the year 2 program will be able to connect with companies and other stakeholders from the manufacturing ecosystem. At the end of this event both the Winter School and the closure event of the Venture Building Program will be officially ended.

Apply now



Requirements

- *You are either a PhD student, researcher, professional in a manufacturing field, or interested in developing business ideas involving manufacturing.*

- *In the Business Creation Track, the student must have the intention to develop an entrepreneurial or intrapreneurially project build on manufacturing research and insights.*

- *You have to attend the entire program to obtain the 15 ECTS.*

- *If you are an EIT Manufacturing Doctoral School student, to obtain the EIT Label Certificate you must collect an additional 15 ECTS in the I&E Program.*

- *You must have developed a business concept in year 1 of the EIT Manufacturing I&E Program or through an alternative way.*

Selection and intake assessment

Applications will be accepted until the 15th of March. In the second half of March, a selection and intake assessment will take place, with the aim to define your entrepreneurial capacity and intentions. You could be invited to an online interview, if needed.

Partner Universities

DOCTORAL School

Arts et Métiers Institute of Technology

Arts et Metiers is a higher education engineering school in France with 8 Education and Research Campuses, 14 research laboratories and 3 institutes. Arts et Metiers develops teaching and research activities with a focus on five strategically chosen fields: Future of manufacturing, Mobility, Energy, Health Technology and Construction.

GRENOBLE INP UGA

Grenoble INP is the Institute of Engineering of Univ. Grenoble Alpes, which is one of the ten French Research and Innovation intensive Universities (IDEX label) and also one of the four French Institutes of Artificial Intelligence (MIAI).

U.PORTO

FEUP FACULDADE DE ENGENHARIA UNIVERSIDADE DO PORTO

FEUP is currently one of Portugal's oldest and most prestigious teaching and research institutions in engineering and related fields, with a reputation that is justified by the wide range of high quality training that FEUP offers in all its degrees. In addition, FEUP's modern building complex, inaugurated in 2000, at Polo II (Asprela) of the University of Porto, has become an important "incubator" for innovation and knowledge, fuelled by the impressive work done by the research centres that it hosts, and their proximity to the business and social milieu.

Mondragon Unibertsitatea

Mondragon University is a non-profit cooperative private university in the Basque Country, officially established and recognised in 1997. It is part of Mondragon Corporation. Committed since its foundation to quality education and studies with a practical focus, they give great importance to the comprehensive training of their students.

CTU CZECH TECHNICAL UNIVERSITY IN PRAGUE

The Czech Technical University in Prague (CTU) is one of the biggest and oldest technical universities in Europe and currently the major technical university in the Czech Republic, with approx. 1,700 members of academic staff. CTU currently has eight faculties and about 16,000 students. It is represented in EIT Manufacturing projects by two of its units — The Czech Institute of Informatics, Robotics, and Cybernetics (CIIRC), and the Faculty of Mechanical Engineering.

STU SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA

Slovak University of Technology in Bratislava (STUBA) is the largest and most significant technical university in Slovakia. It is a modern EU educational and research institution, founded in 1937. STUBA consists of 7 faculties: Civil Engineering, Mechanical Engineering, Electrical Engineering and Information Technology, Chemical and Food Technology, Architecture, Materials Science, and Technology, Informatics, as well as one institute – Management. The studies are performed at 3 levels. In the area of scientific and research activities, STUBA successfully joins European Union programs.

TARTU ÜLIKOOL 1632 UNIVERSITAS TARTUENSIS

University of Tartu is Estonia's leading centre of research and training. It preserves the culture of the Estonian people and spearheads the country's reputation in research and provision of higher education. UT belongs to the top 1.2% of world's best universities and is among the best universities of New Europe (EU13). The institutes of Technology and Computer Science at UT offer international Masters and Doctoral programmes in Robotics and Computer Engineering, Copmuter Science and Security and Cloud Computing. Industry collaboration focuses on Intelligent Materials and Systems, AI and Robotics, Mobility Solutions, and Business Process Analytics.

A word from EIT Manufacturing

Paola Fantini
Education Director EIT Manufacturing

In the EIT Manufacturing education programs, students will gain the capabilities, opportunities, and support from the network to become real entrepreneurs and change makers, to pursue the career they want to take. They will learn to question the status-quo, identify challenges and opportunities, mobilize energies, develop, and promote innovative solutions. They will become skilled at dialoguing, reasoning, and negotiating with peers and other stakeholders, in addition to acquiring excellent technical and business competences.

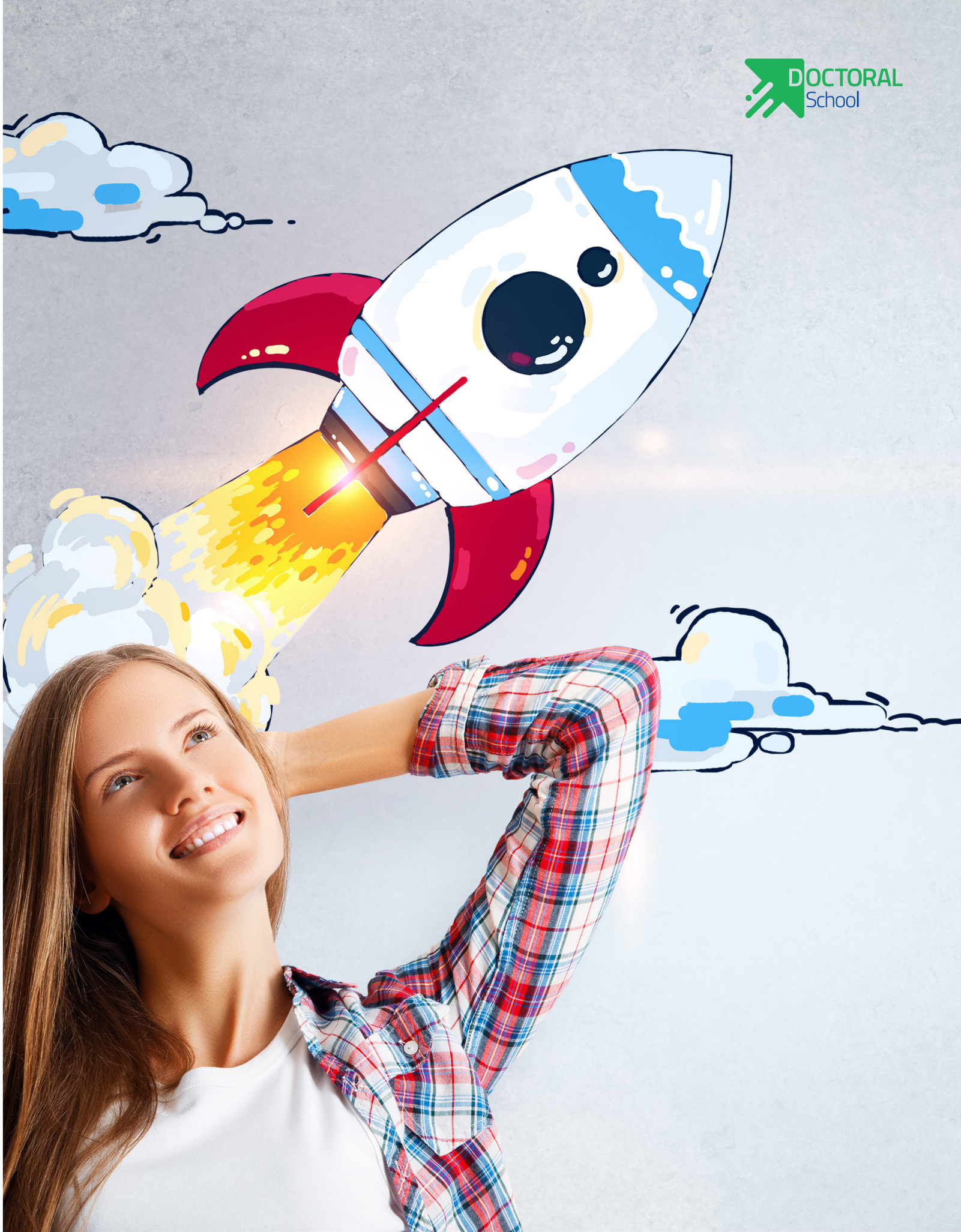
Lucia Ramundo
Master and PhD Program Manager

Our programs allow students to become experts in innovative manufacturing fields from both the technological and business and management side. We develop their leadership, creativity and all soft skills needed to navigate the complex industrial landscape while also taking into account the needs of society.

Program developed in collaboration with:

Henri Mennens
innpulse Innovation Consulting

The Innovation and Entrepreneurship Program at the EIT Manufacturing Doctoral School lets participants valorize their knowledge, research findings, and related market insights. For a period of two years, we offer them a roadmap that will help them to find out how to develop an entrepreneurial or intrapreneurial project during the Doctoral School or afterwards. The program has the latest insights on business design, innovation, and entrepreneurship, provided by awesome experts from the business and academic field.



Making innovation happen!

DOCTORAL School

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Keep up with the latest on:
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