



TRANSFORMING OPEN RESPONSIBLE RESEARCH AND INNOVATION THROUGH CHARM
TORCH

DELIVERABLE D5.4 – TORCH: REPORT ON STUDENT ENTREPRENEURSHIP SUPPORT METHODS

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GLOSSARY OF KEY INITIALS, ABBREVIATIONS AND ACRONYMS

AI: Artificial Intelligence
 BIC: Business & Innovation Centre (Montpellier)
 BSC: Business Support Contract (France)
 CAE: Activity and Employment Cooperative
 D2E: The National student entrepreneurs establishment diploma (France)
 ECTS: European Credits Transfer System
 EENE: Spain as an Entrepreneurial Nation Strategy
 EIT: European Institute of Innovation and Technology
 EPO: European Patent Office
 EUIPO: European Union Intellectual Property Office
 HSUP: Hungarian Start-up University Programme
 IAE: Instituts d'Administration des Entreprises (Business Administration Institutes) (France)
 IP+: RésO Incubateurs Pépinières + (France)
 MOMA: Montpellier Management
 MUSE: Montpellier University of Excellence
 NDRI Office: National Research, Development and Innovation Office (Hungary)
 PEPITE: Student Centres for Innovation, Transfer and Entrepreneurship (France)
 PES: Pan-European Steal
 Polytech Montpellier: University Polytechnic School of Engineering of Montpellier
 R&D: Research and Development
 RDI: Research, Development and Innovation
 RENACE: National Network of Entrepreneurship Centres (Spain)
 RETA: Special Regime for Self-Employed (Spain)
 SME: Small Medium Enterprises
 SNEEE: Statut National Etudiant Entrepreneur (National Status for Entrepreneurial Student) (France)
 SDG: Sustainable Development Goals
 SIMple project: Start-up and Innovation Management simuLation
 TES: Trinity Entrepreneurial Society
 UIS: UtrechtInc Students
 WP: Work Package

Universities

ELTE: Eötvös Loránd University
 UB: University of Barcelona
 UM: University of Montpellier
 UU: Utrecht University
 TCD: Trinity College of Dublin

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ABSTRACT

Deliverable 5.4 "Student entrepreneurship support methods" introduces the existing and best practices to support entrepreneurial students in the Alliance Universities.

For the purposes of this report, each of the Alliance Universities carried out interviews with their entrepreneurial students to gather their perspective on student entrepreneurship and on that of the support system provided by their institutions and their external partners.

The deliverable presents incentives and disincentives for student entrepreneurship support at systemic, societal, university and individual level. It also provides some potential preliminary recommendations on all four level to improve the support to entrepreneurial students.

EXECUTIVE SUMMARY: REPORT ON STUDENTS ENTREPRENEURSHIP SUPPORT METHODS

TORCH Work Package 5, “Strengthening cooperation between universities and enterprises”, centres on understanding the commitment of universities in collaborating with non-academic actors, especially businesses but also other actors of the innovation ecosystem, to answer global and societal challenges and end-user needs.

This Work Package seeks to identify current strategies, practices and tools in each of the institutions to partner with non-academic actors as identify best practices and challenges to make a landscape report.

As the last step in this process, Deliverable 5.4 “Student entrepreneurship support methods” focuses on mapping the current support systems for student entrepreneurship across the five TORCH partner institutions and draw an overview of the existing incentives and disincentives for student entrepreneurship support at systemic, societal, university and individual levels. Looking forward, the current deliverable will also enable us to provide potential preliminary recommendations for the CHARM-EU Alliance as a whole, that could be adjusted within each university according to their needs.

The qualitative questionnaire and semi-directed interviews with entrepreneurial students and entrepreneurship support staff within the Alliance Universities were the foundation of our methodology. We also benchmarked the Universities and incubators’ websites to gather information on content of support trainings programmes for entrepreneurial students.

We found that all member institutions have a more or less developed support system in place for student entrepreneurship, depending on the political strategy and orientation of each of the Alliance Universities. These support systems are included in entrepreneurial education, for instance with bachelor’s and master’s Degrees, specific entrepreneurship and business modules, training and executive programmes on entrepreneurship. In addition, all of the Alliance Universities organise entrepreneurial student challenges, to raise awareness among students on entrepreneurship, and to give them a first glance of it. All also encourage their entrepreneurial students to take part to local or national challenges and competitions. All of the universities are well integrated into the local and national ecosystem of innovation and give their students access to their broader network to boost their entrepreneurial projects and find external support to complete that of the university.

In addition, we found that four out of the five Alliance Universities have created one or several start-up incubator(s) for students. These incubators provide several pre-incubation and incubation training programmes, for the different stages of start-up project creation. The incubators provide between two and four training programmes, depending on each university system. The training programmes consist of specific courses useful for developing entrepreneurial projects, for instance how to build a business model, accounting, business management, marketing, sale strategy, finding investors, building a multidisciplinary team, pitching a project etc.

Students' start-up incubators also give entrepreneurial students access to a broad network of actors involved in supporting student entrepreneurship and to business angels and potential investors. In addition, they provide students with hosting, facilities, rooms, and a stimulating entrepreneurial environment with open spaces for the different incubates to meet and exchange. Start-up incubators also organise networking events for students.

We also found that some national programmes, such as the Hungarian Start Up University Programme in Hungary or PEPITE in France, are implemented on a university level by the Alliance members.

After introducing the student entrepreneurship support system currently in place in each of the Alliance Universities, the report then gives the entrepreneurial students a chance to explain their motivations for being involved in an entrepreneurship project and in creating their start-up whilst being students.

Then, the deliverable presents the incentives and disincentives at systemic, societal, university and individual level for student entrepreneurship. For instance, we found that at systemic level in each of the Alliance countries, the Higher Education National Strategy includes priorities on supporting student entrepreneurship, especially through entrepreneurial education. However, some of the interviewed entrepreneurial students have underlined a lack of available grants to financial support students entrepreneurs at national level. Also, some of the interviewees believe that there is still a “mental block”, a myth around entrepreneurship in the culture and mindset of communities that suggests that entrepreneurship is difficult and not for everybody. Finally, students interviewed suggest that traditional education methods are incompatible with entrepreneurship. On a societal level, students underline the large range of support for student entrepreneurship by actors across the innovation ecosystem, such as external incubators who can complete the universities' offers. However, interviewed students also deplore that the different offers for entrepreneurial support is not legible enough: they don't know which actor to contact for their needs, what each of them has exactly to offer and how they differentiate from each other. On a university level, the current support systems are proven incentives for students to venture into the world of entrepreneurship, to take the plunge to work on and develop their ideas and launch their own start-ups. The training and incubator programmes help students to overcome their doubts and their feeling of imposture syndrome, allow them to learn new skills and broaden their knowledge. Students feel supported by their institutions and can get access to grants to boost their project. However, in some universities, students report there is a lack of visibility of existing support systems for student entrepreneurship. They suggest that many students and teachers are not sufficiently aware of facilities that exist currently. Also, during interviews with entrepreneurial students and entrepreneurship support staff, we sometimes heard from both sides of the entrepreneurial story, so to speak: some report that they are very satisfied with the support provided by their university, while others are disappointed and wish that more supports were available and that they were more wide reaching. On an individual level, students are eager to be engaged in an entrepreneurial project - they find it very stimulating to learn new skills, meet new people, create a project that has societal impact and work



toward more sustainability. Yet, they sometimes find it difficult to combine their studies with the creation of a start-up, as this is a time-consuming and challenging project.

Finally, the report suggests some potential preliminary recommendations that have been expressed by the interviewees on a systemic, societal, university and individual level, with a focus on universities.

OBJECTIVE OF WP5 TASK 4

The objective of this target area is to focus on student entrepreneurship by analysing how the Alliance Universities and external actors operate, on the one hand, to raise students' awareness on entrepreneurship and on the other hand, to support student-entrepreneurship.

This focus on student entrepreneurship is necessary because it benefits students from different social and economic backgrounds (thus being inclusive), by teaching them how to cultivate unique skills and think outside the box. Moreover, it creates opportunities, installs confidence, ensures social justice and stimulates the economy.

METHODOLOGY

To collect appropriate data, a qualitative survey with closed and open questions was developed by the WP5 leading team (UM) and completed by representatives of each partner university. Our intention was to follow similar lines of questioning for each university while still allowing space for the individual characteristics. This data collection method has allowed the collection of key data and facilitated a comparative analysis between the CHARM' Alliance members.

In addition, semi-directed interviews, following interview matrixes prepared by WP5 leading team, were carried out by each university with appropriate entrepreneurial students, start-up incubator managers and external partners such as business incubators to understand the strategies and practices developed and implemented to support student entrepreneurship.

Table 1. Interviewees at ELTE

Students entrepreneurs	2
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Table 2. Interviewees at TCD

Students entrepreneurs	5
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Table 3. Interviewees at UB

Students entrepreneurs	1
Start-up incubator's manager	1

Table 4. Interviewees at UM

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INTRODUCTION

The European Commission, in its 2006 Communication "Fostering entrepreneurial mindsets through education and learning"¹ defines entrepreneurship in the following way: *“Entrepreneurship refers to an individual’s ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day-to-day life at home and in society, makes employees more aware of the context of their work and better able to seize opportunities, and provides a foundation for entrepreneurs establishing a social or commercial activity”*.

The communication shows that Europe aims at building and stimulating the entrepreneurial mindsets of young people, encourage innovative business start-ups, and foster a culture of entrepreneurship within universities. The important role of education in promoting more entrepreneurial attitudes and behaviour is widely recognised.

The forty-six Bologna signatory countries met in London in May 2007, and recommended such measures as the recognition of non-formal learning, the development of flexible curricula to accommodate student and staff mobility, and enhanced university-employer collaboration in innovation and knowledge transfer.

At higher education level, the primary purpose of entrepreneurship education should be to develop entrepreneurial capacities and mindsets. The way to success is to teach students about new sources of self-employment and convince them that being a businessman or woman is one way of entering the labour market. Start-ups is therefore one of a range of possible outcomes. Historically, entrepreneurship has been associated with small businesses and hence viewed as a less attractive career option for dynamic university graduates. A shift in attitudes among students can be fostered by introducing and promoting the dynamic, innovative and ambitious face of entrepreneurship.

The Entrepreneurship 2020 Action Plan² and the Communication on Rethinking Education³ presented a coherent framework for entrepreneurship education. EU countries set education policies while the Commission mainly acts as a catalyst and a facilitator, promoting entrepreneurship education. The main priorities are:

- Funding for European projects that will create reference models for further exploitation, through calls for proposals promoting exchanges of good practice and experiences on a EU level.

¹ Commission Communication “Fostering entrepreneurial mindsets through education and learning”. COM (2006)

² EUR-Lex, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52012DC0795> [Accessed 10 Feb 2022]

³ EUR-Lex, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52012DC0669> [Accessed 10 Feb 2022]

- Organising of workshops for policymakers and practitioners.
- Helping policymakers and other stakeholders to network.
- Publishing guidelines based on existing good practices in Europe.
- Releasing studies, indicators, and data collection.

On a higher education level, the primary purpose of entrepreneurship education should be to develop entrepreneurial capacities and mindsets. In this context, entrepreneurship education programmes can have different objectives: a) developing entrepreneurial drive among students (raising awareness and motivation); b) training students in the skills they need to set up a business and manage its growth; c) developing the entrepreneurial ability to identify and exploit opportunities. Graduate start-ups are one of a range of possible outcomes.

In terms of specific contents, programmes and courses should be adapted to different target groups (by level: undergraduate, graduate, post-graduate, PhD; by field of study: economics/business, scientific/technical studies, humanities, arts & design, etc.). The best way to encourage entrepreneurship among students is by giving examples from the relevant technical areas.

Entrepreneurship education should not be confused with general business and economic studies; its goal is to promote creativity, innovation and self-employment.

However, the benefits of entrepreneurship education are not limited to boosting start-ups, innovative ventures and new jobs. Entrepreneurship is a competence for all, helping young people to be more creative and self-confident in whatever they undertake.

1. THE ALLIANCE UNIVERSITIES SUPPORT SYSTEM FOR STUDENT ENTREPRENEURSHIP

All of the Alliance Universities have implemented support systems to create a culture and mindset of entrepreneurship inside their students' communities and to support their entrepreneurial students.

Student entrepreneurship support takes several forms, each of which complements the other and responds to student needs to support their projects.

The main forms of support for student entrepreneurship in the universities of the Alliance are the following:

- Entrepreneurial Education, for instance with specific trainings programmes on entrepreneurship at different levels of studies (bachelor, master degrees).
- Universities' start-up pre-incubators and incubators for students, with various types of support offered (cf below).
- Competitions, prizes and awards, which can be organised at a faculty or university level. The purpose is to raise awareness on entrepreneurship among students, stimulate their ideas and have a prior introduction to entrepreneurship, to show them how it is possible to turn an idea into a business. In addition to university competitions, students can also take part in competitions at local, regional and national level.

Universities also have strong link with external non-academic actors in ecosystems of innovation to advice students-entrepreneurs. For instance, students-entrepreneurs can be co-incubated in their university' incubator and in an incubator of their city.

1.1 Start-up incubators for entrepreneurial students within universities

Four out of the five of the Alliance Universities have created a start-up incubator dedicated to support entrepreneurial students: Start UB! at the University of Barcelona, UM I Lab by MOMA at the University of Montpellier, UtrechtInc at Utrecht University and Tangent at Trinity College of Dublin.

The vision of start-up incubators inside universities is multiple⁴ :

- Start-up incubators aim to help transform the academic culture and mindset towards entrepreneurship, transmit what entrepreneurship and innovation are to the whole university community and wish to promote a structural change.
- Start-up incubators try to develop synergies and collaborations between the academic university community and external actors.

⁴ Data collected during interviews of start-up incubators' staff of the CHARM'Alliance

- Start-up incubators promote a " growth perspective ", that is to say to help students grow in the process and train them to have the ability to identify problems in order to create real solutions.
- Start-up projects involve the need of a mix and a hybridisation of skills. An incubated student must become competent in various fields and should be able to identify his or her needs and to detect and analyse their difficulties.
- Incubators underline the importance of dialogue, meetings and networking to help students upscale their projects by meeting the right people.
- Finally, start-up incubators in universities put the focus on mentoring and that peer support is the most efficient.

The start-up incubators are training places for students, facilitators and accelerators of projects. They offer students a place to work, to meet people and exchange ideas, but also to learn, for instance through courses on accounting, business plan, marketing, sales, communication, pitch etc.

Also, they are intermediaries and mediators to the worlds of business and industry worlds and to investors.

The university start-up incubators offer several supports:

- A pre-incubation and incubation period that can be between six months and two or three years on average, according to the student's needs and the university's offer.
- General trainings, for instance on accounting, business plan, business management, marketing, communication, sell strategy, pitching etc. Those trainings can be divided in different levels (for instance introductory courses, intermediary courses, advanced courses), according to the needs and skills of the students and to the advancement of their project.
- Incubators must teach entrepreneurial students how to build a reliable, efficient and multidisciplinary team.
- Teach students how to pitch their project. Pitching is essential to attract business partners and investors.
- Individual follow-up of projects, to have a support that is most adapted to each case.
- A working environment (access to a room, a computer and to a community of student-entrepreneurs, where they can dialogue, share ideas, experiences with people sharing the same interest and experience for entrepreneurship): *"To have the experience not only of the mentors here, but also of the rest of the start-ups that are around. For example, we*

have started close collaborations by sharing the space and these are opportunities that come from having a networking space. It's very cool, to be honest. We are very happy."

- A double-support/coaching (students can have access to an academic coach and a business coach to support their project and advise them).
- Peer coaching, mentoring and success stories to inspire entrepreneurial students.
- Incubators offer a bridge to the business world through meetings, events, contact with investors, business angels.
- Networking events with external stakeholders.
- With the COVID-19 pandemic, start-up incubators and students-entrepreneurs also highlight the importance of having a virtual campus.

Now, the report introduces more specifically the support system for student entrepreneurship that exist in each of the Alliance Universities.

Overview of the support system for students entrepreneurs available within the Alliance Universities:

Table 7. Overview of students' entrepreneurship support system available within the Alliance Universities

	Coordination of student entrepreneurship support	Entrepreneurial Education	Student Start-Up Incubator(s)	Entrepreneurship Society or Centre
ELTE	Centre for Innovation	Yes	No	No
TCD	Tangent	Yes	Yes, LaunchBox, Blackstone LaunchPad, Open Incubator, Alsector, Tangent Pioneers	Yes, Trinity Entrepreneurship Society (TES)
UB	Start UB!	Yes	Yes, StartUB!	No
UM	At the level of each component. The three most active components on student entrepreneurship are Montpellier	Yes	Yes, UM I lab by MOMA	Yes, Student Centres for Innovation, Transfer and Entrepreneurship at local (PEPITE-

	Management (MOMA), The University Polytechnic School of Engineering of Montpellier (Polytech) and the Business Administration Institute (IAE)			LR) and national (PEPITE) levels IAE Start-up Lab
UU	Utrecht Inc and Utrecht Inc Students	Yes	Yes, Utrecht Inc Students	Yes, Utrecht Centre for Entrepreneurship

1.2 ELTE support system for student entrepreneurship

At ELTE University, the support system for entrepreneurial students is coordinated by the Innovation Centre. The support system focuses mainly on implementing the Hungarian Start Up University Programme at the university level. In addition, ELTE also participates in multi-universities projects to develop support to entrepreneurial students, organises an “Innovative Education Forum” and the “Innovative Students' Ideas Contest”.

The Innovation Centre

At ELTE, The Innovation Centre provides some support for students' entrepreneurship. For instance, this unit organises the “Innovative Students' Ideas Contest”, which is a rather new initiative. The contest aims to discover new business ideas. Graduate and postgraduate students are eligible and strongly encouraged to participate.

Here are some examples of participant entrepreneurial projects into the Innovative students' Ideas Contest” from 2019 to 2022:

Table 8. Students' entrepreneurial projects presented during the Innovation Center's Innovative Students' Ideas Contest for the period 2019-2022

Entrepreneurial project	Short description of the project	Entrance date within the Innovation Centre's Innovative Students' Ideas Contest
Clever Selective – Trash – Select Playfully	Selective waste collector with special shapes for the education of the primary school age group.	03/10/2019
Arthur	A project that shapes young people's approach to science with the help of augmented reality glasses.	03/10/2019

CaseLab	Smartphone-based portable field meter.	03/10/2019
SMAPP – Are all the pests on our farm accountable?	Development of a digitized family of traps to predict effective control dates against various pests (mainly apple moth, corn borer and cotton owl).	12/11/2020
Low-Cost ROBOTICS	Development of unique, cost-effective yet functional hand or forearm prostheses for children between the ages of 3 and 16.	12/11/2020
TENT – The new life of a tent	Reducing the environmental impact of the Sziget Festival through the collection and recycling of abandoned tents.	12/11/2020
OKTONDI – Education. Online. Digitally.	Assisting educators, teachers and students in distance learning during the pandemic.	12/11/2020
MeMo – Mental Monitor for early detection of dementia and slowing of its progression	A unique service idea in the world for the early detection and slowing of the progression of dementia.	30/06/2021
Cseperedő - Together the beginning is a cake-walk	A gamified mobile application that can reduce the number and severity of problems (such as learning or attachment problems) that roots in pregnancy and the first 3 years, but appears only later in adolescence or young adulthood.	30/06/2021
Going to be – Full support for students further learning and career decisions	A design to fully support students 'further learning and career choices by gaining insight into specific jobs through real companies and accessing all information and knowledge on the Internet platform in one place, centrally.	30/06/2021
Internity – A bridge between the university and your career	The development of a complete incubator and knowledge center-based software solution to help students launch their careers and connect companies with the most ideal junior candidates.	30/06/2021

The Innovation Centre provides legal and administrative support, and financial support in special cases.

In addition, students can gain access to optional courses on entrepreneurship. The “Entrepreneurship and Innovation” Master at the Faculty of Education and Psychology provides basic innovation and business knowledge for non-business students; helping them develop knowledge and skills necessary for starting a business.

However, ELTE University has not implemented a start-up incubator for students and there is no working time arrangement for students undertaking a start-up creation project.

The Hungarian Start-up University Programme (HSUP)⁵

The Centre for Innovation supports the institutional implementation of the Hungarian Start-up University Programme (HSUP), initiated by the National Research, Development and Innovation Office (NRDI).

The Hungarian Start-up University Programme is a national programme in Hungary. This is the first online university start-up-training programme. The twelve learning-modules are divided into two semesters, for instance business and financial planning, market entry, IP protection, pitching, investment opportunities, entering international markets and scaling etc.

The first semester focuses on getting to know innovative thinking and the world of startups. The second semester allows students to acquire practical knowledge of building businesses. It is not necessary to have an idea before enrolling on the course. The idea can arise during the course, or the student can join a team of other students that are working on an idea.

The aim of HSUP is to acquaint Hungarian students with the world of innovation, modern entrepreneurial knowledge and especially the operation of start-ups work, through an educational platform: *“With the help of interactive, playful study materials and personalized content in the Hungarian Start-up University Programme, you can study at your own pace, and we will be by your side all the time. The Hungarian start-up world is constantly evolving, and we are counting on you for that. We are confident that together we can go even further”.*

Under the programme, the university provides projects owners with three dedicated mentors. As part of this, they discuss the status of the project on a weekly basis.

The advantages for students undertaking this online course are numerous:

- Credits: this training starts as a university subject, meaning students can get credit for successful completion.

⁵ <https://hsup.nkfi.gov.hu/> [Accessed 10 Feb 2022]

- **Scholarship:** If students successfully complete the first semester and continue the subject in the second semester, they receive an HSUP scholarship, with a monthly grant of HUF 150,000.
- **Mentoring:** At the end of the second semester, students must present the first working version of their idea to successfully complete their studies.
- **Partnership:** The Start-up University Programme is joined by organizations and businesses that want to help students implement their ideas with a variety of opportunities on offer.

ELTE Innovative Education Forum

The ELTE Innovative Education Forum was an event in 2015 for sharing experiences, discussing opportunities for wider use of innovative education methods and exploring barriers. The Center organises similar thematic forums several times a year, providing an opportunity to share experiences and good practices. The SIMpLe project (see below) was, for example, presented at this Forum in the form of an interactive, online exhibition providing inspiration and ideas that could support education in terms of innovation.

SIMpLe project: Start-up and Innovation Management simuLation (2015-2016)

SIMpLe aims to boost innovation potential of participating universities. Together the Eötvös Loránd University, the Bergen University College and the BusinessWorks Ltd. launched together a project with the cooperation of the Central European University as an external partner, in order to raise awareness on innovation and entrepreneurship, to improve skills and develop an entrepreneurial curriculum for non-business students in particular. The participating universities used a multidisciplinary approach with regard to the specificities of the different scientific fields.

The main outcome of the project was the web-based learning tool, by which students can experience peer-learning in business situations and can develop a general skill set applicable to working life. Moreover, start-up interdisciplinary working-groups for business and non-business students were established to help new business ideas to emerge. This process was mentored and guided by business practitioners, close collaboration between higher education institutions and SMEs/industry participants.

Start It @ K&H

K&H is one of the leading banks in Hungary, which strives to support the implementation of innovative ideas. For the Innovation Day, which takes place every year, the Innovation Centre invites the leaders of the programme Start It @ K&H to award a special prize for the ideas of the students they consider to be the most innovative. These award-winning ideas are then given the opportunity to enter the programme's own competition, in which they have the option to win a mentoring to start their own business. In this way, Eötvös Loránd University collaborates to help the students getting to the market.

Further mediator role of the ELTE Innovation Centre in sharing extern opportunities

At its own Facebook site, ELTE Innovation Centre shares pieces of information on innovation-related opportunities open for ELTE graduate students collected from various extern newsletters and other sources.

Such programmes are for instance the Pan-European Seal (PES) Internship Programme 2022-2023⁶, which is a one year-long professional traineeship programme offered by European Patent Office and European Union Intellectual Property Office.

Another example is Ashoka Hungary Green Lab⁷, fostering development for green projects/enterprises/start-ups the ideas of which are under-represented among the Hungarian initiatives of social goals. The Green Lab Programme sets calls for addressing concrete environmental challenges and aims to develop more viable and scalable businesses in Hungary that have measurable environmental impact.

The Start-up Campus (see details below) is an initiative colligating universities, represented by the Technical University in Budapest, offers programmes to which ELTE students are eligible, as well.

The Start-up Campus⁸ incubator in Budapest

Start-up Campus is an international innovation centre and start-up incubator, which develops and implements innovation programmes for corporations and governmental partners. The incubator supports innovative projects with educational, incubation, investment, sales and foreign market entry services from early phase ventures up to SMEs with great growth potential. Start-up campus incubator is implemented in Budapest and offers several programmes, for instance:

- HFDA Start-up programme (Fashion and Design)
- CheckINN Start-up programme (Auto and motosport focused)
- Tokajtech Start-up programme
- InnoGen Youth programme
- Start-up campus university
- Sporttech start-up programme
- Sporttech Hungary programme

⁶ ELTE, Pan-European Seal Internship Program, <https://www.elte.hu/en/content/pan-european-seal-pes-internship-program-2022-2023.t.2026> [Accessed 28 Feb]

⁷ Ashoka Hungary, <https://www.ashoka.org/el/country/hungary> [Accessed 28 Feb 2022]

⁸ Start-up campus, <https://www.startupcampus.hu/?lang=en> [Accessed 28 Feb 2022]

1.3 Trinity College of Dublin support system for student entrepreneurship

Trinity College is the first in Europe for Producing Entrepreneurs and Start-Ups⁹: “*Graduates from Trinity founded more venture-backed companies than graduates from any other European university for the sixth successive year according to independent research conducted by private equity and venture-focused research firm, Pitchbook*”. Trinity Provost said “*The news that Trinity is Europe’s leading university for graduate entrepreneurship for the sixth successive year supports our ambitions and our role as a global leader in enabling the best students to become the best entrepreneurs.*”

Pitchbook’s 2020 *Universities Report* placed Trinity at number forty-nine in the global rankings for producing venture-backed entrepreneurs from its undergraduate programmes.

Between the years of 2006 and 2020 – the period over which Pitchbook conducted its latest independent analyses – Trinity alumni produced 277 entrepreneurs, formed 254 venture-backed companies, and raised capital of approximately US 4.8 billion.

National level: The “Irish Strategy for Higher Education to 2030”

The “Irish National Strategy for Higher Education to 2030”¹⁰ put the emphasis on student entrepreneurship as highlighted in the following points:

- “Whether as employees of established leading companies, as entrepreneurs in new start-up enterprises, or as social innovators, Irish graduates need to be job shapers and not just job seekers.” (p.37)
- “Creativity and entrepreneurship must be encouraged to a much greater extent; and institutions should facilitate reflective learning, applied knowledge, practical laboratory experience, and scientific skills” (p.56)
- “Research carried out in higher education has direct bearing on the formation of our students. This is most obvious at the postgraduate level, as students learn the art of research and participate in the advancement of knowledge. These students will be the primary engine for transferring that knowledge to the wider society, either by job shaping and entrepreneurship or as innovators within their chosen careers.” (p.63)
- “Academy will begin the process of defining and mainstreaming innovation as a central element in the universities’ mission. It is intended to focus particularly on PhD training, positioning innovation at the heart of their courses, facilitating student mobility between campuses, and ensuring that the breadth and depth of expertise and resources at UCD and TCD are available to Ireland’s future entrepreneurs” (p.100)

⁹ Trinity College of Dublin, Trinity News and Events, *Trinity first in Europe for producing entrepreneurs for the sixth successive year*, https://www.tcd.ie/news_events/articles/trinity-first-in-europe-for-producing-entrepreneurs-for-sixth-successive-year/ [Accessed 10 Feb 2022]

¹⁰ <https://hea.ie/resources/publications/national-strategy-for-higher-education-2030/>

The Student Entrepreneur Awards is at the forefront of developing entrepreneurship, giving young entrepreneurs a viable pathway to transform their smart ideas into commercial businesses. It aims to stimulate entrepreneurship and to encourage students to start their own business. The competition is a great opportunity for ambitious and enterprising third level students to build a real-world business venture.

Tangent, Trinity's Ideas Workspace¹¹

Tangent is the Hub for innovation and entrepreneurship within Trinity, open to all students regardless of disciplines, and offers various support methods to student entrepreneurship:

- Professional Education
- Postgraduate Education
- Undergraduate Education
- Accelerators & OpenIncubator
- Student Support
- Events and space rental

The objective of the workplace is to empower the students to forge their own paths during and after their time at Trinity College of Dublin. Tangent supports early-stage startups and entrepreneurs by offering them the opportunity to participate in accelerator programmes, such as LaunchBox and Blackstone LaunchPad.

Entrepreneurship Programmes in Trinity

- LaunchBox¹² is a summer accelerator programme open to teams of Trinity students (undergraduate and postgraduate), with an early-stage business. The programme provides mentorship, funding, access to alumni and investors, and the ideal collaborative environment to launch new start-up ventures. The programme runs out of Tangent and comes with €10K in funding for successful teams.
- Blackstone LaunchPad¹³ is campus-based and an experiential entrepreneurship programme open to Trinity students, alumni, staff and faculty offering coaching, ideation and venture creation support. It is based in the Berkeley Library in the centre of Trinity's

¹¹ Trinity College of Dublin, Tangent, Trinity's Ideas Workspace, <<https://www.tcd.ie/tangent/>> , [Accessed 08 Feb 2022]

¹² Trinity College of Dublin, Tangent, Launchbox, <https://www.tcd.ie/tangent/accelerators/launchbox/> , [Accessed 10 Feb 2022]

¹³ Trinity College of Dublin, Tangent, Blackstone LaunchPad, <https://www.tcd.ie/tangent/mentoring/launchpad/> , [Accessed 10 Feb 2022]

historic campus and run out of Tangent. They focus on entrepreneurship more than on ideas. The mission of the programme is to introduce Trinity students to entrepreneurship, help them develop entrepreneurial skills and enable them to independently achieve success in whatever venture they pursue.

Women Who Wow¹⁴

Women Who Wow is a mentorship programme for female students in Trinity with an interest in entrepreneurship. The programme started in 2016 and is housed in Tangent.

The opening event gathers potentials mentees and mentors to clarify the objectives of the mentorship scheme and match the mentees with the correct mentor. After that the mentee and the mentor meet monthly for six months. These mentors share their knowledge and experience, and in turn help their mentees develop their business ideas, grow their early-stage startups, pursue opportunities in the start-up industry, help them to network, or simply empower them to get where they want to go.

Open Incubator¹⁵

Students who have an idea can join peer interest groups to collaborate with other innovators to develop solutions related to their share interests.

Interest groups meet regularly to discuss new interest specific challenges, form teams around proposed solutions and launch new start-ups or social enterprises. The groups also act as knowledge banks for information presented by members and expert guests.

If students simply want to test out an idea, or to develop a start-up, they can start by entering the Open Incubator. From there, they can also have access to a spot on the Launch Box Accelerator.

Alsessor, Tangent's Artificial Intelligence Accelerator¹⁶

Alsessor is a five-month accelerator programme designed to support global early-stage Artificial Intelligence (AI) companies at prototype or proof of concept phase. The sectors of interest of Alsessor are retail, digital health, fintech, insurtech, regulatory, and compliance.

The participants are new businesses with edge innovations in AI. This AI accelerator helps expedite each start-up's commercial development within the rubric of an intense accelerator environment.

¹⁴ Trinity College of Dublin, Tangent, Trinity's Ideas Workspace, Women Who Wow, <<https://www.tcd.ie/tangent/mentoring/women/>> , [Accessed 08 Feb 2022]

¹⁵ Trinity College of Dublin, Tangent, Trinity's Ideas Workspace, Open Incubator, <https://www.tcd.ie/tangent/accelerators/open_incubator/> , [Accessed 08 Feb 2022]

¹⁶ Trinity College of Dublin, Tangent, Trinity's Ideas Workspace, Alsessor, <<https://www.tcd.ie/tangent/accelerators/alsessor/>> , [Accessed 08 Feb 2022]

Such a collaborative environment has been proven to be of immense benefit to entrepreneurs and innovators, offering them exposure to domain expertise, mentorship, masterclasses and workshops.

Tangent Pioneers¹⁷

Tangent Pioneers, powered by Bank of Ireland, is a programme which takes Trinity's start-ups international, offering the opportunity to learn how to operate in a more competitive market. For one week, Trinity start-ups network, learn, pivot, pitch and grow in a new market with challenges and opportunities.

The programme helps raise the profile of Trinity internationally and allows to engage with US-based alumni of Trinity College of Dublin in a meaningful way.

The Trinity Entrepreneurial Society (TES)¹⁸

The Trinity Entrepreneurial Society fosters innovation in Trinity College Dublin and supports students on all stages of their entrepreneurial journey through multiple programmes and events, such as:

- **TES Incubator:** Trinity's in-house TES incubator supports start-ups throughout all stages of development, providing an opportunity for financial assistance (up to €10,000), mentorships, workshops and key networking opportunities throughout the entire academic year.
- **TES Dragons' Den:** an opportunity for students to gain experience in pitching, presenting, selling and a chance to win a prize fund of €10,000 to aid in their start-up initiative.
- **TES Talks:** exclusive to members, this is an annual convention where successful Entrepreneurs from around the world visit Trinity to speak to TES members.
- **TES Start-up Fair:** an annual event where TES members have the opportunity to network, gain business insights and potential career opportunities in exciting new start-ups.

*"TES gave us mentorship, money and advice. LaunchBox provided us with this along with incredible support, mentorship, and legal advice to sort out some company issues."*¹⁹

Trinity Business School

Trinity Business School provides various programmes around business. Dublin powerful business network contributes to the school's programmes and global alumni community.

- **Undergraduate: Global Business**

¹⁷ Trinity College of Dublin, Tangent, Tangent Pioneers, <<https://www.tcd.ie/tangent/accelerators/pioneers/>> , [Accessed 08 Feb 2022]

¹⁸ Trinity Entrepreneurial Society, <https://www.testrinity.com/> [Accessed 10 Feb 2022]

¹⁹ From the interview of a entrepreneurial student from Trinity College of Dublin

The Global Business Degree is a unique programme, designed for students who wish to focus on business from the very beginning of their degree. Innovation and entrepreneurship are key pillars of this programme.

- **Business modules**

Multiple modules focused on business are available for undergraduate students from year one to year four.

- **MSc in Entrepreneurship**

This programme is designed to equip students with specialist knowledge and the practical ability to start or support new businesses. With a strong focus on technological and international entrepreneurship, students will learn how to excel in starting new ventures, supporting and financing enterprise or utilising an entrepreneurial mindset and approach in existing enterprises seeking growth.

Ranked first in Ireland and tenth in the World for Entrepreneurship (Eduniversal 2021), this programme equips students with the specialist knowledge and practical ability needed to start or support new and existing businesses.

Provost's Innovation Challenge

Provost's Innovation Challenge is a three-day Hackathon run by Tangent every year that gives teams of students the chance to come up with solutions to real-world problems, often linked to United Nations SDG's.

1.4 University of Barcelona's support system for student-entrepreneurs

In the last seven years, the University of Barcelona has encouraged more than 600 students per year. Currently, and since 2020, there are more than thirty projects in StartUB!Lab²⁰, the new accelerator space of StartUB!²¹.

National level

In October 2020, the Government presented its Strategic Plan for Recovery, Transformation and Resilience. The "High Commissioner for Spain as an Entrepreneurial Nation" is the body of the Presidency of the Government in charge of promoting the "Spain as an Entrepreneurial Nation Strategy"²², presented in February 2021 (the EENE). The importance given to entrepreneurship is

²⁰ University of Barcelona, StartUB!, Start UB! Lab, <http://www.ub.edu/startub/startub-lab/>, [Accessed 10 Feb 2022]

²¹ University of Barcelona, StartUB!, <http://www.ub.edu/startub/en/>, [Accessed 10 Feb 2022]

²² Gobierno de España, Presidencia del Gobierno, High Commissioner for Spain Entrepreneurial Nation, <https://www.lamoncloa.gob.es/lang/en/temas/entrepreneurial-nation/Paginas/index.aspx> [Accessed 10 Feb 2022]

evident throughout the document. Entrepreneurship is an essential basis for the strategic areas established: innovation and business competitiveness, particularly in SMEs, and education at all levels, establishing synergies between research, university education and entrepreneurship.

The EENE is based on three levers:

- An improved education, which is necessary for inclusive development.
- An economy based on RDI, with support for strategic driver sectors and innovative entrepreneurship.
- Inclusive development, with the improvement of education, which must close the main inequality gaps (gender, territorial, socio-economic, generational, ...) between people, so that everyone participates proactively in the strategy.

The strategy focuses on linking education and entrepreneurship at all educational stages. Thus, a specific relational framework is established between university and entrepreneurs. Universities must become trainers of entrepreneurs and generators of scenarios of opportunity for social, cohesive and sustainable growth in a knowledge economy ("entrepreneurial universities"). To achieve this status of entrepreneurial institutions, universities must undergo a necessary process of transformation. The EENE offers a series of support measures that should be used as opportunities for transformation and functional improvement in order to fulfil their social mission.

The Strategy supports the necessary coordination and collaboration between agents, establishing a National Network of Entrepreneurship Centres (RENACE). Among the functions of the network are:

- The promotion of training, development, talent attraction and retention activities for people.
- Active support for entrepreneurship with incubation and acceleration services.
- Support for business innovation and collaboration with large companies.

Entrepreneurs, regardless of their age, who are registering with the RETA²³ for the first time or who have not contributed to this scheme in the last five years, will be able to benefit from the flat rate measure ("la tarifa plana"). Initially only those under thirty years of age were eligible, but the age limit was later removed. This measure is a reduced rate for the self-employed, which allows a rebate to be applied to the Social Security contribution payable for a certain period of time.

Young entrepreneurs can benefit from the "Youth Guarantee". When someone become self-employed for the first time, he or she can receive 10,000 euros²⁴.

²³ Special Regime for Self-Employed in Spain

²⁴ According to interviewed entrepreneurial students from UB

City level: Barcelona

From Barcelona City Council²⁵, students can receive " Impulsemos PFAS", which is a grant for impact projects: *" a grant that has allowed us to survive and buy tablets and develop the business and then some small prizes, for example the Terrassa prize, Lebra or others here more local "*²⁶.

Barcelona Activa, is the reference local entity that supports entrepreneurship in the city of Barcelona. They offer advice, training, support and networking for professionals, entrepreneurs, the self-employed and companies. We also support specific organisations and projects that contribute to the social and solidarity economy (ESS). In the last 30 years Barcelona Activa has supported more than 15 000 projects, incubated more than 1500 start-ups and during 2020 they offered more than 6600 hours of advisory sessions for entrepreneurs and raised more than 54,4 million of euros for start-ups²⁷.

University of Barcelona

At the University of Barcelona, the office responsible for fostering and supporting innovation and entrepreneurship among students is StartUB!. StartUB! provides administrative and legal support to students entrepreneurs, but also support in other subjects such as marketing, sales, business strategy, communication, accounting etc.

Students also have access to entrepreneurial education, for instance with the "Innovation and Entrepreneurship in Biomedical Engineering²⁸ which aims to train a new generation of technologists who can transform biomedical innovations into feasible business solutions.

University of Barcelona Business School²⁹

The Universitat de Barcelona Business School is the centre for research and postgraduate and executive education in business at the Faculty of Economics and Business of the University of Barcelona.

Another example of entrepreneurial Education is the MSc in International Business³⁰ of University of Barcelona Business School, that offers students advanced knowledge of basic aspects on how to manage an international company in the fields of accounting, marketing, operations, human resources and strategic management. Also, the Erasmus Mundus Master in Global Markets, Local

²⁵ Barcelona City Council, <https://ajuntament.barcelona.cat/en/>, [Accessed 10 Feb 2022]

²⁶ From the interview of an entrepreneurial student at the University of Barcelona

²⁷ Barcelona Activa, Emprenedoria, <https://emprenedoria.barcelonactiva.cat/en/web/guest/home> [Accessed 24 Feb 2022]

²⁸ University of Barcelona, https://www.ub.edu/web/ub/en/estudis/oferta_formativa/master_universitari/fitxa/I/M280K/index.html , [Accessed 14 Feb 2022]

²⁹ University of Barcelona Business School, <https://www.ub.edu/business-school/> [Accessed 14 Feb 2022]

³⁰ University of Barcelona Business school, MSc in International Business, <https://www.ub.edu/business-school/msc-in-international-business/>, [Accessed 14 Feb 2021]

Creativities which is an international programme, that aims to examine how local actors (clusters, cities, regions, entrepreneurs, companies and legislators) generate competitiveness under global market conditions.

StartUB!³¹

StartUB! coordinates, promotes and develops all activities related to entrepreneurship at the UB.

First of all, students with a business idea should contact the StartUB! office in order to meet with managers, discuss and define the idea or project, to see what is possible to do and which support could best suit the project : *"I think that from the process of contact we have with the students, the first thing is to have an initial meeting to make a diagnosis of the project, the student's initiative, the background, where he/she comes from, what faculty and what is the objective he/she has with the project"*³².

Once the idea or project is more clearly defined, students can follow a training programme. Several training programmes are available, depending on the stage the idea or project is at : *"Then, once this first phase of analysis is over, there is the part of the services that we offer at StartUB!, which is training, from students who are starting to develop ideas, whether they have ideas or not, - the ideation phase, the validation phase, the launch and growth phase, so we try to diagnose in which phase of the project each one of them is and orientate which are the appropriate trainings for the phase of the project, because for each one of these phases there are different programmes, as complementary activities to what they are already working on"*.

In addition, StartUB! offers physical premises, mentoring sessions and a community to students entrepreneurs. They have strong connections with external actors: *"We are increasing our contact with companies, which is necessary because companies are looking for talent and we have the talent, we have to be able to do this matching and for new projects and find solutions. We also have mentors; we have a database of people who are qualified to guide projects. Investors we are working on it, but there are also other institutions of the ecosystem of Barcelona and Catalonia that we also have relationships with and that give us support to carry out these other activities, apart from the European ones, such as EIT Health, we have other collaborators"*.

Through StartUB!, entrepreneurial students have access to an important network and can attend networking events.

Finally, StartUB! also aims at developing more funding for student entrepreneurs: *"which is what we are also working on, how the projects can get funding, capital is necessary, we know that, there are some public funding resources and we present calls and we are also working on forming a network of business angels so that students can also receive private funding for their projects. We*

³¹ StartUB!, <https://startub.ub.edu/en/>, [Accessed 28 Feb 2022]

³² From the interview of a manager of the StartUB!

are going to organise investment forums, so that they can have the opportunity to present to investors, but we have no relationship with investment. You are the intermediaries”.

In addition, four pathways/trainings are available for students-entrepreneurs at StartUB!:

- **Ideate**

Ideate is a training programme that focuses on basic concepts of innovation and entrepreneurship throughout the community of the UB. Practical training modules and workshops are offered across all faculties of the University. At the end of the training, students should know how to create an innovative and sustainable product and/or service.

Several activities are included in the programme to encourage and promote Innovation and Entrepreneurship amongst students, such as:

Inspiring talks: Inspiring talks by entrepreneurs and innovators lasting an hour in a flexible and informal format. These talks are incorporated into the regulated training activities of the different degrees taught at the University. Professors on the range of degree programmes act as prescribers of these talks if they consider that their subjects can benefit from them.

Entrepreneurs guide for beginners: It is a course created in collaboration with Catalan public universities and EIT Health. It aims to be the starting point for all those who want to improve their knowledge and skills in the business world. During this course, students learn to identify an opportunity, develop the business model (and the steps to validate it), and learn about the main mechanisms for finding their business. In addition, they have the help of experts to resolve any questions that may arise during the course.

Design Thinking: There are workshop to learn the key skills for thinking outside the box and identifying innovative ideas through a people-centred methodology.

Innovation days (iDay): During the programme, participants seek solutions to real life challenges and share the experience with participants from different disciplines and backgrounds. They have access to the tools and advice necessary to develop solutions. The iDay is an initiative of The University of Barcelona with the support of the project ReInnova FBG-UB.

Akademia: Akademia is an online programme of eight sessions of one-hour duration. Each session is led by a leading expert in his or her sector, who will help students analyse the future, interpret and exploit trends and put into practice what they are learning at university to create an innovative and sustainable product and/or service.

Innovation thinking: It is a co-creation workshop to learn how to apply rapid prototyping and gamification to the design and ideation of an innovative experience and / or product, for any discipline.

• Validate

This phase aims to support the entrepreneurial community in the process of validating its business ideas, and providing it with the necessary tools to assess whether the idea – which was probably identified in the previous stage – truly represents a business opportunity.

From Science to Market: Promoted by the University of Barcelona, the Autonomous University of Barcelona, the Polytechnic University of Catalonia and the Pompeu Fabra University, this is a programme aimed at twenty-five undergraduate, master's or doctoral degree students from any university who wants to showcase their thesis and explore the possibility of creating a company derived from research. It consists of 120 hours of training in technology and knowledge transfer and business creation, and several hours of mentoring.

Business Model Lab: This is a twenty-hour introductory course on business creation that provides knowledge on the essential aspects of the process of defining the value proposition, working with various prototyping methodologies, analysing customer segments, identifying cost types and assessing possible sources of income and financing. The course ends with a session on how to perform an elevator pitch.

Business Model Lab – EIT Health Edition: This is a special version of the Business Model Lab course carried out in collaboration with EIT Health, National University of Ireland, University of Luxembourg, Amgen and Hospital Clínic. In this edition, participants will learn the basics of business creation by working on the 6 challenges proposed by collaborating institutions.

• Launch

This phase aims to cover the initial stage of project development up to the establishment of start-ups or companies. It consists of different programmes which provide training and support from mentors, and the StartUB! Lab, a workspace where the entrepreneur can develop their project and meet and interact with other entrepreneurs.

StartUB! Sprint: StartUB! Sprint involves expert support during a four-month period for a selection of entrepreneurial teams with projects from different disciplines, in different stages of development or up to one year after being established as a company. It is a programme to help students accelerate their entrepreneurial projects, whether they are in the development phase of the idea or if they are newly established. At the end of the programme, the groups will present their projects to a jury, which will award a prize of 3,000 € (1st prize) and 1,000 € (2nd prize) to the best. Undergraduate, graduate, master or doctoral students enrolled at the University of Barcelona or in one of its affiliated centres.

Inclusiveness is one of the values and strategy of the StartUB!. They have included the promotion of sustainability, the diversity and the promotion of inclusivity, as in the same way than the promotion of female entrepreneurship. They try to look for inclusivity in round tables, to scheduled workshops about these topics, to give referents and to collaborate with other expert institutions.

Globally, students-entrepreneurs are satisfied of the various support provided by StartUB!, as show the following testimonies, collected during interviews with entrepreneurial students of the University of Barcelona:

- *“StartUB! gave us the facilities and the ease of being able to work together. So, having this space has been fundamental during this year, because in the end, there are so many of us. We have been very fast in development this year, constantly running, practically in sprint. And having a place where we can hold meetings, where we can work together and where it's so comfortable, has helped us a lot. And then, obviously, [...] having someone to ask questions. It was a safe space to work in and I liked that”.*
- *“The follow-up, that they know what stage the project is at, because then they can adapt the information they give us to the moment we are at. All the information regarding grants, subsidies that come to us thanks to them or possible courses. For example, there are eight sessions in consolidation with a tax advisor.”*
- *“I really like StartUB!, for example, which offers many things to do, but they are not compulsory, so if you are in a week where the workload is very heavy and you can't attend, it's fine.”.*
- *“A networking event with all the investors. All of that, of course, brings a lot to the table. So we should do more of these types of events ”.*

StartUB! Lab

StartUB! Lab incubates and accelerates many different kinds of projects and in diversified areas.

Table 9. Incubated students' entrepreneurial projects within StartUB! Lab for the 2019-2022 period

Entrepreneurial project	Short description of the project	Entrance date within StartUB! Lab	Currently incubated
MIGOSMEDIA	Influencers Marketing Agency	01/07/2021	Yes
DEKINES	The intelligent platform for the management of work areas	01/02/2022	yes
Sbl consulting	Sports Data Base Analysis	04/02/2022	yes
GLEX	Legaltech platform to help expats to get legal assessment	01/11/2021	yes
MyMart	Women Comfortable Shoes	01/11/2021	yes
Sea Therapeutics	Consumer health: nanovesicle drug delivery	12/11/2021	yes
Marvut	Technology Development	22/11/2020	yes
Senniors	Home Care	01/06/2021	no
Blendie	Fashion	01/10/2021	yes

Alta Guardia	Security Systems	10/10/2020	yes
Selectivitat.io	Education Systems	15/10/2021	yes
Zippers	Sustainable Fashion Shoes	09/09/2021	yes
Omashu	Blockchain Marketplace eSports	01/03/2021	yes
Hemp and Love	Sustainable Clothes	10/10/2020	yes
Benesit	Smart Device for Posture Correction	01/11/2019	yes
Bleta	Tablet for Seniors	01/10/2020	yes
Footai Esports	Organization of eSports Leagues	07/011/2019	yes
Human It Care	Telemedicine and patient monitoring	01/01/2020	yes
Shellock	Transport & Logistic	01/12/2019	yes
Luci	Digital Health Solution for Alzheimer	22/11/2019	yes
Evix	Cycling Safety Helmet	01/09/2019	yes
Ludens Project	Serious Games Gamification	06/07/2021	yes
The Blue Box	Health Tech Detection of Mammary Cancer	27/07/2021	yes
Alerces	Platform to learn by experience	16/09/2021	yes
Medra	Data Base analysis for public institutions	27/04/2021	yes
VR Instruments	Health + AI+ VR medical diagnostic analysis	15/05/2021	yes
Pay-and-Go	Retail – Tech payments	29/09/2021	yes
Trip Through Your Wire	VR experiences for travelling industry	02/09/2021	yes
Balam	Sports CRM for Football Centers	01/03/2021	yes
Marketeen93	Marketing & e-commerce Consultancy	08/10/2021	yes
AVA	Respiratory Newborn solutions	14/04/2021	yes
Findenjoy	Marketing solutions Agency	11/11/2020	yes
Inskin	Software for dermocosmetics assistance	12/02/2021	yes
Lupper	Mobile App dating for gamers	03/03/2020	yes
Totx	Sustainable Constructions Systems	12/10/2021	yes

1.5 The University of Montpellier

Entrepreneurial students at the University of Montpellier can apply for the National status of student-entrepreneur and for the Student-Entrepreneur Establishment Diploma. With the status of Student-Entrepreneur, UM students can integrate PEPITE-LR, which is one of the “Students Centres for Innovation, Transfer and Entrepreneurship” of the Region Occitanie. Throughout PEPITE-LR, they have access to the pre-support programme “Starter”.

In addition, since 2019, a student start-up incubator has been created, inside “Montpellier Management” component of the UM.

National level

Initiated by the Ministry of Higher Education, Research, and Innovation in 2014, PEPITE France³³ federates thirty-three PEPITE, which are “Student Centres for Innovation, Transfer and Entrepreneurship”, spread throughout France. PEPITE's mission is to strengthen the entrepreneurial culture and innovation in higher education, by implementing awareness-raising, training, and support actions. PEPITE France helps students and young graduates to connect their business creation projects with companies as well as support and financing structures. The National Coordination PEPITE France leads this network.

At the national level, the "Entrepreneurial Spirit" plan³⁴ in favour of student entrepreneurship, announced on 2 May 2019 by Frédérique Vidal, Minister for Higher Education, Research and Innovation, makes students entrepreneurship a priority for the coming years. The plan aims at increasing entrepreneurship training, encouraging entrepreneurial projects during studies and improving the recognition of skills developed by students-entrepreneurs. To this end, the plan builds on the success of the student-entrepreneur status and the student-entrepreneur diploma (see below), promoted by the PEPITE France network, and proposes measures to amplify their effects.

One example of the measures announced was the provision of tailor-made entrepreneurship training, adapted to each student: *"Students must be able to benefit from entrepreneurship training adapted to their desires, from simple awareness-raising to in-depth study. For this to happen, entrepreneurship must be better integrated into university curricula, and be recognized as crucial factor in training and skills acquisition"*.

The national status of student-entrepreneur (SNEE)

The circular of ninth of June 2021 sets out the procedures for awarding the national student-entrepreneur status (SNEE) and the rights and benefits conferred by this status.

The national status allows undergraduate students and young graduates to elaborate an entrepreneurial project in a “PEPITE”. The national status secures the path of young start-up creators. Indeed, if graduated students want to create a start-up right after their studies, it is often financially precarious and offers little stability. This lack of stability does not allow people to dedicate 100% of their working-time to their start-up creation. Thus, with this national status, even graduated people can have a student's status.

The status gives access to services delivered within the framework of the PEPITE:

³³ PEPITE France, <https://www.pepите-france.fr/en/>, [Accessed 10 Feb 2022]

³⁴ Ministère de l'enseignement supérieur, de la recherche et de l'innovation, L'esprit d'entreprendre, le plan en faveur de l'entrepreneuriat étudiant, <https://www.enseignementsup-recherche.gouv.fr/fr/l-esprit-d-entreprendre-le-plan-en-faveur-de-l-entrepreneuriat-etudiant-49300>, [Accessed 10 Feb 2022]

- Support from a teacher and an external referent from the PEPITE network (entrepreneur, support and financing network).
- Access to the PEPITE or a partner's coworking space to encourage networking between student-entrepreneurs in their diversity and PEPITE's practitioner partners.
- Possibility of signing a Business Support Contract (BSC) with an incubator or Activity and Employment Cooperative (CAE) or another PEPITE partner.

Depending on the size of the project and the profile of the holder, the PEPITE commitment committee assesses whether registration for the "student-entrepreneur" (D2E) establishment diploma is essential.

National "Student-entrepreneur" (D2E) Establishment Diploma³⁵

The objective of the Student-Entrepreneur Diploma (D2E) is to provide an administrative framework and individualised pedagogical support to entrepreneurial students. This diploma is focused on entrepreneurial support to enable the follow-up and recognition of any student entrepreneurial project. The D2E is composed of a single "Education Unit" (UE) validated by the submission of a report and a defence at the end of the diploma.

The diploma confers rights and advantages that allow students to carry out their project with security and visibility. Any student who has been awarded the national status of student-entrepreneur following the examination of his or her file by the commitment committee of PEPITE can register for the D2E. Registration for the D2E is compulsory for young graduates and is strongly recommended for students during their studies but is not required.

The content of the diploma favours learning by doing, relies on digital pedagogical resources and provides the young project leader with co-supervision by teachers and professionals through coaching and mentoring offered by the support partners. The personalised coaching consists of twenty-hours of meetings with an academic coach and a professional coach. In addition, students have access to two group seminars at the beginning and halfway through the course, and a seminar organised with the Economic Development Agency of Occitanie Region (AD'OCC).

With the D2E, students have access to specific courses focused on building up essential skills for entrepreneurship, such as accountability, building a business plan, management, marketing, sell, communication etc. These courses are not compulsory.

The registration in D2E allows students to benefit from the same advantages as the national status of Students-Entrepreneurs:

³⁵ PEPITE LR, Diplôme Etudiant-Entrepreneur (D2E), <https://www.pepите-lr.fr/un-projet-une-idee/d2e-creawiz>, [Accessed 10 Feb 2022]

- Student status during the company creation period;
- Support, access to the PEPITE's coworking facilities and the necessary support to create their company;
- Training in entrepreneurship and management, geared towards the preparation and launch of an entrepreneurial project to be used in your career path.

In addition, students can substitute their entrepreneurial project validated by the PEPITE to the obligation to do an internship; the right to a gap year; and they also have the possibility of converting the "student-entrepreneur" diploma (D2E) into ECTS in the national diploma.

Region Occitanie

In 2010, the regional PEPITE pole of the former Languedoc-Roussillon Region (PEPITE-LR)³⁶ was created. The mission of PEPITE-LR is to promote entrepreneurial culture among students, to support them in their project of creating or taking over a company. PEPITE-LR aims to present entrepreneurship as a vector of professional integration.

Inside PEPITE-LR, the "Starter" programme offers a five-months full-time pre-support programme. Within this, students have access to workshops, testimonies, meetings with experts, dedicated space etc. It is the opportunity for entrepreneurial students to have a framework to work serenely and efficiently on their project, thanks to a working framework dedicated to a class of Student-Entrepreneurs.

In addition, since 2019, the Region Occitanie has been providing specific support for student entrepreneurship, committing to funding a whole series of awareness-raising and support actions for student entrepreneurs (example of calls-for-projects for the period 2019-2021).

Moreover, to support a strong entrepreneurial dynamic, the Region Occitanie has been financially supporting the implementation of regional network of business creation support structures for several years.

For instance, the Economic Development Agency of Occitanie Region AD'OCC leads the "Réso Incubateurs Pépinières +³⁷" (IP+). Forty-seven structures are grouped within the network which brings together support and accommodation structures for high-potential business creators. The Réso IP+ is mobilised throughout the Region Occitanie to help innovative projects emerge, thanks to a charter and a business reference system, a common operation, and adapted tools. In addition, IP+ network is involved in the governance of PEPITE and is in connection with local incubators.

³⁶ PEPITE LR, <https://www.pepите-lr.fr/>, [Accessed 10 Feb 2022]

³⁷ AD'OCC, Réso Incubateur Pépinières +, <https://www.agence-adocc.com/presse/communique-de-presse-adocc-lance-reso-incubateurs-pepinieres/>, [Accessed 10 Feb 2022]

University of Montpellier

At the UM, there are four mission heads, who are “PEPITE referents”. Their objective is to liaise between PEPITE-LR at regional level and the university and its components. The four referents are attached to the following UM components: University Polytechnic School of Engineering of Montpellier (Polytech), Montpellier Management (MOMA) and Business Administration Institute (IAE). Those referents are attached to the University President and to the Vice-President for Innovation and Partnerships.

According to one of the officers, currently, except for the components whose core business is entrepreneurship (IAE³⁸, Montpellier Management) and a few exceptions (example: UE "Patent Project" - Faculty of Pharmacy or ECUE "Responsible entrepreneurship and sustainable innovation" - Polytech Montpellier), students' entrepreneurship is not very democratised at the University of Montpellier. Nevertheless, in 2017, 800 students benefited from awareness-raising actions by PEPITE-LR, but it is still far from the 49 000 students that the University counts³⁹.

In 2020-2021⁴⁰, eleven students enrolled in the student-entrepreneur diploma (D2E) and sixty-five who have applied for student entrepreneur status are from the University of Montpellier, out of forty-four D2Es and 257 SNEEs in all the higher education establishments of the former Languedoc-Roussillon Region. That is 25% of the student entrepreneurs. Seventy-six students are supported out of a total of 49,000 registered students at the UM. Even if a good number of students who are entrepreneurs probably still go undetected, beyond the doctoral students, young doctors, or teacher-researchers, they represent an extraordinary but largely under-exploited potential for business creation.

Within the Partnership and Innovation Department, students can attend the monthly meeting of the National Institute of Intellectual Property, to learn more about Intellectual Property, patent, start-up creation, etc.

Montpellier University of Excellence (MUSE) ecosystem

Student entrepreneurship is at the heart of the Montpellier University of Excellence⁴¹ (MUSE) consortium's educational innovation policy.

³⁸ The Business Administration Institute

³⁹ Figures from a student challenge proposal submitted to the DIPA Director by the PEPITE referent at the UM

⁴⁰ Figures from a student challenge proposal submitted to the DIPA Director by the PEPITE referent at the UM

⁴¹ Montpellier University of Excellence, <https://muse.edu.umontpellier.fr/en/muse-i-site/> [Accessed 11 Feb 2022]

MUSE federates the sixteen partners of the consortium, each with their own offer, bringing together all the partners to work together, and animates the network. Inside MUSE, a working group “Incubation” has been constituted. It is composed of all members of the MUSE consortium and of external partners. The working group focuses on issues at the operational level, on how to improve the process to get students into laboratories; and how to involve students without scientific background and overcome the scientific barriers in a project of business creation.

Each partner of the MUSE consortium has its own support for student entrepreneurship. For instance, the Montpellier SupAgro/INRA incubation site is a member of the SYNERSUD network, one of the strongest links in the support of innovative projects relating to agronomic sciences, agri-food, the environment and biotechnologies. It is intended to support and accommodate "pre" and then "post-creation" project leaders from all backgrounds (researchers, doctoral students, students, professionals, etc.) with an entrepreneurial spirit and, above all:

- an innovative idea to develop,
- an innovation linked to agronomic research in the broadest sense of the term: a project based on research results or built with a research partnership.

Most of the projects are co-incubated by several structures, such as the Montpellier BIC (Business Innovation Center), which provide complementary skills and services.

In 2018, the CONNECT students initiative⁴² aimed at supporting student projects, of a voluntary nature, able to bring together all the students of the MUSE consortium around major societal issues. The objective was to transform the different campuses into real meeting and exchange points for all students and to open them to society.

In 2019, the second wave of the “Take-off”⁴³ call-for-projects aimed - in part - to support actions designed to 'help institutions bring their students closer to the business world'. The call-for-projects for pedagogical innovation supported the MUSE consortium’s strategy to transform its establishments. The objective was to promote top-quality education that reflects the site’s excellence in terms of training students and helping them acquire skills; encouraging pedagogical transformation in curricula teaching methods; and developing interdisciplinary opportunities using innovative teaching methods. This call-for-projects was open to all teaching staff at the consortium’s member establishments.

⁴² Montpellier University of Excellence, Student initiative, <https://muse.edu.umontpellier.fr/en/student-initiatives/> [Accessed 11 Feb 2022]

⁴³ Montpellier University of Excellence, <https://muse.edu.umontpellier.fr/en/pedagogical-innovation-2/>, [Accessed 11 Feb 2022]

Training offer in entrepreneurship at the University of Montpellier

At the University of Montpellier, students have access to several training on entrepreneurship, from bachelor to Master's Degrees:

- The "Entrepreneurship and SMEs" Bachelor's Degree teaches students interested in entrepreneurship both as student-entrepreneurs or as future actors in the entrepreneurial ecosystem.
- At Montpellier Management, the professional Bachelor's Degree "Entrepreneurship Professions" offers two work-linked training themes:
 - The "Business Creation and Takeover" training aims to train and support future entrepreneurs (business creators, developers of activities within existing businesses, business takeovers).
 - The "Management of VSEs/SMEs" aims to acquire the methods for managing a small or medium-sized company.
- There are also four Master's Degrees: "Entrepreneurial support", "Entrepreneurial and Digital Project Management", "International management of SMEs", and "General Management of SMEs".

Student entrepreneurship challenges

At the University of Montpellier, student challenges are organized on a faculty level, component level (for instance Polytech Montpellier), or even on a university level for Master's Degree students. The objective of these challenges is for students to find innovative solutions, for instance on an ecological and social level. For instance, students can work during one week on the challenge to go from idea to project. Inter-component competitions are also organised.

POL'INNOV Challenge and Montpellier Management Start-up Event are two examples of students' challenges organised at the University of Montpellier:

POL'INNOV Challenge⁴⁴

The Polytech Montpellier organises a sustainable entrepreneurship and innovation challenge for its year-five students, in partnership with the Metropole of Montpellier and PEPITE-LR.

Divided into multidisciplinary teams and immersed for a week, they had to mobilise their creativity and skills to invent a solution to a major sustainable development issue. They had to validate all the

⁴⁴ Polytech Montpellier, Polynov Challenge, <https://www.polytech.umontpellier.fr/formation/liens-utiles/challenge-entrepreneuriat-5eme-annee>, [Accessed 11 Feb 2022]

stages - technical, commercial, economic, financial, legal, social and environmental feasibility, etc. - with a view to making the solution available to as many people as possible.

Finally, they had to pitch the project to a jury of teachers and professionals.

Montpellier Management Start-up Event

Montpellier Management (MOMA) Start-up Event is a business creation competition organised for students in the Master's Degree Entrepreneurship programme. During the academic year, several teams of students design entrepreneurial projects by setting up a business plan. The students have six months to create their entrepreneurial project. These projects are then presented during a five-minute pitch to a panel of professionals, which represents a springboard towards business creation and the Montpellier ecosystem. There is one "final battle" to decide between the finalists. There are three winners and an award-winning favourite.

Obi.lab⁴⁵

At University Institute of Technology of UM, located in Sète, the Ob.i LAB²³, a Digital Fabrication Space inspired by the international network of Fab Labs, was created in 2017. This lab offers the use of digital equipment to master innovative technological tools, increasingly present in the industrial fabric. The main target audience is students. Ob.i LAB is divided into two spaces:

- A multifunctional space with free access to organise meetings, work in groups, make presentations, event gatherings etc.
- A digital creation workshop including a range of classic and digital tools.

Polytech support system for students entrepreneurs

Within the UM component Polytech (University Polytechnic School of Engineering of Montpellier), a support system for entrepreneurial students has been set up. It includes several facilities:

- Nautilus, a co-working and collaborative space, where Polytech students can work on their own project. It is used to develop, extend and deploy new teaching practices that aim to facilitate and encourage creativity, entrepreneurship, well-being, mutual aid and group dynamics. This space is part of Polytech Montpellier's more general ambition to change traditional teaching structures by focusing on learner-centred teaching approaches (project-based, peer-based and problem-based learning). The multidisciplinary nature of the student profiles (scientific, managerial and financial) will stimulate complementarity and creativity, through support for business creation, and visibility with industrial

⁴⁵ University of Montpellier, University Institute of Technology, Espace de Fabrication Numérique Ob.i LAB, <<https://iut-montpellier-sete.edu.umontpellier.fr/obilab/>>, [Accessed 08 Feb 2022]

partners. In particular students in the process of setting up a company can come and take advantage of the excellent conditions for maturing their project.

- BULLE, a new, user-friendly learning and collaborative work space, equipped with the necessary resources (documentary, digital, multimedia) to encourage exchanges between students, graduates, teachers and companies. The objective is to improve the integration of students, by co-constructing their professional project from the beginning of the engineering cycle, thus participating in economic development and perpetuating the links with partners in the socio-economic world. This space should help students to develop their professional project by drawing on the company network. The Polytech partners' club, which currently has forty partners, will be called upon.
- At the end of their studies, students have to work on a “project”. They have the possibilities of working on their own entrepreneurial project.

“Montpellier Consulting & Engineering” students consulting company

"Montpellier Consulting & Engineering" is a students consulting firm, born from the partnership between two components of the University of Montpellier: The Polytechnic School of Engineering and the Business Administration Institute. The student consulting company offers paid services to enterprises or public institutions. It allows students to gain business professional skills and to put into practice their technical skills.

IAE Start-up Lab

The IAE Start-up Lab is a student association that aims to promote employability and innovative entrepreneurship among students at the University of Montpellier and support them in boosting their projects. Their strong start-up dynamic open students up to a real entrepreneurial culture, give them access to formidable tools and allow them to create their own network.

UM I-lab by MOMA⁴⁶ (Montpellier Management) : Start-up incubator for students

The start-up incubator of the University of Montpellier has been created in 2019 and specialises in supporting students, young graduates, doctoral students and researchers with an entrepreneurial project from the MUSE perimeter. The incubator offers two training programmes (described below), including courses given by experts. It is a place for exchange and training, a skills accelerator and an idea generator. Students can follow a two-years incubation session to develop their business idea. They must sign an incubation charter that guarantees equal support to all. The selection process to be incubated in the UM incubator is selective, students must submit an application file that is validated by a committee.

⁴⁶ University of Montpellier, I-lab by MOMA, <<https://www.um-ilab.fr/>>, [Accessed 08 Feb 2022]

The incubator started to host incubates in March 2020. Since then, fifteen projects have been or a currently incubated within UM I-Lab by MOMA. In 2022, the incubator has received forty applications.

Table 10. Incubated entrepreneurial projects within I Lab by MOMA since March 2020

Entrepreneurial project	Short description of the project	Entrance date within the incubator I-Lab by MOMA	Currently incubated
APA' Mouv	APA' MOUV is a gym adapted to people with disabilities and/or chronic illnesses. Located in Palavas les Flots, it is the first in Occitanie and uses innovative equipment based on new technologies	16/03/2020	Yes
Bless Your Mental	Psychological coaching activity for young athletes after a physical injury	16/03/2020	No
Foils Souples	Design of 3D flexible foils for kitesurfing.	16/03/2020	No
Green e-Gestion	Eco-responsible online management and invoicing solution. Offers a responsible and human management of invoice reminders.	16/03/2020	No
Inverse studios	Street-wear brand made in France.	16/03/2020	No
Psych'Educ	Project of a Youtube channel on the theme of eating disorders with the aim of prevention.	16/03/2020	No
The Haiï Mask	Development of a mask to measure VO2 max. Intended for confirmed and high-level athletes, it will allow a follow-up of the performances and an improvement of the trainings.	16/03/2020	Yes

3D AD Diag	Rapid diagnostic device for Alzheimer's disease.	07/01/2021	Yes
μTrap	Device for the detection of food bacteria.	07/01/2021	No
NextMat 3D	Biomaterials allowing bone regeneration. Applied to the dental field, it facilitates the placement of implants.	07/01/2021	Yes
BioBeads	Biological alternative to pesticides to control pests such as tiger mosquitoes.	15/11/2021	Yes
DressCode	Application that lists the clothes in your wardrobe in order to suggest outfits according to different factors (weather, events...).	15/11/2021	Yes
Go2Wine	Application to connect wine merchants and millennials by helping them choose their wine.	15/11/2021	Yes
Peppers	Application dedicated to the event industry allowing to connect party organizers and young people looking for a party.	15/11/2021	Yes
Solar Experience	Small solar panels for phone charging.	15/11/2021	Yes

Located in the University Library Richter, the UM I-Lab incubator is an open-access and lively place where project leaders can meet, exchange ideas and welcome resource people. The incubator offers project leaders a coworking space, access to meeting rooms, training with experts and personalized follow-up with a business manager.

In addition, the incubator is also a place of learning for students who are not entrepreneurs.

The incubator is connected to a strong ecosystem of professionals. By mobilising all the private and public players likely to promote the growth of start-ups, the support programmes help the project leaders to make their project a reality and to build a network.

Project leaders have access to collective courses and individual courses based on the expertise they need. Training courses are varied and can answer most student needs and expectations.

The incubator also presents business success stories to give students ideas, encouragement and feedback from their peers. This sharing of common experience allows students to take a step back in order to have a general and objective overview of examples of the paths of business creation. Success business stories can trigger mentorship, students can rely on those experts, who can share their skills and network with the students.

Furthermore, through the incubator, students have access to networks and to potential investors.

The two training programmes of the incubator are the “Warm-up programme” and the “Take-off programme”:

- **The "Warm-Up" programme**

Warm-Up is a pre-incubation programme for students, recent graduates, PhD students and researchers at the University of Montpellier. The objective of this programme is to validate the economic feasibility of the project. It is a tailored training programme that offers training courses to acquire the entrepreneurial skills needed to build a business project. These courses are given by experts in the ecosystem and by UM teachers.

Project leaders benefit from personalised follow-up by the incubator's business manager, as well as quarterly meetings with the incubator's management staff.

In addition, project leaders can be accompanied by “Junior Coaches”, who are second-year Master’ students with pre-incubated companies. They coach incubees in their specialist areas to help them move forward with their projects.

Also, pre-incubatees take part in group workshops on specific themes to work on their projects. The aim is to pool their skills and solve their problems.

- **The “Take-Off” programme**

Take-off is an adapted training incubation programme for students, young graduates, PhD students and researchers at the University of Montpellier. Its objective is to accompany projects to market.

The Take-Off programme offers training courses to enable acquire all the skills needed to develop project and create company. These training courses are given by experts in the ecosystem and by teachers from the UM.

Project holders benefit from personalised follow-up by the incubator's business manager, as well as quarterly meetings with the incubator's management.

Project leaders benefit from support from an expert mentor and/or seasoned entrepreneur.

In addition, incubates benefit from a network of contacts thanks to the many people they meet during training sessions, individual meetings or events.

Globally, the incubated students at UM I Lab by MOMA who have been interviewed for the report are satisfied with the support of the incubator, by the courses and the coaching. Some of them believe the professional coaching is more efficient than the academic one, because it is more adapted to their concrete needs for starting a business.

Business & Innovation Centre (BIC) of Montpellier⁴⁷

The Business & Innovation Centre is the professional incubator of the Montpellier area and offers personalised support to project leaders.

Students entrepreneurs can be co-incubated in this incubator according to their needs. The incubator offers various training programmes, courses and above all access to an important network that can support students in their project, by giving them useful sharing skills, help them grab opportunities etc.

For instance, students with an innovative project can apply to participate into the “Jump' In Creation” programme of the BIC, to help them get their business off the ground in the best possible conditions. Based on a five-week residency at the BIC in Montpellier, combining group workshops and individual meetings with innovation experts, the programme brings together around ten entrepreneurs at each session. Business model, value proposition, commercial strategy, pitch, project management, communication, financing, intellectual protection, legal issues.... are some of the topics covered during this programme.

Participating in the Jump' In Creation programme means joining a dynamic ecosystem with privileged access to the services of the Montpellier BIC for the duration of the programme.

1.6 Utrecht University

At Utrecht University, entrepreneurial students get support from Utrecht-Inc Students (e.g. the Student start-up validation programme) and have access to the mentoring network of Utrecht-Inc.

Utrecht University is currently investigating whether it is feasible to set up an Utrecht Student Investment Fund, following the example of a number of successful examples such as those that exist at the universities and colleges in Enschede (Twente) and Amsterdam³.

Development and promotion of inclusivity within student entrepreneurship community is not overly considered in Utrecht University⁴⁸. The incubation programme is in English, so that all students from Utrecht University can participate. Utrecht-Inc Students (see below) does pay close attention to

⁴⁷ Montpellier Méditerranée Métropole, Business and Innovation Centre, <https://www.bic-montpellier.com/fr>, [Accessed 11 Feb 2022]

⁴⁸ Data collected in the survey filed by representatives of Utrecht University

have a diverse board (male/female, native/non-native). They try to lead by example, in order to stimulate diversity students to start the programme.

Utrecht University focuses on entrepreneurial education. All seven Utrecht University faculties and University College Utrecht offer some form of entrepreneurial education.

Executive Programmes on entrepreneurship

Bachelor's, Master's and PhD students can follow elective courses, minors or full programmes on entrepreneurship. New courses launched in 2020 include a Master's programme called “Business & Social Impact” and executive programmes on social entrepreneurship and social intrapreneurship for professionals.

The valorisation programme

At Utrecht University, one of the recent initiatives to support student entrepreneurship was the Valorisation Programme, running from 2010-2018. Through this programme, twelve regional consortia have given shape to, among other things, entrepreneurship education and knowledge transfer.

Utrecht-Inc Students (UIS)⁴⁹

Utrecht-Inc offers support to entrepreneurial students through Utrecht-Inc Students, the hub and incubator for entrepreneurial students in Utrecht. It supports them in kickstarting their start-up. The goals of UIS are to inspire, connect with other entrepreneurial people and support students on their journey of start-up creation. Thirty-six students have been incubated since the creation of the incubator.

The incubated students' start-ups within Utrecht-Inc for the period 2019-2021 are the following ones:

Table 11. Incubated students' entrepreneurial projects within Utrecht-Inc for the 2019-2021 period

Entrepreneurial project (start-up name)	Short description/website	Entrance Date Utrecht-Inc	End date Utrecht-Inc	Currently incubated?
ServeSupply	User-friendly web application for inventory management and automatic ordering. https://www.servesupply.nl/	08/10/2019	30/01/2020	No
Scientometrics	Scientometrics and Network analysis tool for researchers.	08/10/2019	30/01/2020	No

⁴⁹ UtrechtInc Students, <https://www.utrechtincstudents.nl/>, [Accessed 11 Feb 2022]

Bikeflip	Sustainable kids bike subscriptions; Kids grow, bikes don't. https://bikeflip.nl/	08/10/2019	30/01/2020	No
Pivot	On demand insurances.	08/10/2019	30/01/2020	No
Epiphany/Youwi	Habit-changing app that maps and monitors behaviour, shares research about certain behaviour patterns and helps you change your behavioural patterns.	03/03/2020	18/06/2020	No
DIMIK	Tool that supports teachers in giving personalised attention to students.	03/03/2020	18/06/2020	No
SPIND	Application that connects clubs and athlete/ platform where demand and offer meet, gathers all information about clubs and teams to make it easier to find vacancies and connect.	03/03/2020	18/06/2020	No
Assess.ai	Personalized, precise support designed specifically for you and your specific mental health needs.	06/10/2020	01/12/2020	No
Adaptex	SaaS solution that provides useful insights and lessons learned from existing data for project teams to enhance the overall quality of these projects. Adaptex takes your enterprise knowledge to the next level and allows your employees to access the knowledge they need, whenever they need it. https://www.adaptex.io/#/	13/04//2021	24/06/2021	No
BeTaught	BeTaught is an online platform on which people can offer and take lessons in any possible competence. https://tjwarners.wixsite.com/betaught	13/04/2021	24/06/2021	No
Transmission	A music-oriented digital platforms that allows its users to share music listening in the form of peer-to-peer music sessions, dictated by algorithms, with digital peer-to-peer interaction.	13/04/2021	24/06/2021	No
Wepics	App that uses AI to select your best photos to print and send to the user's home. Using sponsoring on the pictures to make it a free service. https://www.wepics.app/	13/04/2021	24/06/2021	No

Room for Living	Mobile urban living room that designs and builds with and for the inhabitants of different neighbourhoods. Establishing a social space which locals can use as their extended living room directly in their street.	13/04/2021	24/06/2021	No
OUT.FIT	Outdoor Training Platform. Platform that owns gym equipment and stages it in containers. Use the app as the key to the containers. The app also provides workouts.	13/04/2021	24/06/2021	No
Navia	Travel app that sets up travel routes which you can share with others. Connecting former travellers to future travellers. From set routes to personalized routes. https://www.naviatrips.com/	05/10/2021	16/12/2021	No
Stamps	Platform for people suffering of long-time illness to update their loved ones whenever suits them best.	05/10/2021	16/12/2021	No
LocalView	Application that connects travellers with locals. Travellers can become locals, not tourists.	05/10/2021	16/12/2021	No

The incubator offers legal, financial, business management, entrepreneurship, marketing, sales strategy support through workshops and programmes. In addition, they offer space, coaching, welcoming network, and a gist of entrepreneurial life. This gives students chance not only to nurture their start-up, but also to gain new knowledge and discover if starting their own business is a path for them.

The free programme “Student start-up validation programme” is an opportunity for students to validate their start-up idea. The validation programme is designed to help students build their start-ups and have a strong foundation alongside their study. The programme gathers an ecosystem of entrepreneurs and subject-matter experts to support students towards market validation for their start-up. The goal of the programme is to understand customers, product and business models and get insights on what to do next.

The masterclasses are structured around experiences from other entrepreneurs, field-tested insights and is supported by experienced experts in start-up entrepreneurship, pitching, customer discovery, and product development.

Accepted participants spend ten-weeks in a programme that consists of:

- INTRODUCTION session: Two intensive weeks during which start-ups jointly work on masterclasses and team building activities for one to two days per week.
- CONTINUATION session: During the rest of the programme, they spend one morning or afternoon per week on either a masterclass or a progress session.

In addition, Utrecht Inc Student has developed the “Utrecht’s student entrepreneurial network” (UIS) that gives students access to several communication channels through which they can meet new people, expand their network, and engage in interesting conversations.

Interviewed students are very satisfied with the support offered by Utrecht Inc Students: *“Utrecht Inc was very helpful with coaching and learning sessions. However, most valuable is the community offered by an incubator. There were workspaces, a network, events with the community - which is nice”; “The start-up incubator, Utrecht Inc, is great. The atmosphere is super good, lovely people, cool coaching, and good coffee”⁵⁰.*

Utrecht University Centre for entrepreneurship⁵¹

The Utrecht University Centre for Entrepreneurship (UtrechtCE) aims to create an academic environment in which students and employees can be entrepreneurial.

It provides support to student entrepreneurship through:

- Entrepreneurial education;
- Supporting teachers in designing and developing their courses, provide guest lecturers and facilitate an active teaching community on entrepreneurial learning;
- Help students turn their ideas into action.

Their missions are to:

- Inspire and help teachers to develop better education;
- Facilitate and actively encourage a community of teachers on entrepreneurial education;
- Provide an overview of all the entrepreneurial education on offer for students and professionals - both within and outside the curriculum.

They stimulate entrepreneurial behaviour that leads to new value creation:

⁵⁰ From the interview of entrepreneurial students at Utrecht University

⁵¹ Utrecht University, Centre for entrepreneurship, <<https://www.uu.nl/en/organisation/centre-for-entrepreneurship>> , [Accessed 24 Feb 2022]

- Actively show which possibilities and facilities there are for potential and starting entrepreneurs;
- Inspire with examples from entrepreneurial minds on campus;
- Organise events around entrepreneurship for students, researchers & entrepreneurs in the making.

Centre of entrepreneurship⁷ offers various courses, programmes and events that are available for entrepreneurial students.

Four courses are available inside the Utrecht University Centre for Entrepreneurship:

- Intrapreneurship: boost entrepreneurship within existing organisations;
- Living pasts: Build a prototype using AI to bring Utrecht's history to life;
- Fundamental of Business and Economics: Entrepreneurship: Pitch your seven-week-old start-up to potential investors;
- Da Vinci Project (Honours: dare to fail in the search for sustainable solutions.

Students' challenges

In addition, Utrecht University offers student challenges⁵² either alone or in collaboration with the academic partners in the Eindhoven-Wageningen-Utrecht Alliance⁵³ and various actors to find solution to societal challenges and new and innovative business ideas.

⁵² <https://ewuu.nl/en/2021/04/students-and-municipality-of-utrecht-join-to-solve-covid-challenges/> or

⁵³ <https://ewuu.nl/en/> [Accessed 11 Feb 2022]

2. MOTIVATIONS OF ENTREPRENEURIAL STUDENTS

The motivation of entrepreneurial students is various and numerous, but we can highlight some of the main tendencies that have been expressed during interviews of entrepreneurial students of the Alliance Universities⁵⁴:

- The willingness and involvement to be useful for society, to change things, *“to make a difference in the world”*⁵⁵ and to participate in a more sustainable world by answering citizens and end-users needs, especially disabled people or elderly:

“We had the idea to start back in April, lockdown 2020 when we saw a viral video of a man bringing his friend to a football game and tracing the position of the ball on his hand in real time. We saw this and thought we could use our technological expertise to do this for those who don't have a friend to do this for them”.

“I think that my generation, at least in my generation, we share that a lot. To say ok, but what's the point of what you're doing? And every time I see a grandmother with Bleta who is laughing or playing or who has been able to see her grandchild, it's worth it to me, beyond a higher salary.”

“We want to apply the circular economy in the municipality, of course, and then all of that means that you can generate more and more impact and not only because we generate it, but because the projects that you find when you get into this area are from people who really want to change things.”

“I feel that I have a strong responsibility to create value for planet earth: I want to leave the world better than I found it.”

- Having a creative and stimulating job

“I enjoy working on long-term projects and creating new things”.

“Also, I like the thrill of creating something new, not being able to know exactly how every other day of your life looks like -as I felt to be the case in employment. So, I would say it is a combination of natural tendency, intrinsic motivation and a sense of purpose”.

“Making a positive impact on the world and having a good time doing so”.

“I have always been interested in innovation or the challenge of creating something new. In addition, self-expression and entrepreneurship are important factors. Personally, it is mainly freedom and self-realisation that motivates me”.

⁵⁴ All the quotations are extracted from interviews with entrepreneurial students from the Alliance Universities

⁵⁵ From the interview of an entrepreneurial student of the Alliance

- Work for themselves, gain financial freedom and earn a living from their passions

“I want to be financially free. I want to own my own company so that I can decide how, when, and where I work. I also love the idea of having unlimited financial gain so that I can use that money to solve bigger and better problems facing humanity”.

“Work for myself doing something I enjoy”.

“In the end, I am an entrepreneur and I think that for a long time I have not been good at working for others, I think, because I really like to have the power of decision and to put my time where I think it is effective to be decisive”.

- Create more links and interactions between students and within the communities

“My co-founders and I had the idea for our start-up in January 2021 when we were living in TCD campus accommodation and feeling increasingly isolated due to a lack of connection between our fellow students. We decided to find a new way for university students to connect based on shared interests and experiences”.

“I am a mental health advocate and wanted to do something to help students”.

3. INCENTIVES AND DISINCENTIVES

By collecting and analysing the existing facilities to support student entrepreneurship in each of the Alliance Universities and by interviewing entrepreneurial students and incubator managers, we have been able to collect some incentives and disincentives at systemic, societal, university and individual levels regarding support to student entrepreneurship.

Systemic incentives

Promoting and funding student start-up, supporting entrepreneurial students and developing an entrepreneurship mindset and culture among societies is at the heart of current national strategies in each country of the CHARM'EU Alliance.

Also, in France, the national status of students-entrepreneurs and the National Diploma for Students Entrepreneurs allow to secure the path of entrepreneurial students.

Systemic disincentives

On a systemic level, some students believe that the administrative procedures for start-up creation are too long and complex. Some of them have shared losing a lot of time on bureaucracy, in submitting papers and files. This time involved in administrative papers is not dedicated to working on improving their idea, product and upscaling their project: *"To set up a company now there is too much paperwork, they don't make things easy. I think so much time is wasted at the beginning when resources are so limited, so much time is wasted in bureaucracy and not only, for example, in setting up or becoming self-employed or presenting everything to the tax authorities, which in the end you say look at the SL and the agency, but until now we have managed it a bit ourselves and it's a lot of time". ; "You lose a lot of time in bureaucracy that you could be using to improve your product"*.

In addition, some of the entrepreneurial students feel that governments are not very well suited to funding start-ups, as they are mostly doing new things or trying to innovate. Innovation does not always fit within their "innovation programmes": *"when I started my circular economy business, this topic was still supplied under the 'green energy' track, which was impossible to get funded from a grant as a result. Also did I not receive any outside capital - most of my work was self-funded up till today"*.

Some students also highlight a lack of funding available at national level to support the student start-ups funds. In addition, precarious conditions of students may prevent them for being involved in high-risk projects: *"There is the active discouragement (e.g.: high student debts)"*.

Traditional educational methods (like lectures) do not correlate well with the development of entrepreneurial thinking. There is a need for more interactive learning approaches, where the teacher becomes more of a moderator than a lecturer. Crossing boundaries between disciplines, and multidisciplinary collaboration, are essential elements in building enterprising abilities.

In addition, on a systemic level there may be a myth, a “*mental block*” regarding entrepreneurship, a “*common belief that entrepreneurship is difficult, that you are not going to succeed*”. Some students are still not very aware about entrepreneurship as a professional career: “*Most students don't even know it is an option to create their own future*”; “*The lack of insight into opportunities is a first part to the limitations*”.

However, we can note that things are moving fast and this lack of knowledge of student entrepreneurs is fading, more and more students are made aware of entrepreneurship and gain interest in it : “*We have to promote the idea that entrepreneurship is a way of being, it's not economic success in itself, but how you manage to improve as a person and develop projects, in the end entrepreneurship is a management project that you can apply to different areas, that you can create in your own company or within other companies*”.

Societal incentives

On a societal level, several start-up incubators are implemented at a local level and focus on different areas, for instance deep tech, agriculture etc. Those local incubators can host and incubate students to support them in their start-up creation by offering them hosting, training courses, access to a network, to investors etc.

Also, networking events are highly important for entrepreneurial students, as it allows them to be aware of the local entrepreneurial ecosystem and meet new actors that can be decisive and helpful to support kickstarting or upscaling their business project, such as mentors, investors, other entrepreneurs etc. It can also help students with team building.

Societal disincentives

Some students highlight a lack of clarity of the offer from the local actors, those in the local innovation ecosystem.

University incentives

Universities support entrepreneurial students through various type of support, mainly:

- Entrepreneurial education (bachelors and master programmes, executive programmes, specific trainings or modules for instance): “*The inclusion of entrepreneurship electives with in undergraduate courses*”.
- Students' challenges “*I am also a big fan of the Provost's Innovation Challenge to get more non-tech people interested in entrepreneurship.*”;
- Start-up incubators: “*Tangent - LaunchBox programme supported us with all the resources necessary for early-stage start-up. Trinity Entrepreneurial Society - helped us continue our journey this year*”.

- Training programmes: *“At the University, I participated in the Hungarian Start-up University Programme, which allowed me to learn more about the start-up world”.*
- Academic and professional coaching
- Mentoring and peer mentoring
- Collaboration with external actors, networking
- Events: *“Talks and events where we can hear about other entrepreneurial journeys”.*
- Mentoring: *“Also many examples of successful start-ups founded by Trinity students makes it feel as though it's possible for you to start your own business”.*

University support systems can be real incentives for students who could possibly be interested in entrepreneurship, but do not have a specific idea of a business: *“Since hearing about LaunchBox in my first year of studies at Trinity, I have been interested in starting my own business. However, I did not have any of what I viewed to be “good” ideas nor did I have the confidence to pursue any of these beyond some toy app development projects. I slowly began participating more in the Irish start-up ecosystem via attending Trinity Entrepreneurial Society events. During my 4th year of studies, I formed a team with some friends, and without any ideas we began brainstorming together. This led to us participating in both LaunchPad Sprints and LaunchBox which really kick started our start-up journey”.*

“Gain knowledge, learn more before getting started: I wanted to start my own business since first year of college, but I believed I need to ensure that I have all the necessary resources for that journey. Therefore, I used my first two years at Trinity to get involved with organizations, find out about college support and learn more about entrepreneurship before starting our small start-up”.

Globally, students are satisfied with the support provided by universities: *“I am completely satisfied with the university support. It greatly shortened the learning process, and the mentor system was also an important stage in the speed of start-up construction, even in changing the business model”.* Students would like to see more communication around university support system for student entrepreneurship, and even more initiatives to support entrepreneurial students.

University disincentives

In some of the Alliance Universities, staff and students notice a lack of political strategy and orientation to support entrepreneurship among students. Also, in some cases there is not enough communication on the opportunities available for entrepreneurial students at faculty and university level, it is not visible on the campus and on the website: *“I think the main barriers is lack of mainstream knowledge of these amazing helps that are on offer for students”;* *“The lack of information. It is very hard to get any knowledge regarding if, for example a student has a relatively*

good and worthy idea for a start-up, how she or he should acquire some well-needed help". Thus, it is very hard to be up-to date what the university offers in terms of innovation".

Some project managers working on support to student entrepreneurship do not feel supported by the university management and feel that there is not enough cohesion and coordination among the existing initiatives and on a national level. In some universities, some staff say that they are highly motivated to implement new support for student entrepreneurship, however they feel frustrated because they do not have the resources nor the political and operational support to do so.

In addition, some students underline the lack of support system inside their universities: *"I am not aware of the fact that there is a reasonable and wide-range support from my university"; "I am not satisfied with the support my university offers me, as I am not aware of any kind of major support / aid available to those who have a start-up idea to nurture"; "I would never credit them for start-up support or even a fertile start-up ground".*

Moreover, currently, the teaching of entrepreneurship is not yet sufficiently integrated in Higher Education institutions' curricula. Available data shows that the majority of entrepreneurship courses are offered in business and economic studies. However, some interviews have shared that it is questionable whether Business Schools are the most appropriate place to teach entrepreneurship: they believe that innovative and viable business ideas are more likely to arise from technical, scientific and creative studies. So, the real challenge is to build inter-disciplinary approaches, making entrepreneurship education accessible to all students, creating teams for the development and exploitation of business ideas, mixing students from economic and business studies with students from other faculties and with different backgrounds.

In addition, some universities do not offer working-time arrangements for student-entrepreneurs to be able to be flexible in their school schedule and have free working time to focus on their entrepreneurial project, which makes it difficult for students to focus both on their studies and their start-up creation project. Even if facilities are offered to students, it may not be supportive enough and sometimes dealing with both responsibilities make the start-up journey difficult and very challenging: *"Doing a start-up was not allowed to interfere with courses, so the [university] has not been supportive for me. Even though there are facilities, it was a hard sell".*

Also, some students criticise the fact that incubators training programmes do not let them enough available free time to work on their *"own thing"* and require them to focus mainly of the learning from the programme *"I had to defend my learnings, and I was told to focus mainly on the learnings from the programme and not growth from doing your own thing", "it is even discouraged in the sense that they will just not take your learnings from business serious in evaluating overall learnings and growth during the study programme".*

Individual incentives

Most of the student-entrepreneurs that have been interviewed admit that they always had *"an entrepreneurial spirit"*, the willingness to undertake, to create a project.

Being involved in a start-up creation project is a very stimulating and exiting project, which allows students to acquire a lot of knowledge and very useful skills in the professional world and learn from new experiences: *“I wanted to broaden my experiences”; “improve my interpersonal skills, test the business viability of my ideas and learn more about business and entrepreneurship”*. Also, it allows them to have access and to build an important network: *“To meet more likeminded people”*.

“I believe founding a start-up is an amazing experience, as it teaches you how to use all of your skills in different situations but also how to learn new skills quickly and implement them in order to solve upcoming challenges. My main motivation for creating a start-up is to create the freedom for myself and future co-workers, that will ensure we can create new things and move quicker and more efficiently while making that little positive change in the world”.

Individual disincentives

At an individual level, creating a start-up while being a student is a very challenging and time-consuming process, as they have to focus both on their studies, on accumulating knowledge and skills and on the start-up creation projects, which require specific skills and thus more trainings and courses: *“Starting a start-up and learning about it at the same time is a time consuming and difficult task”, “Building a start-up is like eating glass. Every step of the road is hard, except for coming up with an idea. Figuring out the problem to solve and the people that have the problem is tough in the beginning”*.

Sometimes, it is hard for students to take the plunge when they lack confidence: *“Nor did I have the confidence to pursue any of these beyond some toy app development projects”*.

Start-up creation has an impact not only on the student and professional life, but also in the personal life. In addition, starting a start-up while being a student can be financially challenging, as both positions are precarious.

Also, entrepreneurial students highlight the difficulty of team management, to make sure the schedule of the whole team matches to have common working time. In addition, some of the team can be involved full-time on the start-up creation project, while others are only involved part-time. Thus, advancement monitoring can be challenging. Building a strong, reliable and multidisciplinary team is thus essential for the success of a student start-up.

Moreover, a lack of understanding of entrepreneurship and of the opportunities, of the available supports for students may prevent them from being invested in a start-up creation project: *“I believe the first step would be the one that many students are hesitating from. They often believe that they need previous experience in order to start their business, while they actually just need to talk to right people”*. This is a high risk-project with difficulties in projecting oneself into the future, an instability which can be frightening and dissuade many students: *“The initial uncertainty of joining the student entrepreneurship social scene”*. In addition, some students believe they do not have the necessary background, skills, experiences and/or capital to start a business: *“A lack of capital and experiences makes it difficult to get started”; “Imposter syndrome & lack of capital. Until there is a high-profile*

unicorn coming out of Trinity, students will always feel as if they must be building from Silicon Valley”.

Staff from incubators notice that some student-entrepreneurs struggle with taking a step back from their project, they have their heads in the sand with the idea that everything has to be done in a hurry. Also, some students only focus on what they enjoy doing, where they feel confident, but start-up creation is not only this, they also have to deal with tasks and subjects they do not like and where they do not feel confident.

4. POSSIBLE PRELIMINARY RECOMMENDATIONS TO IMPROVE SUPPORT TO STUDENT ENTREPRENEURSHIP

Interviewed entrepreneurial students and start-up incubators managers have shared with us some potential recommendations on a systemic, societal and university and individual level. These recommendations are presented here. Quotes are taken from the interviews of student-entrepreneurs and start-up incubators managers.

Systemic level

On a systemic level, in some of the Alliance countries, students would like a recognition of their status of “student-entrepreneurs” and the possibilities of working-time arrangements for student-entrepreneurs.

In addition, they would like to have access to specific student grants to support them. Indeed, as students, some of them can be in a precarious financial situation and would need more financial support to have more time to dedicate working on their entrepreneurial project.

Also, they wish more funding would be available at national level to support students’ start-up, as this is a high-risk project.

According to the incubators managers, there is an incredible potential for entrepreneurship in the Alliance countries that is underexploited. There is a need to create a stronger entrepreneurial culture inside the society, and make people believe that they can undertake entrepreneurial projects and they can have an impact: *“But entrepreneurs have to believe more in what they can do and how to make an impact”*. This change of mindset on entrepreneurship should not only be at national but also at European level.

In addition, there is a need for more visibility of the national support systems for student-entrepreneurs (for instance the HSUP in Hungary or the PEPITE network in France). Those support systems should be a more integral part of university life and students’ academic careers.

Societal level

On a societal level, students give recommendations to local external incubators. They would like to have more visibility about the role of each actor offering support to student-entrepreneurs. They would like to know which organisation they should contact at which step of their project, depending on their status.

University level

Most of the recommendations relate to the university level, or on a faculty level, which are more adapted to offering support to entrepreneurial students, according to the principle of subsidiarity. Interviewed administrators and entrepreneurial students believe that the national systems and organisms cannot substitute or replace university systems.

Universities can act in several fields: education, incubation, management etc, and at their level or on a faculty level. Students really encourage universities to go support student-entrepreneurs, for instance through entrepreneurial education, mentoring, coaching, networking and incubation.

Entrepreneurial education

Students would like to see more business and entrepreneurial modules, courses, training, Bachelor's and Master's degrees. They wish universities could provide every student with at least one course to create a solution to problem and share learnings, on starting a business, being creative. It is essential to develop innovative thinking across all subjects. They advise these courses to be interdisciplinary and transdisciplinary where everyone can fill a role adapted to their specific domain: *"This will prepare students for collaboration, creativity, growing strong when things don't work out. This would actually be super cool"*. In addition, they would like universities to develop more learning-time for exploration of ideas. Indeed, they believe that *"The future will simply not consist of factory workers but rather of a highly dynamic workforce that must be able to adapt to any situation and unforeseen change - tech. dev. goes increasingly faster. We, the students of today, will likely be going through various super trends, even beyond AI, Additive Manufacturing and spaceflight. Therefore, giving students space and applaud for trying new things and exploring on their own would be gold beyond imagination"*.

Students would consider education to be more practical, where case studies would be more important than theoretical education.

Teachers and projects leaders inside universities are aware of this demand: *"The demand for learning about entrepreneurship is increasing. However, there is a shortage of human resources and funding for this type of education; therefore, it is not possible to meet this demand fully. Action-oriented teaching is labour-intensive and costly, and requires specific training. There are currently too few professors of entrepreneurship. There is a need to graduate enough PhD students in entrepreneurship who can become teachers. Moreover, there is very little in terms of incentives to motivate and reward teachers for getting involved in entrepreneurial teaching and interaction with students. It is currently difficult to build a career in entrepreneurship, as research remains the main promotion criterion"*.

Students' challenges and business-related events

Moreover, students would like to see more students' challenges and competitions to get a taste of entrepreneurship bit by bit. Indeed, they believe that *"Start-up competitions once a year is not enough to have an innovation hub in the university"*. Those challenges are very helpful to spot students that have the fibre for entrepreneurship, it is a good opportunity for entrepreneurial students to test their ideas, so there should be more of this kind of events.

They would like universities to provide an interface for students with similar interests to find each other. Universities could think about what such an interface could look like, in collaboration with students.

Students believe that it is worth creating as many business-related event and meetings as possible within the wall of the universities.

Recognition and valorisation of student-entrepreneurship

Entrepreneurial students would like that managing an entrepreneurial project while studying would be more valorised by universities, instead of being an obstacle to the smooth running of their school curriculum. For this, working-time arrangements should be extended and generalised for student-entrepreneurs.

Also, students would like to improve the recognition of the skills developed by student-entrepreneurs, in particular towards companies.

Communication and visibility of the support system

In addition, students advise universities to communicate more widely about the entrepreneurship support they provide, to make more students aware of the possibilities of support they have access in their institutions: *“information is key first of all”*. It would give more students a sense of support, that they have the opportunity to embark on an entrepreneurial adventure with the help of their university: *“Regular information to students regarding entrepreneurship and innovation support, courses and so on would be a must”*. Indeed, numerous students are not aware of the entrepreneurship world and of the devices available to support them within universities. Also, teachers are sometimes not aware of the existing support for student-entrepreneurship either. More awareness towards teachers would allow them to advise their students better.

Further, better communication makes it easier to raise awareness about student-entrepreneurship among students, and in turn helps create a positive entrepreneurial culture and mindset among universities. Students should know that entrepreneurship is a possible career path. Start-up incubator managers are aware of this necessity of communicating more and creating an entrepreneurial mindset within students' communities: *“We have to promote the idea that entrepreneurship is a way of being, it's not economic success in itself, but how you manage to improve as a person and develop projects, in the end entrepreneurship is a management project that you can apply to different areas, that you can create in your own company or within other companies”*.

Incubators

Inside incubators, students would like to have more gradated levels of training course available. They would also prefer a longer incubation time with more hours dedicated to each course, for instance on accounting, they say they need more time to spend on financial tables.

At the management level of start-up incubators, there is a need to have more people in the team to be able to support all the students: *“there comes a point where we can't do more things, as we are*

in this process of growth is to have more people to offer more resources and reach more projects, in the end we have started quite well but the potential for growth is much higher”.

In addition, some start-up incubator managers believe that they should standardise their management system in order to be able to provide even better monitoring of each project: *“We need a system that generates this information and that can provide different types of data so that we can measure the progress of the projects, and diagnose why we have made progress and where we have not made progress in order to really work on the points of greatest weakness, I think that would be more in that sense”.* Thus, the Alliance Universities could think together on how to improve the operationalisation of their management systems inside their start-up incubators.

Incubator managers believe that they would need more experts inside their walls to support students, *“to help us give them this push, because in the end it is more about giving them the possibility to believe, as there are people who kill them before they even start, I think this is our differential, I make them see how far they can go and how far they can go, then how each one builds the road”.* They believe they must give support in the sense of motivation and inspiration.

Access to funding

Some of the Alliance Universities are thinking about how to implement financial support for student-entrepreneurs. The most difficult part of a business creation being the creation phase, students need financial help to survive. Students need freedom and free time to focus on their project, which is difficult with limited resources. The Alliance Universities which to *“support entrepreneurship in a way that you can make a living from it”.*

We can note that some of the Alliance Universities programmes already offer funding to student start-up, such as the LaunchBox accelerator in Trinity College of Dublin.

Management level

Some referrers or incubators managers believe that there is too much “sprinkling” of student-entrepreneurship within universities and that this should be more structured. There is a need in some universities for a stronger political will to develop support systems for student- entrepreneurs, more strategy and concrete actions. Sometimes, political issues disrupt strategic issues, at the expense of the students.

Some universities could think about building a stronger teaching project for student-entrepreneurship.

In the Alliance Universities, some “entrepreneurship” referrers could be positioned (if not already done), for instance on a faculty level, for students to know which door to knock on when they have an entrepreneurial idea.

Some information sessions on the support system available for student entrepreneurship inside universities could be organised for teachers and students.

Individual level

At the individual level for students, some university administrators, referents, projects leaders and incubator managers have shared with us several potential recommendations for entrepreneurial students:

- Entrepreneurial students should surround themselves with a reliable and efficient multi-disciplinary team. Indeed, it is paramount for the success of a start-up to gather various profiles in order to deal with multiple issues and to have broader knowledge and skills. It is also important to team-up with people you can trust and who are really available to invest their time in the project.
- Entrepreneurial students should not be afraid to ask for help and assistance when they feel lost in their business creation project and to reach out to more experienced people to get feedback on their actions and peer advice.
- Entrepreneurial students should learn to sometimes take a step back from their project in order to have a more objective overview of the next steps and of the priorities.
- It is important for entrepreneurial students to invest in themselves, attend various entrepreneurial courses to gain knowledge on business creation, but also accounting, management, communication, marketing, sell strategies, pitching etc. Indeed, some entrepreneurial students may have the tendency to mainly focus on the subjects they enjoy, and what they like to be doing. Yet, a start-up creation requires many skills and not a single aspect should be less worked on for the success of the start-up.
- It is paramount for students to learn how to pitch their project and to popularise their concept or technologies to attract potential investors and partners.
- Finally, entrepreneurial students should not underestimate the importance of networking. Events are the right place to meet the right person, which can really boost their projects.

CONCLUSION

We found that all of the Alliance members have taken steps to develop a system that support student entrepreneurship within their institutions.

All Alliance Universities have entrepreneurial education degrees available from Bachelor's to Master's level, for undergraduate and postgraduate students. Some of the Alliance Universities also offer professional entrepreneurial education.

In addition, the Alliance Universities organise students challenges to give them a glimpse of entrepreneurial projects and student entrepreneurship. These challenges can be between one day and one week long, usually a team of students work on a business idea and pitch the project at the end. The winners can be awarded a grant to support their project. Universities can also encourage their entrepreneurial students to participate to local or national challenges and prizes.

Some of the Alliance Universities implement national programmes for student entrepreneurship on a university level, such as the Hungarian University Start-Up Program being implemented in ELTE and the PEPITE support being implemented in the University of Montpellier.

In addition, four out of the five of the Alliance Universities have one or several incubators to support entrepreneurial students improve their business skills and learn new knowledge through specific trainings that includes courses, finding investors, networking etc. Each incubator can offer several different levels of programmes to fit the different phases of start-up creation. Incubates also have access to a working place, tools, networking events etc. Most interviewed entrepreneurial students are very satisfied with the incubation programmes within their universities, that have really help them start and upscale their projects.

Trinity College of Dublin has also created a specific mentorship workshop dedicated to female entrepreneurial students, called Women Who Wow.

Trinity College of Dublin and Utrecht University have also developed entrepreneurial "communities" within their institutions, with the Trinity Entrepreneurial Society and Utrecht University Centre for Entrepreneurship. They aim at creating an entrepreneurial society where people can share and have access to resources, workshops, training courses and mentorship.

Most of the entrepreneurial students interviewed are globally satisfied with the support system for student entrepreneurship currently in place within their university, especially with the support provided by student start-up incubators. Incubators help them overcome their feeling of incompetence, learn new diverse skills to build and manage a start-up, learn how to build a team, how to pitch their projects, how to find investors. Students have access to academic and professional coaching and to mentorship. Also, incubators provide students with a common entrepreneurial place where they can meet like-minded students and with a broad entrepreneurial network that is very useful for students to broaden their horizons, meet new people and find appropriate skills and technologies to upgrade and support their project.

However, some students would like to see more entrepreneurial education on offer within all faculties, and that the entrepreneurial education would be more inter and transdisciplinary. Also, they deplore that in some of the Alliance Universities the support system is not visible enough, as many students are not well aware of the support offer they could get to help them develop their ideas. They encourage their universities to pursue their effort in developing more support for entrepreneurial students.

In addition, administration staff and start-up incubator managers also believe that more awareness should be raised among students and teachers regarding student entrepreneurship and the support system. Also, more staff should be hired within universities to coordinate and develop student entrepreneurship support activities as the demand is increasing. In some universities, some interviewed administrative staff deplore the “sprinkling” of student entrepreneurship support activities and a lack of strong political strategy. They would also like to work on developing more funding opportunities to support student entrepreneurship.

Below, we have compiled two tables to represent our findings in detail. The first table presents an overview of the student entrepreneurship support system within each of the Alliance Universities. The second table introduces the incentives and disincentives for student entrepreneurship support on a systemic, societal, university and individual level.

Summary table of the institutional strengths for student entrepreneurship support system:

Table 12. The Alliance institutional strengths for student entrepreneurship support system

	Admin coordination	Entrepreneurial Education	Student challenges	Incubator	Trainings programmes	Entrepreneur-ship centre/society/com munity
ELTE	The Centre for innovation		the “Innovative Students’ Ideas Contest”		The Hungarian Start-Up University Programme (national programme): 12 learning-modules divided into 2 semesters to acquire practical knowledge of building businesses	
TCD	Tangent, the Hub for Innovation and Entrepreneurship	Undergraduate education Post-graduate education Professional Education Trinity Business School MSc in Entrepreneurship	Provost’s innovation Challenge	Open incubator Alsessor, AI Accelerator TES Incubator	LaunchBox: summer accelerator programme for students early-stage business Blackstone LaunchPad: experimental programme focuses on entrepreneurship Women Who Wow: mentorship programme for female students Tangent Pioneers: internationalisation of start-ups	The Trinity Entrepreneurial Society (TES): Incubator, Dragons’ Den, Talks, Start-up Fair
UB	StartUB!	UB Business School	Innovation Days (iDay)	StartUB!	IDEATE Entrepreneur’s guide for beginners: starting point to improve knowledge in business	

					<p>Design Thinking: skills for thinking outside the box</p> <p>Akademia: online programme, eight sessions lead by experts in different sectors</p> <p>Innovation Thinking: co-creation workshop</p> <p>VALIDATE: validating the business idea</p> <p>From science to market: showcase thesis and see the possibilities of creating a company</p> <p>Business Model Lab: 20-hour introductory course on business creation</p> <p>LAUNCH: cover the initial stage of project development up to the establishment of start-ups</p> <p>StartUB! Sprint: 4-month programme to accelerate entrepreneurial projects</p>	
UM	On an individual component level and MUSE	Bachelor'ss and Master's Degrees	Pol'innov Challenge Start-Up MOMA	UM I-Lab by MOMA	<p>Warm-Up: pre-incubation programme to validate the economic feasibility of the project</p> <p>Take-Off programme: accompanying projects to market</p> <p>Junior coaching</p> <p>Local and National level: PEPITE Starter programme: 5-month full-time programme for entrepreneurial students</p>	<p>On a local (PEPITE-LR) and national (PEPITE) level</p> <p>On an individual component level: IAE Start-up Lab (Business Administration Institute)</p>
UU	Utrecht Inc Students	Executive programme on Entrepreneurship		Utrecht Inc Students	10-week programme with introduction and continuation sessions	The Utrecht University Centre for Entrepreneurship (UtrechtCE)

Summary table of the incentives and disincentives for student entrepreneurship support methods at different levels:

Table 13. Incentives and disincentives for students' entrepreneurship support methods at different levels

	Incentives	Disincentives
Systemic	<p>National strategies of Higher Education integrate priorities on student entrepreneurship</p> <p>In some countries, a national status for student-entrepreneurs and a national establishment diploma</p> <p>Competitions and prizes to support entrepreneurial projects</p> <p>In some countries, national programmes to support student entrepreneurship</p>	<p>Administrative procedures may be too long and complex</p> <p>Lack of student grants for entrepreneurial support</p> <p>Lack of funding to support student start-ups</p>
Societal	<p>Incubators with a large offer</p>	<p>A lack of visibility for the offers of societal actors</p>
University	<p>Entrepreneurial Education</p> <p>Student Challenges</p> <p>Start-up incubators</p> <p>Training programmes</p> <p>Networking</p> <p>Housing facilities</p> <p>Mentorship and coaching</p> <p>Entrepreneurial society</p>	<p>Traditional education methods are not suitable with the development of entrepreneurial thinking</p> <p>Lack of visibility of the support system in place</p> <p>Too much "sprinkling", not enough political will and strategy (in some universities)</p>
Individual	<p>Create a project useful for the society and participate to a more sustainable world</p> <p>Create a job them enjoy</p> <p>Learn new skills</p> <p>Gain financial freedom</p>	<p>Hard to overcome the feeling of incompetence "imposter-syndrome"</p> <p>Hard to combine studies and the development of an entrepreneurial project</p> <p>Sometimes, financially precarious situation</p>

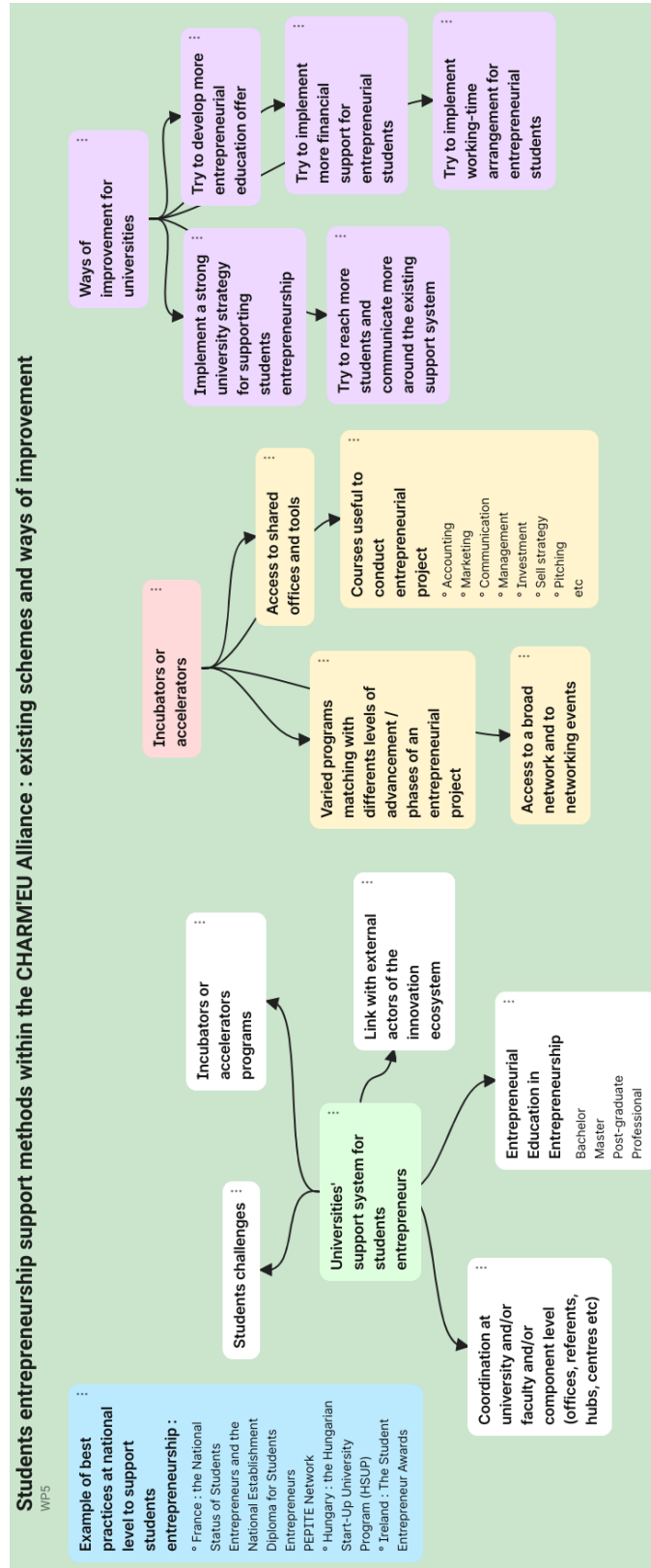


Figure 1. Student entrepreneurship support methods within the CHARM'EU Alliance: existing schemes and ways of improvement



ANNEX I: STUDENT ENTREPRENEURSHIP SUPPORT METHODS SURVEY

1. Do you have offices responsible for student entrepreneurship's support?
 - Yes (please indicate)
 - Not explicitly, but it's part of responsibilities of specific agents or offices (please specify)
 - No
2. Which support is available for entrepreneurs' students? [Multiple answers possible]
 - Legal support
 - Financial support
 - Administrative support
 - Business management support
 - Entrepreneurship support
 - Marketing support
 - Sale's strategy support
 - None
 - Other (please indicate)
3. Is there a handbook/written methodology available for students willing to create a start-up?
 - Yes (please link the document)
 - Current reflection
 - No
4. Do students entrepreneurs have a tutor/mentor to support and advise them inside the University?
 - Yes
 - Under discussion
 - No
 - I don't know

5. Is there an entrepreneurship bachelor and/or master programme?
 - Yes, bachelor programme
 - Yes, master programme
 - Yes, both bachelor and master programme
 - No
6. If yes, does this programme include a working-time arrangement?
 - Yes
 - No
 - I don't know
7. Are there any grants available for students willing to create a start-up?
 - Yes (please indicate)
 - No
 - I don't know
8. Does the university associate with external actors to support students' entrepreneurship?
 - Yes (please indicate the main partners)
 - Under discussion
 - No
 - I don't know
9. Tools available at the University for students entrepreneurs
10. Is there a students' start-up incubator inside the University?
 - Yes (please indicate)
 - No
11. If yes, how many students have been incubated since the creation of the incubator?
12. Does the specific strategy take into account different social and economic background of students and promote inclusiveness? How?

ANNEX II: INTERVIEW MATRIX FOR STUDENTS ENTREPRENEURS

Gender

Age

Nationality

Education

1. Which training are you following at the University?
2. How was matured the idea of creating a start-up?
3. What are your personal motivations in creating a start-up?
4. Do you get support from the University to create your start-up? If yes, by who is provided this support?
5. Are you incubated in a start-up incubator?
6. If yes, which support do you get inside the incubator?
7. Did you get a grant to help your start your project?
8. Who are the shareholders of your start-up?
9. Do you benefit from a special status? If yes, what are the advantages of the status?
10. Did you encounter any difficulties during the start-up creation process?
11. Are you satisfied with the support offered by the University? And by the incubator (if applicable)?
12. According to you, what are the best practices implemented inside the university to support student-entrepreneurship?
13. According to you, what barriers are hampering student-entrepreneurship inside the university?
14. Which recommendations would you give the University to improve student-entrepreneurship support methods?

ANNEX III: INTERVIEW MATRIX FOR START-UP INCUBATORS MANAGERS

1. Date of creation of the start-up incubator
2. What are the objectives and missions of the start-up incubator?
3. Which support is offered to the incubated start-up? Please describe the different trainings available
4. How many start-ups are incubated per year since the creation of the incubator?
5. Who are the different actors involved in the incubator (for instance: entrepreneurs, enterprises, investors, mentors etc.)
6. Success story
7. What are the good practices implemented in the incubator to support start-up creation?
8. Which difficulties do you encounter?
9. Which recommendations would you give to improve students-entrepreneurship support methods?