



Building an Open Innovation program between universities and corporate partners in Brazil through an online entrepreneurship platform

Luiza Melo Villardi

Dissertation written under the supervision of Professor René Bohnsack

Dissertation submitted in partial fulfilment of requirements for the MSc in
Business, at the Universidade Católica Portuguesa, January 5th 2022.

Contents

Abstract English.....	1
Acknowledgments	3
List of Abbreviations	4
List of Figures.....	5
List of Tables	6
1. Introduction.....	7
2. Theoretical Background.....	9
2.1. Open Innovation.....	9
2.1.1. Definition	9
2.1.2. How do Universities Benefit from Open Innovation Programs with Corporate Partners?	11
2.1.3. How do Corporate Partners Benefit from Open Innovation Programs with Universities?	11
2.2. Blended programs: Why adopt them?	15
2.3. Venturely: What is it?.....	16
3. Methodology	19
3.1. Variables and Measures.....	19
3.2. Research Design.....	20
3.3. Data Collection Procedure: Interviews	23
4. Results	26
4.1. Stakeholders Expectations for Blended Open Innovation Programs.....	26
4.1.1. University Professors	26
4.1.2. University Students.....	28
4.1.3. Corporate Partners.....	29
5. Synthetized Prototype of an Open Innovation Program.....	31
5.1. Program Details.....	31
5.1.1. Program Type.....	31

5.1.2.	Duration	32
5.1.3.	Human Resources	32
5.1.4.	Defining the Challenge	34
5.1.5.	Modules	34
5.1.6.	Pitch and Jury	37
5.1.7.	Reward for Students	37
5.1.8.	Investment	38
5.1.9.	Next Steps	38
5.2.	Venturely: How it can be adapted?	38
6.	Conclusions	42
	References	44
	Interviews	47
	Appendix	48

Abstract English

Coined in 2003 by Henry Chesbrough, the concept of open innovation consists in the idea that innovation can also take place outside the company, either with start-ups, students, professors, and others. It can be developed in many different ways, including open innovation programs with university students, seen as a group always up to date with new trends and technologies. However, there are many bureaucracies involving the partnership between these two stakeholders.

Therefore, a need arises to try to reduce these bureaucratic issues and allow the development of innovative ideas of products and services to companies. In order to do so, this thesis included extensive research about the insights of the stakeholders involved through eighteen interviews as well as the related literature to develop a blended open innovation program applicable to Brazilian universities and companies.

As a country with great potential to innovation, Brazil was chosen due to the lack of well-established programs of this kind with potential to scale. When talking about scalability, it is important that the program is supported by a platform with capability to allow the interaction between stakeholders, with Venturely being the chosen one for this purpose.

The results of this dissertation contributed to the creation of a synthesized prototype of a blended open innovation program between companies and universities in Brazil.

Keywords: *Open innovation, blended program, company-university partnership, Brazil*

Title: Building an Open Innovation program between universities and corporate partners in Brazil through an online entrepreneurship platform

Author: Luiza Melo Villardi

Abstract Portuguese

Formulado em 2003 por Henry Chesbrough, o conceito de inovação aberta consiste na ideia de que a inovação pode ocorrer fora da empresa, seja com start-ups, alunos, professores, entre outros. A mesma pode ser desenvolvida de diversas formas, incluindo programas de inovação aberta com estudantes universitários, vistos como um grupo atualizado com novas tendências e tecnologias. Entretanto, existem muitas burocracias envolvendo a parceria entre as partes.

Com isso, surge a necessidade de se reduzir questões burocráticas e permitir o desenvolvimento de ideias inovadoras de produtos e serviços para empresas. Conseqüentemente, esta tese incluiu uma extensa pesquisa sobre as percepções dos atores envolvidos por meio de dezoito entrevistas, bem como a literatura relacionada para desenvolver um programa híbrido de inovação aberta aplicável a universidades e empresas brasileiras.

Por ser um país com grande potencial de inovação, o Brasil foi escolhido pela falta de programas desse tipo consolidados e com potencial de escala. Quando se fala em escalabilidade, é importante que o programa seja apoiado em uma plataforma com capacidade para permitir a interação entre os atores, sendo a Venturely a plataforma escolhida para o efeito. Os resultados desta dissertação contribuiram para a criação de um protótipo sintetizado de um programa híbrido de inovação aberta entre empresas e universidades no Brasil.

Palavras-chave: *Inovação aberta, programa híbrido, parceria empresa-universidade, Brasil*

Título: Building an Open Innovation program between universities and corporate partners in Brazil through an online entrepreneurship platform

Autora: Luiza Melo Villardi

Acknowledgments

Given the fact that this dissertation was written under the supervision of Professor René Bohnsack, I would like to first thank him for the amazing support throughout this challenging semester. I would like to thank him for constantly challenging my ideas and helping limiting them to keep focused on the truly important feasible aspects. Besides that, I would also like to thank Claudia Marante for her support and constructive feedbacks so that this thesis could be adequate and a great experience.

Also, many thanks to the eighteen interviewed for their availability and valuable insights regarding the theme. Really important insights were collected, which made the outcome of this dissertation possible and reliable.

I would also like to thank my team at work: Carolina Fernandes, Catarina Lisboa, Gonçalo Rodrigues, Leonor Neto, and Manuel Mello for being so empathic throughout this semester. Thank you also for challenging and inspiring me to give my best every day.

Thanks also to my friends, especially Clara Portugal, Júlia Vieira, and Letícia Rangel for being so supportive throughout this journey. Thank you for being so comprehensive and for always being there for me. I will miss you a lot.

Lastly, I would like to thank my family for making this dream possible. Thank you for believing I would get this far and for investing on me. I will never be able to thank you enough for everything you have done.

List of Abbreviations

IP	Intellectual Property
MVP	Minimum Viable Product
NDA	Non-disclosure Agreement
Q&A	Questions and answers
R&D	Research and Development

List of Figures

Figure 1. The Knowledge Landscape in the Open Innovation Paradigm	9
Figure 2. Step-by-step procedure of open innovation implementation.....	13
Figure 3. Example of Venturely's Venture Creation Process.	16
Figure 4. Venturely's Smart Business Model Canvas.....	18
Figure 5. Overall methodology.	21
Figure 6. Summary of the prototype of the open innovation program.	31
Figure 7. Modules Timings.....	34
Figure 8. Icon for the Ideas Development section.	39
Figure 9. Example of Venturely adaptation with company's logo.....	40

List of Tables

Table 1. Summary of Innovation Initiatives.	20
Table 2. Interviewed.	25
Table 3. University professors interviewed.	27
Table 4. University students interviewed.....	29
Table 5. Companies interviewed.....	30
Table 6. Suggestion for Venturely adaptation.	39

1. Introduction

A Financial Times report from March 2021 showed that the search for online education programs increased heavily in the past few years (Moules, 2021). At the same time, innovation helped EU companies to mitigate the negative effect of the COVID-19 pandemic (Santos, Haegeman, & Castello, 2021). But what do they have to do with each other?

Evidence shows that companies and universities can benefit from the interaction between them to generate innovation within the company's framework as many firms do not have all the competencies to do so in-house (Lehoux, D'Amours, & Langevin, 2010). At the same time, universities continuously build infrastructures to benefit from this opportunity, such as Harvard's Innovation Labs, Columbia's Innovation and Entrepreneurship Ecosystem, Nova SBE's Innovation Ecosystem, and many others.

The rise of these mechanisms within universities' structures shows a tendency to both foster students' business but also to cooperate with well-known companies to bring innovative ideas to their business models and challenges. In this context, these ideas can be specially brought by students through open innovation programs in the form of challenges as long as they have a robust structure. Although this model is widespread in Europe and the United States, in some countries it still faces barriers.

Brazil is an example of that as, although the country's big potential, companies and universities still find it difficult to implement open innovation programs between themselves. There are cultural, institutional, and operation obstacles for that (Van Dierdonck & Debackere, 1988). Cultural ones reside in differences in some matters, such as in Intellectual Property (IP) rights and aims, while institutional ones relate to different understandings of possible outcomes and responsibilities (Van Dierdonck & Debackere, 1988). At the same time, operational barriers include differences in processes, project management, and expected results (Van Dierdonck & Debackere, 1988). Interviews made for this project also concluded that the abundance of bureaucracies interfere in the realization of these programs.

Due the pandemic context in which organizations adopted a more flexible approach, it is important to allow initiatives to happen in a blended format, also to allow the inclusion of more people. Furthermore, studies show an increase in the search for online learning (Moules, 2021), with a clear tendency for it to continue even after the COVID-19 pandemic (Singh, 2021).

Meanwhile, blended programs must have a well-established structure to allow proper development of ideas, especially when working in groups, reason why an entrepreneurship

platform called Venturely was chosen to solve this issue. Some adaptations on it will have to be done so that it can admit the development of proper projects.

Therefore, this study aims at developing a prototype of a blended open innovation program that can be adopted by most Brazilian universities. By doing so, standardized aspects of the program can help reducing the barriers for them to happen. The outcome of this process is an open innovation program between Brazilian universities and companies as an extracurricular activity with two semesters duration, involving students, which should be organized in groups, professors, mentors, and companies' experts. Structured in three modules, the challenge can be defined by the company itself or with the help of mentors, including a pitch moment and a reward for the best solution.

This dissertation is organized as follows: chapter two defines open innovation, explores how each stakeholder can benefit from this partnership, shows the benefits of a blended approach, and introduces Venturely. While chapter three justifies the methodology used and establishes a benchmark of innovation ecosystems and initiatives that helped structuring this thesis, chapter four shows results of the interviews done. In the last chapter, the synthesized prototype of an open innovation program between companies and universities is presented, with clearly defined aspects such as duration, human resources needed, modules, rewards, and others, as well as Venturely's adaptations.

2. Theoretical Background

2.1. Open Innovation

2.1.1. Definition

Coined in 2003 by Henry W. Chesbrough, the concept of *open innovation* was born as the opposite of *closed innovation*, which consists of the idea that innovation takes place only within the company itself (Chesbrough, 2003, p. 21). On the other hand, open innovation relates to the idea that innovation may develop either outside or inside the firm, with the last being as valuable as the first one as it is in the open innovation paradigm that ideas are in abundance (Chesbrough, 2003, p. 43).

Chesbrough argues that the plethora of ideas within the open innovation paradigm is caused by today's facilitated access to databases, journals, books, and news, aligned with the easy access to the internet. Besides that, there is also the fact that professors and university students are willing to apply their knowledge to real-life business problems, creating opportunities in existing markets but also creating new ones (Chesbrough, 2003, pp. 44-45). In other words, knowledge is, nowadays, more widely distributed than in the closed innovation era. According to Chesbrough, this process happens because professors became more aware of industries' needs as, with governments' cuts in research, they learned to look for other types of support for their investigation fields (Chesbrough, 2003, pp. 44-45). He illustrated this process in figure 1.

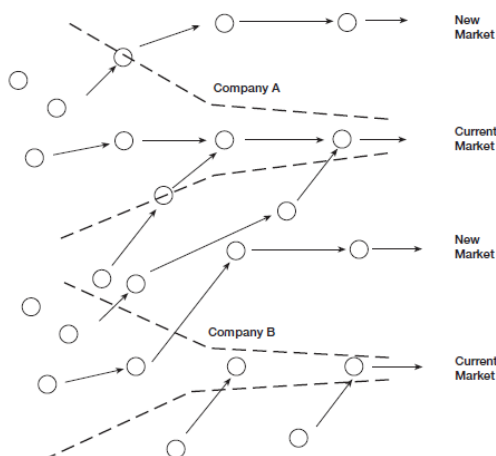


Figure 1. The Knowledge Landscape in the Open Innovation Paradigm

Adapted from "Open Innovation: The New Imperative for Creating and Profiting from New Technologies" by Henry W. Chesbrough, 2003, Boston: Harvard Business School Press, p. 44.

It is important to note that companies adopting open innovation as a methodology, also include the customers in the innovation process, both as a partner and as a coproducer (Chesbrough, 2003, p. 56). When aligning with universities, corporates have the chance to put this in practice by bringing the customer to the development of new products, services, and business models. The concept of innovation also evolved beside the research and development (R&D) process. Gassmann, Enkel, and Chesbrough (2010, p. 213) claimed that different streams were born from it and classified them into nine different perspectives and fields of study. The *spatial perspective* relates to the globalization of innovation as access to research, technology, and product development became easier. This perspective shows that for companies, being close to universities fosters its capacity of absorbing information at the same that it allows companies to access knowledge and competence without having to employ anyone (Gassmann, Enkel, & Chesbrough, 2010, p. 213).

The *structural perspective* shows that there is a strong trend towards more R&D outsourcing and alliances as it reduces costs and increases specialization. From the *user perspective*, the integration of users in the innovation process is a must as they show their requirements (Gassmann, Enkel, & Chesbrough, 2010, p. 214). The *supplier perspective* claims for the integration of suppliers in the innovation process as it can “significantly increase innovation performance in most industries” (Gassmann, Enkel, & Chesbrough, 2010, p. 214).

The *leveraging perspective* claims that the creation of new technologies and the commercialization of IP is a high potential field for the future, while the *process perspective* looks at the innovation process as having three directions: outside-in, inside-out, and coupled (Gassmann, Enkel, & Chesbrough, 2010, p. 214). From the *tool perspective*, some tools are needed to enable customers to create their products and/or to enable companies to integrate external creators. The *institutional perspective* claims that open innovation can be considered a “private-collective innovation model”, while the *cultural perspective* defends the idea that open innovation starts with a mindset that values outside competencies and know-how (Gassmann, Enkel, & Chesbrough, 2010, p. 214).

That being said, a need to better understand how open innovation benefit university professors, students, and companies comes up. Therefore, it is necessary to explore how the stakeholders relate to each other when talking about this specific topic and what are each one’s interests regarding it.

2.1.2. How do Universities Benefit from Open Innovation Programs with Corporate Partners?

Universities have two main stakeholders that can be interested in open innovation programs with corporate partners: students and researchers/professors. According to Lee, researchers follow scientific goals with various objectives: the commodification of their scientific results, obtain financial support to test their theories empirically, boost the transfer of human capital to industry, and arrange job opportunities for students (Lee, 2000).

In a study conducted with the Austrian Center of Competence in Mechatronics, a network-structured organization consisting of various partners, Regina Gattringer showed that the main benefit coming from the industry-university partnership is the transfer of knowledge, occurring either formally or informally (Gattringer, Hutterer, & Strehl, 2014, p. 274). While the formal process is related to tangible results such as patents, research papers, licensing agreements, etc., the informal process relates to intangible results. They can be conferences, workshops, networking, consultations, employees, and other activities that can boost students' development of skills (Roshani, Lehoux, & Frayret, 2015, pp. 4-5).

Usually, companies aligned with open innovation principles partner with start-ups, either by incubating, investing, or even acquiring them (Chesbrough, 2003, p. 55). As universities are a big cradle of those, this creates a strong value in universities for students. Proof of that is shown in a study presented in the University-Business Forum which concluded that most universities try to develop connections with firms by establishing centres as bases for that interaction (Roshani, Lehoux, & Frayret, 2015, p. 9), which is also beneficial for firms themselves.

2.1.3. How do Corporate Partners Benefit from Open Innovation Programs with Universities?

According to Lee, companies have different goals when talking about cooperating with universities. The main reasons are the search for improvement in their products and/or services and the possibility of launching profitable innovations, having the IP belonging fully to them or shared between them and others (Lee, 2000). At the same time, they are interested in testing the applicability of the theories developed by researchers and increasing their popularity through seminars and workshops (Lee, 2000).

As an organization usually focused on the internal and as knowledge is spread all over, companies can't achieve competencies by themselves, with a need to innovate and bring new ideas inside (Roshani, Lehoux, & Frayret, 2015, p. 5). Consequently, companies cooperate with universities to access diverse competencies, skills, equipment, and capital, outsourcing some

ideas (Roshani, Lehoux, & Frayret, 2015). Therefore, one of the outcomes of this partnership, as demonstrated in technology centres around the world, is economic growth as there can be transfers of economically useful scientific knowledge (Varga & Parag, 2009).

There are also formal and informal benefits coming from this type of partnership, such as patents, agreements, workshops, networking, etc. (Roshani, Lehoux, & Frayret, 2015, pp. 4-5). At the same time, open innovation can reduce costs with R&D and optimize time (Roshani, Lehoux, & Frayret, 2015, p. 6) as seen in Brostrom and Loof's study, which showed that this increase firm's R&D capacity and help in the management of corresponding costs and risks (Loof & Brostrom, 2006).

According to Chesbrough, companies have low-cost manners to approach new knowledge: employ professors for a summer work-along or hire graduate students (Chesbrough, 2003, p. 50). More costly ideas would be to fund projects in universities, which would then lead to an approach coming from researchers themselves, with no need for companies to scout projects to fund as professors would go after it by themselves. Corporate partners could also invest in start-ups founded by students or even help them build it to explore potential future interests, learn new practices and business models, create strategic alliances, and acquire and develop new start-ups and new business models (Chesbrough, 2003, p. 50).

Another logic that benefits companies from partnering with universities is that they can diffuse their own technology instead of storing it, making money as multiple paths to market are created. This logic is also applicable to other aspects, such as managing IP to benefit your own business model and profiting from others' use of it (Chesbrough, 2003, p. 52). Chesbrough defends the argument that

You need not invent the newest knowledge or the best new knowledge to win. Instead, you win by making the best use of internal and external knowledge in a timely way, creatively combining that knowledge in new and different ways to create new products or services. (Chesbrough, 2003, p. 52)

Evidence supporting the theory that companies benefit from partnering with universities is based on facts: companies scout students' start-ups, incubating, investing, and even acquiring them (Chesbrough, 2003, p. 55); in the United Kingdom alone, new businesses are born every 2 hours in universities (Higher Education Statistics Agency, 2021); 60% of research projects funded by the Advanced Technology Program in the U.S. involved firms collaborating with universities (Hall & Link, 2001); top U.S. university researchers contributed to setting up, for example, biotechnology firms (Zucker, Darby, & Brewer, 1998).

When talking about the implementation of open innovation programs between universities and companies themselves, Roshani, Lehoux, and Frayret established a framework and a roadmap for this to happen properly. They proposed a general step-by-step approach that can be modified according to the company's situation (Roshani, Lehoux, & Frayret, 2015, p. 14).

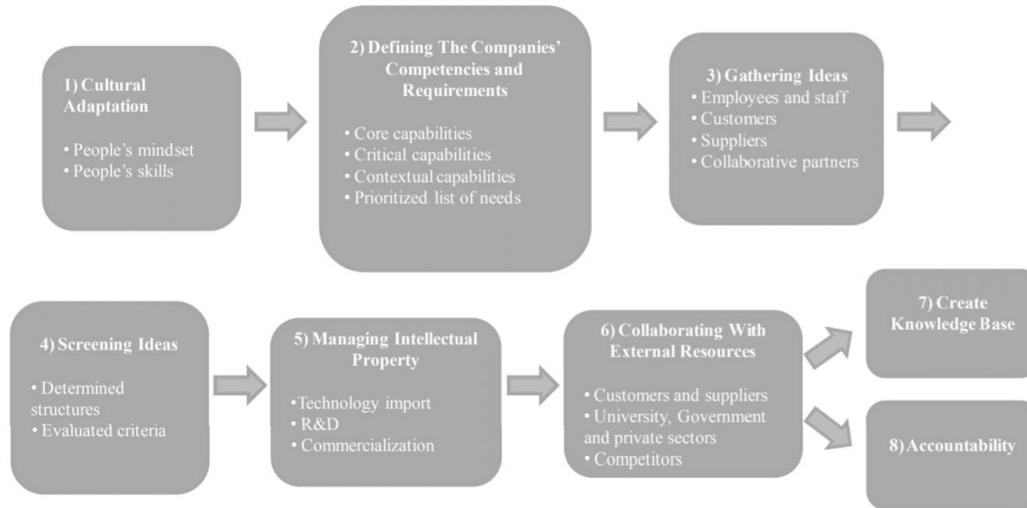


Figure 2. Step-by-step procedure of open innovation implementation.

Adapted from “University-industry collaborations and open innovations: an integrated methodology for mutually beneficial relationships” by Mona Roshani, Nadia Lehoux, and Jean-Marc Frayret, 2015, CIRRELT, p. 14.

For the final goal of this dissertation, it is important to understand what each step talks about. The first one, cultural adaptation, takes into consideration people's mindset and skills since the culture of networking and communicating with others also influences the company innovation culture. In practice, this translates into being flexible, using internal and external competencies, understanding that failing is also learning, taking risks, understanding that companies should also develop things internally instead of only buying externally, and communication skills (Roshani, Lehoux, & Frayret, 2015, pp. 15-16).

The second step, defining the company competencies and requirements, states the importance of clarifying resources and capabilities to the innovation team involved in the project. The capabilities can be divided into three different segments: core, critical, and contextual (Roshani, Lehoux, & Frayret, 2015, p. 17). The first one refers to the capabilities that distinguish the company and that should not be shared, while the second one relates to competencies with a completion role and can be shared. Contextual capabilities are the ones necessary for innovation and are in abundance both in the company and in the market. By knowing this, the company can have a clear vision about where and how specifically external innovation can

help, being easier to clarify which projects should be prioritized (Roshani, Lehoux, & Frayret, 2015, p. 17).

Step three talks about gathering ideas from the inside and the outside. To gather ideas internally, the firm should create a proper environment for employees to express themselves and give suggestions, while externally this should also happen so that customers and suppliers can continuously give inputs, which depends on the way these ideas are treated by the company. However, the company should know how to select the suggestions since having lots of ideas does not mean being able to process all of them (Roshani, Lehoux, & Frayret, 2015, pp. 17-18).

Step four comes to clarify how to screen and select ideas, solving the issue cited above. First, it is important to define rules and structures to select ideas and go through them. Then, there should be a clear criterion defined to evaluate and prioritize ideas, with a ranking being published afterward so that accountability can be shown (Roshani, Lehoux, & Frayret, 2015, p. 18).

Step five talks about developing an IP strategy. Although looking contradictory when talking about open innovation, IP can be an important source of profit maximization as it allows the company to sell a patent to other companies and an important source of alliances as it enables partnering with others (Roshani, Lehoux, & Frayret, 2015, pp. 19-20).

Step six talks relates to the collaboration with external resources, which can be an outside-in or inside-out process. The first one integrates suppliers, customers, and external knowledge sourcing to improve the company's own knowledge base, while the second one transfers ideas to other companies by externalizing its knowledge and ideas in different markets. There are no clear arrangements for these types of collaborations as they can start differently depending on the type of partner and context (Roshani, Lehoux, & Frayret, 2015, pp. 20-21).

Steps seven and eight happen simultaneously, although the first one usually only starts after the first year of using open innovation projects in a company as it is a long-term process and can ensure the durability of this type of projects. This base can be used to “survey practices and identify the best ones, monitor the progress of open innovation and access the statistics and results of previous projects” (Roshani, Lehoux, & Frayret, 2015, p. 21). Acknowledgment is also an important aspect of the open innovation process as it shows both to internal and external stakeholders the success of projects, generating accountability but also making people trust in the company for this type of project, transforming the culture of the firm by encouraging people to comply with it (Roshani, Lehoux, & Frayret, 2015, p. 21).

To boost even more the relationship between companies and universities, it is important that the stakeholders adopt a flexible approach to their activities. In this case, the blended model can be a good option for open innovation programs as it gives the flexibility needed.

2.2. Blended programs: Why adopt them?

Blended learning programs have always existed. However, it was during the pandemic that the expression became well-known and that this type of education was disseminated, showing a tendency for it to continue even after COVID-19 ends (Singh, 2021).

According to the Sloan Consortium, the definition of blended learning program stands for courses that include online and in-person classes, with the online part counting for 30-79% of the deliverables. It also includes the use of technologies for the online content parts, enabling interaction between students, professors, and the learning resources (Keengwe & Kang, 2012, p. 479).

Although the empirical studies in this subject are limited, there are many advantages coming from this type of model. The main ones include the fact that it is an alternative option to overcome the limitations of exclusively in-person or exclusively online programs as it combines advantages of both, students are more satisfied with it, the responsiveness of faculty is better, and the effectiveness of interaction between peers and instructors is increased (Keengwe & Kang, 2012, p. 480).

When talking about tools that contribute to the success of blended courses, Collis and Margaryan refer to instructional theory, learning resources, learning supports, online tools, and the environment in mediating participants' activities. They also classify it into technological and pedagogical tools. Technological tools "provide online learning spaces for students teachers to integrate their learning into learning communities", basically enabling them to share knowledge through, for example, online discussion tools (Collis & Margaryan, 2004). Besides that, discussion boards were more useful than in-class discussions as it allows students to think and then build a response, enabling active and reasoned participation (Lin, 2008). Another benefit coming from using technological tools is that it helps students to turn creative ideas into practical skills and practice, creating and publishing new material using web pages (Keengwe & Kang, 2012, p. 487). Regarding pedagogical tools, Zhao argues that the success of it depends more on the type of use professors make of technology than on the technology itself (Zhao, 2003).

When talking about the online learning communities, a study showed that these spaces help students "improve their motivation, socialization, information exchange, and tacit

understanding”, besides the fact that “when students reach the highest level of community, they start to communicate outside of online discussion” (Yeh, Huang, & Yeh, 2011). Therefore, it is possible to conclude that the online part of learning creates a proper environment to boost in-person discussions as it gives students time to think and process the subjects taught (Keengwe & Kang, 2012, p. 488). At the same time, the face-to-face approach is an important aspect to keep students motivated and to build relations and connections among them (Palloff & Pratt, 1999).

Accordingly, a blended open innovation program should count on a platform to support the journey by centralizing the process. Therefore, an entrepreneurship platform called Venturely, a tool that allows the creation of business models, ventures, and pitch decks, will be used.

2.3. Venturely: What is it?

Venturely (<https://venturely.io/>) is a tool used to design business models born at the University of St. Gallen, with Professor René Bohnsack, who launched the platform in 2016 at Católica Lisbon School of Business and Economics. The platform aims at “empowering businesses to capitalize on business model innovation in the context of digital transformation, sustainability and internationalization” and to be the world’s largest business model database (Venturely, 2021).

Venturely also allows anyone to develop an idea from scratch until the go-to-market. In 2018, the platform was launched during the Web Summit in Lisbon as a non-profit business modelling and venture creation platform, while in 2019 it received the most innovative, impactful, and scalable information and communications technology (ICT) tool award from Reimagine Education in San Francisco (Venturely, 2021).

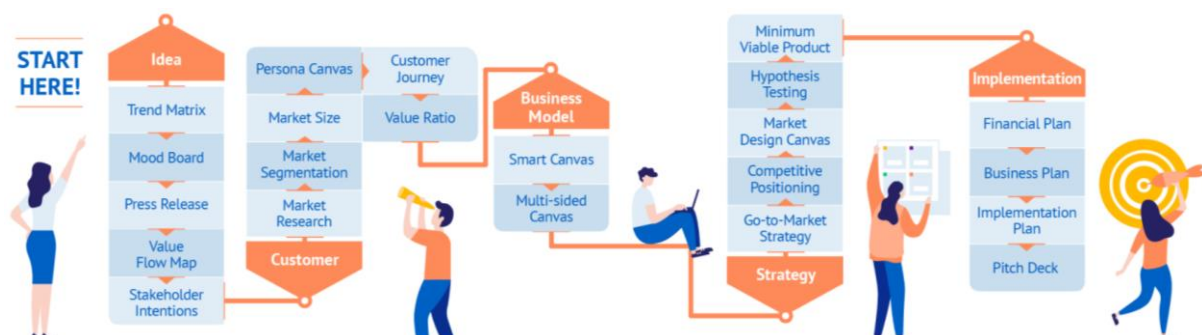


Figure 3. Example of Venturely's Venture Creation Process.

Adapted from <https://venturely.io/>. Consulted on December 21st, 2021.

The platform can be used by companies willing to innovate, people willing to develop new ideas, professors who want to use it in classes, and many more as it has three main types of projects: Business Model, Pitch Deck Generation, and Venture Creation (Venturely, 2021). By digging into how universities can benefit from using Venturely, there are three main aspects: it can be used by professors to teach how to build business models, pitches, or create projects from zero, by the university itself to design new ideas and business models for their own, and to foster students' ideas by providing them access and coaching them through the platform (see appendix A for Venturely's types of projects).

The Business Model allows the creation of viable and scalable business models with a smart canvas by easily adding post-its to identify each aspect of the model. It is also possible to calculate cash flows, search for competitors, receive feedback from an algorithm, test hypotheses, explore business model patterns, enable a wizard function to help, build customer profile, consider different stakeholders, and define your unfair advantage (Venturely, 2021). See appendix B for Venturely's smart business model canvas.

Using the Pitch Deck project, Venturely gives users an easily done ten slides pitch deck only by filling the following aspects: logotype, problem, solution, product, market size, pricing, go-to-market, competition, team, competitive advantage, and the *ask* (how you have used previous funds to get you where you are, what your near future looks like, and how you plan to use the money you are trying to raise) (Venturely, 2021). See appendix C for Venturely's pitch deck creator.

With the Venture Creation project, it is possible to edit the product logo and name, adjust the project's settings (such as team, message board), switch between projects, access a knowledge hub, and invite a coach (Venturely, 2021). The six steps in Venture Creation and their add-ons are: Idea (Trend Matrix, Moodboard, Press Release, Value Flow Map, and Stakeholder Intentions), Customer (Interview Guide, Market Segmentation Matrix, Market Size Matrix, Persona Canvas, Customer Journey Map, and Value Ratio Matrix), Business Model (Smart Business Model Canvas and Multi-sided Business Model Canvas), Strategy (Go-to-Market Strategy, Competitive Positioning, Market Design Canvas, Hypothesis Testing, and Minimum Viable Product Plan), Implementation (Cash Flow Analysis, Implementation Plan, and Business Plan), and an optional Pitch Deck creator. Check below part of the step-by-step process. See appendix C for Venturely's venture creator and figure 4 for the Smart Business Model Canvas.

Smart Business Model Canvas ?

Build your business model by adding Post-its and Patterns to the canvas

Key Partners ?	Key Activities ?	Value Proposition ?	Customer Relationship ?	Customer Segments ?
	Key Resources ?		Channels ?	
Cost Structure ?			Revenue Streams ?	

Post-its

Title...

Description...

[Create](#)

Business Model Tools

- Cash Flow Calculator
- Ecosystem Radar BETA
- Auto Business Model BETA
- Hypothesis Testing

Business Model Database

Search

- Essential Pack
▼
- Digital Transformation Pack
▼
- Circular Economy Pack
▼
- Sustainability Pack
▼
- E-Mobility
▼

Canvas Settings

Pre-fill Option Off

Extended Canvas Off

Widescreen Mode Off

Download as PDF

Clear

Save

Business Model Canvas layout by strategyzer.com (CC license)
Business Model Patterns by Remane et al. (2017), Lüdeke-Freund et al. (2018), Lüdeke-Freund et al. (2017) and Braun et al. (2018)

Figure 4. Venturely's Smart Business Model Canvas.

Adapted from <https://venturely.io/>. Consulted on December 28th, 2021.

3. Methodology

3.1. Variables and Measures

To build a qualified innovation program, it is important to look at what others are doing to learn and adapt from them. By analysing others' experiences, it is possible to perceive important details for open innovation programs between universities and companies to happen and to study possible ways of boosting this environment.

For this reason, a benchmark of innovation programs and initiatives within schools was done aiming at clarifying how top schools or institutes create environments favourable to the development of open innovation and how this can be beneficial for students. Those are applicable here as minor details from each initiative can be used to design the final solution, such as duration, human resources, target, and more. See table 1 for universities and institutes analysed and their set-ups and check appendix D for more detailed information.

<i>University/Institution</i>	<i>Companies related</i>	<i>Set-up</i>	<i>Target</i>
Esade Sant Cugat Campus Rambla of Innovation	Companies from any sector.	Specific labs dedicated to the step-by-step of a new idea development (conception, feasibility, prototyping, and business model) and creation of new ventures.	Esade students, faculty, and companies.
Esade Sant Cugat Campus Esade Creapolis	Companies from any sector.	Multidisciplinary teams to refine an existing product or service or create new ones; Design thinking programs between companies and students; Identification of new markets; Acceleration and incubation of technology start-ups with companies; Debate forums.	Companies aiming at disrupting in their business or exploring new ones.
Harvard Innovation Labs	N/A ¹	Multidisciplinary team and specialized labs to support students and alumni in the creation of their own business.	Harvard students and alumni.

¹ Not properly an open innovation program, but aiming at supporting students' and alumni's businesses.

Nova School of Business & Economics Co.Innovation Lab	Companies from any sector.	Open innovation programs with different structures (time, number of students and companies participating, reward).	Nova School of Business & Economics students (mainly).
BRASA Summer Journey	Companies from any sector.	Open innovation program that puts students from different universities to solve real companies' challenges.	Students from any university.

Table 1. Summary of Innovation Initiatives.

3.2. Research Design

For this dissertation, a six-step methodology was used, employing both primary and secondary data to get to conclusions to answer the following research question: What type of open innovation program can be developed between universities lacking infrastructure for such programs and corporate partners that includes the Venturely platform? Due to the aim of this project, primary and secondary data are used as they allow the consultation of both literature about innovation programs and of people who would take part in it, such as companies, university professors, and university students.

The study of literature related to open innovation and its benefits both to companies and to universities gives new ideas and perspectives about these aspects. It enables the study of diverse authors' visions about these topics, which stimulates the construction of the open innovation blended program between corporate partners and universities, the result of this thesis.

More than fifteen literatures were chosen based on facts like authors' know-how regarding the topic (reason why older bibliographies were chosen) and relevance of the content found to the purpose of this thesis. Some key words were used for the search: *open innovation, university-industry innovation, collaborative learning, blended programs, online higher education*. The interviews design was done taking into consideration the need to validate and develop aspects found in the literature.

However, the study of the literature is not enough to get to conclusions, with a need to consult those who would be directly involved in the programs: companies, professors, and students. Listening to their insights will enable the formulation of a much more assertive program since it will be done based on the perception of those who will benefit from it. Check figure 5 for overall methodology.

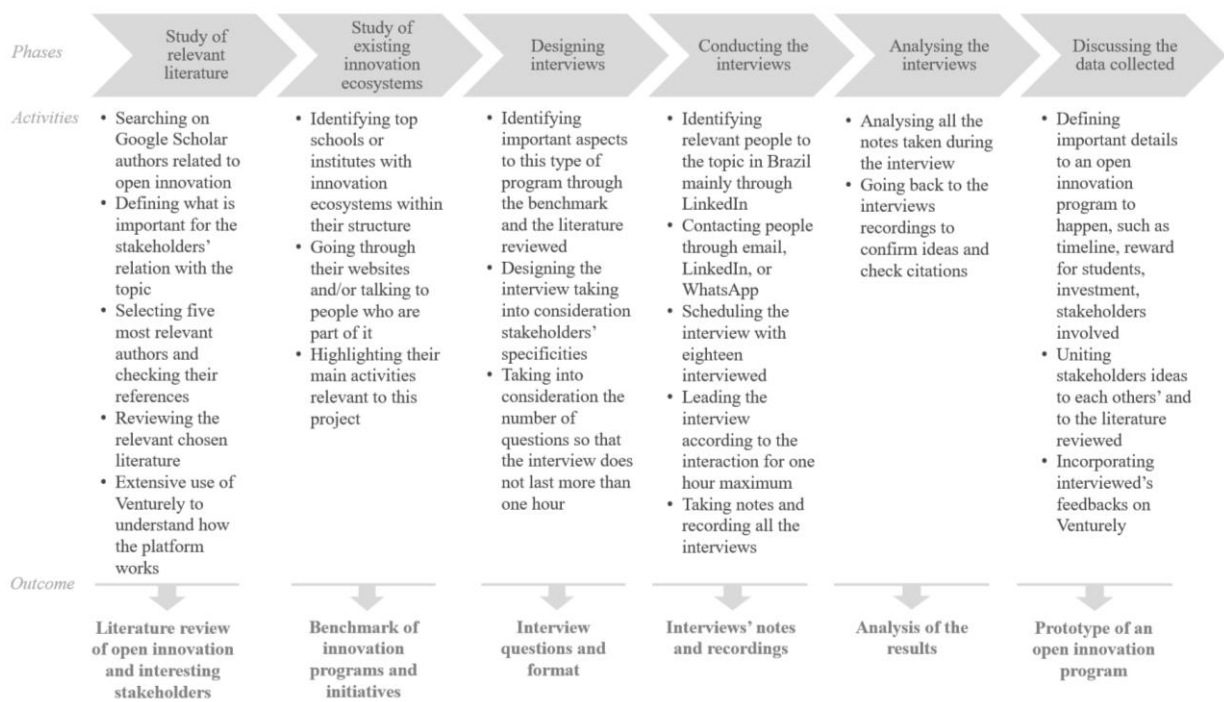


Figure 5. Overall methodology.

In the first step, relevant authors to open innovation were defined through a search on Google Scholar and scan of approximately forty articles. With this information in mind, important aspects to university students, professors, and company related to open innovation were established and after a selection of the five most relevant authors, their references were checked to see if any other authors should be added. At the same time, an extensive use of Venturely was done to understand how the platform works. The outcome of this step was the literature review of open innovation together with important topics related to a program of this type to each stakeholder and Venturely.

Secondly, a need to study and understand important aspects of innovation ecosystems/programs emerged as it can help perceiving indispensable topics to open innovation programs. Besides that, it is important to gather ideas about how this can be done. To do so, top schools or institutes were chosen based on the Financial Times Ranking and the author's know-how about each one. After going through their websites and/or talking to people who are part of it, main activities of each one were highlighted. The outcome of this phase was a benchmark of innovation programs and initiatives.

The third step was the design of interviews, the methodology used for the data collection process. Interviews were designed considering what aspects would be relevant to design the program based on the benchmark and the literature reviewed and taking into consideration

stakeholders' specificities. One aspect relevant to the design of the interviews was that questions should not exceed the one hour maximum established for each interview. The outcome of this part was the interview questions and format, adapted to each type of stakeholder: university professors, students, Brazilian companies that do not do open innovation programs regularly and companies that frequently do so. The outcome of this step was the interview questions and format. Check appendix E for interview questions.

This leads to the fourth step: the data collection, conducted through interviews with three main stakeholders: companies, university professors, and students. Companies include both Brazilian ones with infrastructure to conduct open innovation programs with universities and those who frequently do it (not necessarily Brazilian). Companies' representatives were chosen after the identification of employees with decision power or working with innovation, while professors were chosen based on their know-how. Students were chosen according to their university and course taken, with a requisite to be a course that could have an open innovation program with a company. Most people were found on LinkedIn and contacted by this way, email, or WhatsApp. Interviews were scheduled according to people's availability and taking into consideration it should last maximum one hour. The goal of the interviews was to find out what each stakeholder thinks about having open innovation programs between companies and universities and how Venturely should be designed to guide it. Notes were taken during each interview and all of them were recorded.

Analysing the data collected is the fifth step. This includes an unbiased analysis of what the interviewed stated, including their thoughts about open innovation programs and Venturely, through notes taken during the interview and through the analysis of the interviews' recording. Companies' insights were analysed taking into consideration its size, their openness to innovation and hybrid model, and willingness to use Venturely to guide the students in the program. University professors' insights were valuable to validate the methodology and willingness to run the program, while students stated for what conditions they would be willing to take part in a program like this. The outcome of this phase was the analysis of the interviews. The discussion of the data collected considered both the literature and the interviews to debate in what terms an open innovation program between companies and universities would work, getting to conclusions regarding the program type, duration, human resources needed, definition of the challenge, modules, reward for students, pitch and jury, next steps, and investment. Besides that, it integrated interviewee's feedback on Venturely so that the platform could better attend the stakeholders involved. Conclusions were made uniting all the insights

collected. The outcome of this phase was a synthesized prototype of an open innovation program between companies and universities.

3.3. Data Collection Procedure: Interviews

Primary data was collected in the form of interviews with university professors, students, and companies that have infrastructure to do so and one that frequently does it. In numbers, eighteen interviews were done in total, ten for universities and eight for companies. The first was composed by six interviews with university professors and four interviews with students, while the second was composed by seven interviews with Brazilian companies that could develop programs with universities and one with a company that already did programs like that.

The decision to go for interviews as the data collection procedure is justified by the fact that the conversation could follow many different paths depending on the type of company/university we are talking about. Here, interviews were more appropriate so that the interviewer could guide the conversation more easily according to what the interviewee states and thinks as it can open other interesting discussions about the topic.

Using both professors and students representing universities allows a broader perspective to collect more insights regarding how universities would deal with it. The requisite for professors to participate was to teach subjects or participate in projects related to innovation. They were valuable stakeholders as they could give inputs regarding the value of the program for students and universities themselves, how a platform to guide this process should look like and its methodology, how blended programs can add value, and the length of the process. At the same time, students could confirm their interest in participating in initiatives like that and what they would like to have in return. They also had valuable inputs regarding what they would expect from Venturely and for how long they would be willing to participate.

Brazilian companies that may or may not have participated in programs with universities (but have infrastructure to do so) were also interviewed. Here, it was important to understand if they have an innovation sector within their structure and what they think about the idea of open innovation. The interview with these stakeholders also aimed at perceiving if they see value in developing programs with universities and what are their concerns regarding this. Other important factors analysed were related to investments (both financial and human resources) and Venturely.

At the same time, attention was also given to companies that already participated in open innovation programs with universities. In this case, there was no requisite for them to be Brazilian as the goal was to understand what they see as valuable and what are the must-haves,

what could be improved, if they used a platform to help in this process, and if they believe this would work in a blended format.

Companies from different areas and structures were chosen. However, two partners from the same company will be interviewed so that it is possible to compare each one's vision and openness regarding innovation. See table 2 for the list of people interviewed.

<i>Group</i>	<i>Name</i>	<i>Company/University</i>	<i>Duration of interview²</i>	<i>Mean of interview³</i>
University professor	Edgard Stuber	Inspere and São Paulo University (USP)	Thirty-six minutes	Zoom call
University professor	Julio Meneghini	Research Centre for Gas Innovation and São Paulo University (USP)	Thirty-nine minutes	Google Meet call
University professor	Luiz Salomão	Santa Catarina Federal University (UFSC) and Senai	Twenty-seven minutes	Zoom call
University professor	Marcus Vinicius Fonseca	Rio de Janeiro Federal University (UFRJ)	Forty minutes	Zoom call
University professor	Poliana Pires	PUC Minas, Information Technology and Management Institute, COTEMIG, Centro Universitário de Belo Horizonte	Thirty-nine minutes	Zoom call
University professor	Vinck de Bragança	Higher School of Propaganda and Marketing (ESPM)	Forty-four minutes	Zoom call
University student	Alexia Filkenstein	Babson College and Inspere	Thirty-eight minutes	Zoom call

² The duration of the interviews were rounded to the closer number.

³ Due to the pandemic situation and geographical location of the interviewer, almost all the interviews were done remotely.

University student	Caís Victor	Rio de Janeiro Federal University (UFRJ)	Forty-one minutes	Zoom call
University student	Thaís Lima	Fluminense Federal University (UFF)	Twenty-five minutes	Zoom call
University student	Valentina Kuster	Rio de Janeiro Federal University (UFRJ)	Forty-one minutes	Zoom call
Company	Adrielle Yamaguchi	Ambev	Twenty-seven minutes	Zoom call
Company	Dani Glikmanas	Shopping Center 3	One hour and forty-nine minutes	Zoom call
Company	Luciano Ciraudó	Solar Cuidados	Thirty-one minutes	Zoom call
Company	Maira Nisi	Suzano	Thirty-two minutes	Zoom call
Company	Mauro Dantas	Solar Cuidados	Thirty-eight minutes	Zoom call
Company	Naiane Salvi	TXM Methods and Cocreation Labs	Thirty minutes	Zoom call
Company	Rodrigo Cordeiro	Stone Age	Twenty-five minutes	In person
Company ⁴	Henrique Figueiredo	Grupo Ageas Portugal	Nine minutes	Zoom call

Table 2. Interviewed.

⁴ Already did open innovation programs with universities.

4. Results

4.1. Stakeholders Expectations for Blended Open Innovation Programs

4.1.1. University Professors

In the table below, general reflections about what university professors think about blended open innovation programs will be presented, as well as their current approach to open innovation programs and their feedbacks on Venturely. More information about their thoughts can be found on appendix F, where codes were used to identify each interviewed to make the reading easier.

<i>Code</i>	<i>Name</i>	<i>Subjects/Initiatives</i>	<i>University</i>
P1	Edgard Stuber⁶	Design Thinking and Artificial Intelligence	Inspier and São Paulo University (USP)
P2	Julio Menghini	Scientific Director Mechanical Engineering	Research Centre for Gas Innovation (RCCGI) São Paulo University (USP)
P3	Luiz Salomão⁵	Subjects related to Branding and Entrepreneurship	Santa Catarina Federal University (UFSC) and Senai
P4	Marcus Vinicius Fonseca	Innovation in Organizations and Innovation and its Maps Coordinator	Rio de Janeiro Federal University (UFRR) LabInTOS (Technological, Organizational, and Service Innovation Lab) at Rio de Janeiro Federal University (UFRR)
P5	Poliiana Pires	Business Model Canvas and Innovation & Creative Data Digital Marketing Strategies and Growth Hacking Techniques	PUC Minas Information Technology and Management Institute
P6	Vinck de Bragança	Technological Innovation Project and Innovation & Entrepreneurship in Data Science Mobile Marketing Leadership to Innovation and Agile Methodologies	COTEMIG Centro Universitário de Belo Horizonte Higher School of Propaganda and Marketing (ESPM)

⁵ Luiz Salomão also developed the TXM methodology, focused on the development of new business, on the improvement of existing ones, and on pre-incubation, and the Cocreation Lab.

⁶ Also has a consultancy for companies using the Problem Based Learning approach to solve companies' real problems and is a specialist in innovation, problem solving, and customer and employee experience, besides doing research in artificial intelligence and being a professor at São Paulo University's (USP) MBA.

<i>Current Approach</i>	<i>Key Success Factors in Blended Open Innovation Programs</i>	<i>Feedback on Venture</i>
Has been doing open innovation programs between students and companies for three years; Uses a platform called Sprintbase.	Having a platform that centralizes everything so that progress can be checked; The platform should allow the user to go back and forth and to build a prototype and validate it; Last, at least, a year; The company must share useful data.	Initial part to explain students it is not a linear method of learning; Allow students to deconstruct initial assumptions.
Has been doing programs focused on gas solutions between engineering students and companies since the nineties; As those are technical-scientific problems, they never worried about the business model, only now they realized potential spin-offs.	Appropriate time length according to the type of program to be solved (six months if the problem is simple); A simple, friendly, and intuitive platform.	Should gather both the ideas and the technical-scientific part.
Has been doing open innovation programs between students and companies for twenty-five years; Now companies are the ones who go look for opportunities; Created an ideation lab to integrate the academy and the market.	Have techniques, methods and tools to make it happen; Incentivize a little bit of chaos as it is necessary for creativity; Divide the process in steps and go one by one; Have everything inside the platform so that the person do not have to leave it to look for something.	The methodology can be revised frequently to add improvements; Video classes and e-books for each phase; Have a Miro kind inside the platform; Include a chat where people can discuss.
Already did open Innovation programs between companies and students through LabrinTOS; In almost all post-graduation courses, students work to solve one of their companies' issues.	In-person lessons to explain all the steps; Make clear to students that there is a path to be followed before putting the idea into practice; Start online and continue in-person.	Having a scheme with colours showing what steps are good and what could be improved.
Have never done open innovation programs directly with companies as companies are usually very bureaucratic to do so; Tries to put students in contact with companies; Organizes visits to innovation ecosystems so that students can get to know it; Advises post-graduation students to work on issues of their own companies.	Students must be supervised; Universities as institutions themselves must support it to attract more companies; Very structured to work even in a small period; A structured methodology with someone who understand it accompanying; Students must first learn the methodology; Work in groups; Allow students to go back and forth; Last, at least, one year; Validate.	Can have ways to develop skills students are not very used to; Allow the work in groups; Have a space for mentors to accompany what students are doing; Be as automatized as possible; Allow students to do a first MVP and collect feedbacks about it; Allow validation.
Never did it directly with companies; Teaches in the post-graduation, in which the final project is related to the development of new business; Some students write their thesis related to a real company, but this are not involved.	Openness from companies; Having a structured methodology that students can follow; Companies willingness to go on with the idea; Platform to guide students in an immature phase but should only be a guide, and not mold students; Give students access to theoretical content; Have mentors accompanying the project; Have clearly defined phases with clear deliverables.	Have theoretical content that students can access anytime; Do not let students jump phases; Allow people from the outside for the validation process.

Table 3. University professors interviewed.

4.1.2. University Students

In this chapter, general reflections about what university students believe would be an appropriate blended open innovation program to answer their concerns will be showed. They pointed out whether they already took part in a program like that and what would be the conditions for them to do so, as well as their feedbacks on Venturely. Detailed information about their thoughts can be found on appendix G, where codes were used to identify each interviewed to make the reading easier.

<i>Code</i>	<i>Name</i>	<i>Course</i>	<i>University</i>	<i>Current Approach</i>	<i>Key Success Factors in Blended Open Innovation Programs</i>
S1	Alexia Filkenstein	Bachelor' s in Entrepreneurship and Innovation	Babson College and Insper	Already took a subject in which the idea was to create a real company, which could be invested by the university. Took part in an open innovation project between Insper and Shopping Center 3 to solve a company' s real challenge.	The program should be smaller and intense; Allow network with the company; Learn new methodologies; Give students rewards and a really immersive experience.
S2	Thais Lima	Bachelor' s in Environmental Engineering	Fuminense Federal University (UFF)	Never took part in an open innovation program; Had a course in which she had to develop a sustainable product but there was no need to develop the business model.	Have a real case from a real company clearly defined and structured but taking into consideration students' availability; Prize to students; Clear phases and deliverables in each one.
S3	Cais Victor	Bachelors in Management	Rio de Janeiro Federal University (UF RJ)	Have never participated in an open innovation program with a company.	Have the right target; Reward for students related to the challenge or to the company; Something that guide students; Happen once or twice a week for two hours maximum.
S4	Valentina Kuster	Bachelor' s in management	Rio de Janeiro Federal University (UF RJ)	Have never participated in an open innovation program with a company, but already took part in a project to create a business model for an app of events requested by an events agency.	Apply the theoretical knowledge they acquire at university; Reward for students; Symbolic prize also for those who are not the winners of the challenge; Something that guide students; Last for one semester.

<i>Feedback on Venturely</i>
Super interesting, but there is a need to exist human mentorship.
Timeline for each deliverable.
Space to publish your project which other can access; Creation of a profile according to each one's interests.
Connecting with people with similar projects through SEOs.

Table 4. University students interviewed.

4.1.3. Corporate Partners

Two types of companies were interviewed: Brazilian companies with capacity to run open innovation programs with universities and a company that frequently does it. Therefore, general reflections of each one regarding blended open innovation programs will be showed, as well as their current approach to it and what they think about having a platform to guide students in the process. Detailed information about their thoughts can be found on appendix H, where codes were used to identify each interviewed to make the reading easier.

<i>Code</i>	<i>Name</i>	<i>Role</i>	<i>Company</i>
C1	Adriete Yamaguchi	Design leader at the Sales Innovation Lab	Ambev
C2	Dani Ghilmanas¹⁰	CEO	Shopping Center 3
C3	Luchiano Cirando⁹	Executive Director of Sales and Shareholder	Solar Cuidados
C4	Mauro Dantas⁸	Executive Director of Finance and Shareholder Strategic	Solar Cuidados
C5	Maira Nisi	Design and Innovation Culture Leader	Suzano
C6	Naiane Salvi	R&D Director	TXM Methods
C7	Rodrigo Cordêiro	Researcher	Cocreation Labs
C8 ⁷	Henrique Figueredo	Founder and Former CEO	Stone Age
		Project Manager (Innovation)	Grupo Ageas Portugal

⁷ C8 is part of a company that frequently does open innovation programs with universities.

⁸ Two partners from the same company were chosen due to their different approaches to innovation.

⁹ Two partners from the same company were chosen due to their different approaches to innovation.

¹⁰ Also investor and mentor and investor of start-ups, member of the Alumni Committee of Entrepreneurship at Insper, and member of REP Insper (a project-based learning course between Insper students and companies).

<i>Industry</i>	<i>Company Size</i>	<i>Current Approach</i>	<i>Key Success Factors in Blended Open Innovation Programs</i>	<i>Feedback on Venture</i>
Beverages	>50,000 employees	Ambey does not run open innovation programs directly with universities.	Adopt a flexible approach to include as many people as possible; Have something to guide students in the process; Give students access to templates.	Allow connection between people; Be white labelled so that students can feel they are in a more immersive experience.
Retail	>40 employees	Takes part into a project-based learning course between Insper students and companies.	Clearly define the problem before designing a solution; Reduce bureaucracies.	N/A: The interviewed did not had direct feedbacks to Venture.
Healthcare	>100 internal employees + >1,200 outsourced employees	Never took part in an open innovation program but believe it would be good.	Have any type of guarantee that the solution would work; Mentorship and an established methodology to guide students.	Having a part that allows validation with clients; being white labelled.
Healthcare	>100 internal employees + >1,200 outsourced employees	Never took part in an open innovation program.	Have super tuned students with a disruptive vision; Be a specific solution for his company.	Be as automatized as possible; Allow students to forget everything that was done before in that subject.
Paper	>35,000 employees	Never did an open innovation program with universities, only start-ups; Already did four editions of JA Startup ¹¹ .	Real engagement from students; Good level of maturity from solutions; Platform to guide students with a good user experience and with a place for mentors to keep track of their work.	Section dedicated to the exploration of the problem; Personalization of the platform by the company.
Open Innovation	>10 employees	Already worked with Santa Catarina Federal University with students who wanted to create a business, but not in proper open innovation programs.	Creating a proper environment for students to apply their theoretical knowledge; Broader reach; Reduce bureaucracies; Give students access to content.	Access to theoretical content and information about each phase; Initial part dedicated to the structuration of the problem; Space where progress can be checked; Allows students to go back and forth; Highlight crucial aspects dedicated to the consolidation of a solution.
Pre-incubator	>40 employees			
Big Data	>70 employees	Do not have open innovation programs with university; Do only closed innovation.	Strong implementation so that the investment is worth it; Collaboration with young people; Spread of knowledge so that it is not concentrated only in one person; Mentorship with professors.	Allows the spread of knowledge; Allows development of creativity; Be white labelled.
Insurance	>2,000 employees	Do open innovation programs with Nova School of Business & Economics since 2017, in which they count on the school's support and provide mentors from the company to accompany students.	Mentorship from company's experts and other specialists; Validation, prototyping, and MVP; Testing inside the university as it is a safe place to do so.	N/A: The interviewed did not had direct feedbacks to Venture.

Table 5. Companies interviewed.

¹¹ A program aiming at the development of an idea from scratch to becoming a real start-up with young people focusing on the United Nations Sustainable Development Goals (SDGs), sustainability, diversity, and inclusion.

5. Synthetized Prototype of an Open Innovation Program

5.1. Program Details

In this section, details about the structure of the open innovation program between universities and companies will be defined. Those are the program type, duration, human resources needed, definition of the challenge, modules, reward for students, pitch and jury, next steps, and investment. See in the figure below a summary of the program structure.

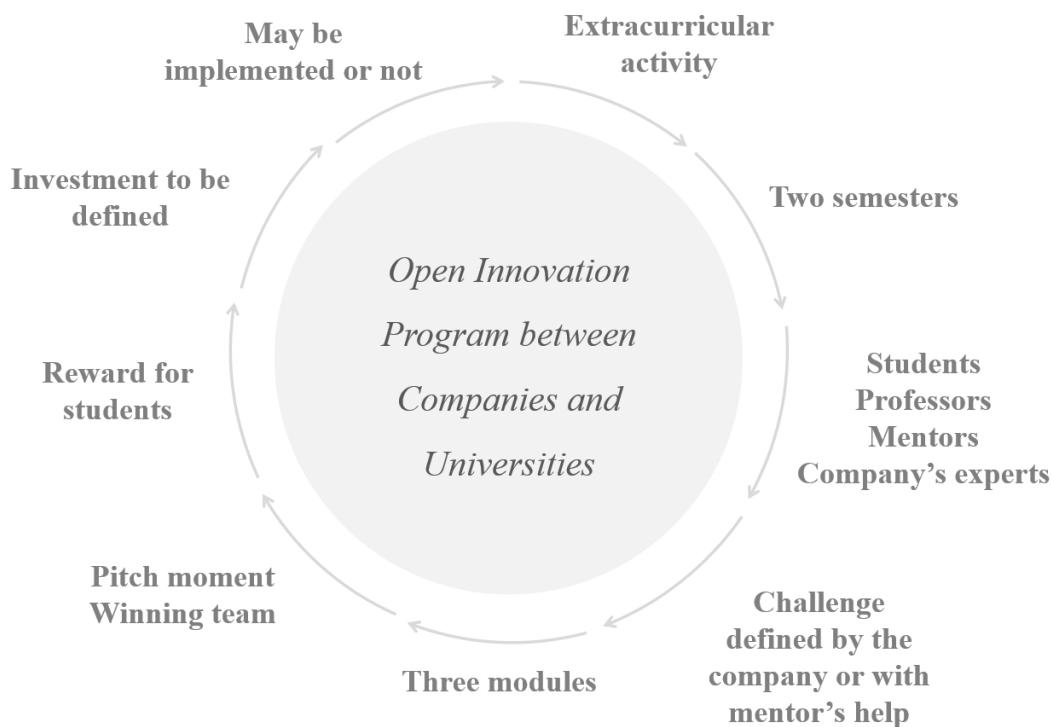


Figure 6. Summary of the prototype of the open innovation program.

5.1.1. Program Type

One thing C1 and C2 made clear in their interviews was that companies and universities have lots of bureaucracies, which complicates the flow of open innovations projects. This gets clear when we look at professors' interviews claiming that sometimes they don't even worry about letting the university know they are doing projects with companies as a project-based learning method. This matter involves not only bureaucracies from the partnership itself but also from academic guidelines, which, most times, are hard to be changed.

Adding to this fact the idea that students are willing to apply their knowledge in real-life business problems (Chesbrough, 2003, pp. 44-45), it would be ideal for the open innovation program to be done as an extracurricular activity instead of being part of a subject itself. First

because this would reduce the bureaucracies of making it fit into an academic guideline from a specific subject, and second because by being an extracurricular activity, it allows more flexibility in terms of duration and model.

This program is supposed to happen in a blended model, with a part online and another one in-person. According to P5 and P6, having a program of this kind allows scalability and, according to P2, it enables the participation even when people are not in the same place, validating the concept of learning communities by Collins and Margaryan. On the other hand, P2 and P4 pointed out that body language and eye-to-eye are fundamental to the interaction of students and to perceive what people thinks about the idea.

It is also important to make students sign a non-disclosure agreement (NDA) so that confidentiality about internal information is guaranteed. The IP should be shared between the students and the company to avoid favouring one side or the other.

5.1.2. Duration

When talking about the duration of an open innovation program between universities and companies, the availability of the stakeholders involved are crucial. While S1 would bet in a short but intensive program, S2 believes that a program on this model would be good in a long period so that people would be able to dedicate proper time to it. At the same time, P1 and P4 believe this should last, as least, a year so that great and robust solutions could come up. As for companies, most of the people interviewed showed willingness to lend teams for a long time for such a program since they see true value on it and believe that having the proper time to go through all the steps calmly could result in a more valuable solution.

As the program aims at bringing true value for all the stakeholders involved and at developing a real and applicable solution, the duration of it should be of two semesters, counting on the holidays in between, resulting in approximately ten months (may slightly vary from school to school). With this duration, there is proper time to generate a solution that can be applicable and that can generate value for all the stakeholders. For companies, it allows the solution to be tested and validated, as for students it allows developing all the steps properly and making them truly feel part of it.

5.1.3. Human Resources

As P3 stated in the interview, “the homo sapiens only exists because he is collaborative, talk to others, and discuss ideas” (Salomão, 2021). Therefore, it becomes clear the need for human

interaction besides the use of Venturely, namely the involvement of professors, mentors, students, and companies' experts.

The involvement of professors from the university itself from subjects such as entrepreneurship, innovation, marketing, design, design thinking, business models, and others, is fundamental as they have the theoretical knowledge needed to go through a project like this. For C3, "if there is (...) someone to coordinate and help, the chance to work is much bigger as it allows control and track" (Ciraud, 2021). Besides their willingness to apply their knowledge in real-life problems (Chesbrough, 2003, pp. 44-45), as it is an extracurricular activity, professors would have to be paid to do it, even having as incentive the possibility of financing their researches coming from the corporate partner (Chesbrough, 2003, pp. 44-45), fact that was proved by professor P3's interview. Their main role would be to explain each module to students as well as its methodology and to accompany them, also clearing questions that may arise. Professors can also be called mentors, but these last ones may not necessarily be professors.

Mentors may be professors or people from outside the university from innovation institutes or labs that the university approves. Although they are not professors, their role is the same as the first ones, to explain the concepts and methodology to students and guarantee that all their questions are clear. To assure that mentors can attend all groups, there should be, at least, one professor/mentor for each three groups.

Students will be recruited by the university, which also has the responsibility of selecting them according to criteria chosen by the school in case there are more registrations than the capacity, which will vary according to the number of mentors available. They can be bachelor's or master's students from any course with graduation expected before or at the same time of the end of the program. Students can register in groups of three or individually. In this case, they will be put together in a group with two other students. Allowance of participation of students from other universities is subject to the host university.

Experts from the company are also an important asset to this program as they are the ones to bring data and information from the corporate partner. It is their responsibility to clearly explain the challenge in an initial phase as well as solutions they already adopted to try to solve it and the reasons why they failed. In the following phases, it is also their duty to analyse if a certain solution idea designed by a group would suit the company's business and how it could be adapted. Experts can be one or two people depending on what the company and the university think it is sufficient to attend all groups. The only requisite is that they know the challenge and the company well.

5.1.4. Defining the Challenge

When talking about the challenge that will be used for the program, it must be defined whether the company will already come with a challenge in mind or if this will be defined together with the mentors accompanying the program. Both cases can happen: companies can come with a problem they already have in mind or may want the help from mentors to study some problems they have and choose the best one given the context.

In both cases, mentors should advise and help the corporate partners to structure well the problem, making sure it can be something applicable to a challenge with university students. In effect, it is their duty to assure that the company structured the challenge so that it can be understandable for people who are not specialists on the subject, gathered enough information to pass to students, such as historical data that might be important, and has experts to help in the process.

5.1.5. Modules

As P6 stated, the phases and deliverables should be clearly defined as it “works as an impulse for students to make decisions and work harder” (Bragança, 2021). At the same time, Roshani, Lehoux, and Frayret established a roadmap for open innovation implementation with eight steps. For these reasons, a division in three modules was done based on Venturely’s Venture Creation project and taking into consideration P3’s interview in which he stated that the “first month should be dedicated to discussion and information, from the second to the fourth to mentoring, and the validation should be done in the fifth month” (Salomão, 2021).

In this case, module one (Exploring) will last for two months (months one and two), module two (Structuring) will last for five and a half months (month three to half of month eight), and module three (Testing and Pitching) will last for two and a half months (half of month eight to end of month ten). See figure 7 for modules’ timings.

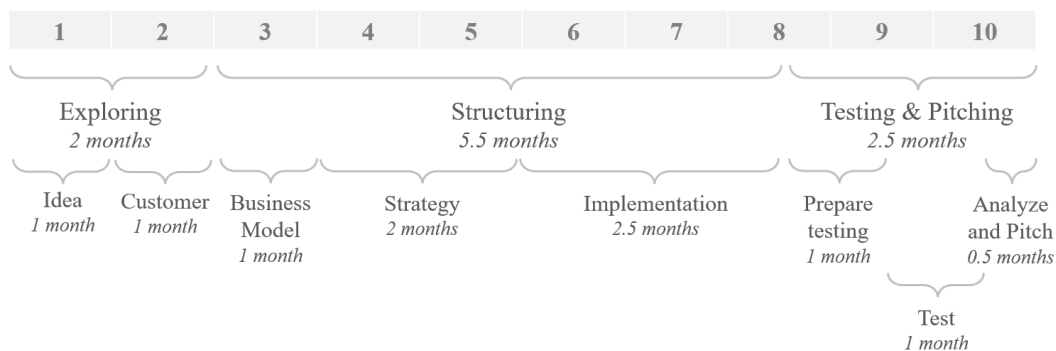


Figure 7. Modules Timings.

Module one: Exploring

The first module should be dedicated to exploring the idea and the customer and must start with an in-person opening session to introduce the stakeholders involved (students, mentors, and experts), the challenge, and the division of groups, if applicable. It will last for two months. While the general methodology should be explained by the mentors, the challenge should be presented by the experts in an easy way, followed by a moment for groups to get to know each other and start working on the Trend Matrix. This day matches steps one and two from Roshani, Lehoux, and Frayret's procedure for open innovation implementation, related to the alignment of mindset and skills and the definition of company's capabilities and list of needs.

On this day, mentors should also explain the methodology of the Idea and Customer parts and groups should finish the Trend Matrix. From the Moodboard to the Market Size Matrix, students can work remotely to have more flexibility and should finish it before starting the Persona Canvas. However, the Persona Canvas, Customer Journey Map, and Value Ratio Matrix should be done in-person as they require more reflective thought and can generate disagreements, which are more easily solved in-person. This part should be done in three sessions of four hours each in the last week of the second month and preferably in days close to each other so that students can have everything fresh in their minds and mentors need to be present to answer possible questions. It is recommended that students complete the Idea in the first month and focus on the Customer in the second one.

These phases should be in the first module as the trends, value flow map, identification of stakeholders, market segmentation and size, and study of the persona and customer journey are the basis for all the upcoming steps and all the upcoming ideas. The output of the first module is the Idea and Customer sections done in Venturely.

Module two: Structuring

Module two of the program comprises the following Venturely parts: Business Model, Strategy, and Implementation and is focused on the structuration of the idea itself, relating to steps three and four of to Roshani, Lehoux, and Frayret's procedure for open innovation implementation. This module will happen in five and a half months, with one month dedicated to the Business Model, two months dedicated to the Strategy, and two and a half months dedicated to the Implementation.

The kick-off of this module should be done in two in-person sessions of three hours each, in which the mentors will explain how each phase should be done and groups will start working with the Smart Business Model Canvas on Venturely. At the end of these two sessions, the

business model should be almost completed, but can be finished by participants remotely as the whole Business Model part (Smart Business Model Canvas and Multi-sided Business Model Canvas) only needs to be ready one month after the beginning of this module.

In the beginning of month four, students need to start working on the Strategy to develop a go-to-market, a positioning in front of competitors, adapt the business model in the target market, test hypothesis, and build a plan for the minimum viable product (MVP). For the Hypothesis Testing and MVP plan, there should be five in-person sessions of four hours each as this is an extensive and demanding part which will require lots of discussions and debates. These sessions may not be consecutive and should happen once a week until the end of month five. Students need to have everything done until the Market Design Canvas part to start the Hypothesis Testing.

In months six and seven, students should focus on the Implementation section, developing an analysis of cash flows, a plan for the implementation, and a business plan. The first and second steps of this part can be done remotely, but students should at least start the Business Plan in-person because of its complexity. Students should have two sessions of three hours each to structure the business plan, one in the middle of month six and another one in the second half of month seven.

The output of the second module should be the Business Model, Strategy, and Implementation parts handed-in by the end of the sixth month.

Module three: Testing and Pitching

Although testing is not a formal part of Venturely's Venture Creation, a space for it should be included for the purpose of this project as most professors and companies stated that it is fundamental to test the idea before implementing it in the company, and many initiatives in the benchmark place testing as an important part of an innovation project, such as Esade Creapolis. Besides that, as this program happens in the context of a university, it is safe space for testing and validating solutions (Figueiredo, 2021). The testing and pitch will go from the second half of month eight to the end of month ten.

This module starts with one month in which students will design how their idea will be tested. In the middle of this period, there will be an online session with mentors to validate their path, followed by another online session that includes experts, who will approve groups' ideas for testing. After that, students will have one month to test what was approved and half a month to analyse result and prepare the pitch, happening in-person in the end of month ten.

5.1.6. Pitch and Jury

As a way of celebrating the end of the program journey and giving recognition to what was done, a pitch day should be organized between the company and the university. It would be interesting for it to be at the company's office as a way for students to get even more involved and motivated. The groups should present themselves in alphabetical order of the groups and pitch in three minutes, followed by four minutes for questions and answers (Q&A) from the jury.

The jury should be composed by the mentors of the group, experts from the company, people from the company related to the subject, and a well-known entrepreneur as an external guest. The last ones will have an unbiased opinion about the challenge and the groups and is also an incentive for students as claimed by S1 in her interview. The quantity of each stakeholder will depend on the size of the program.

A cocktail can be served in the end as a form of celebration and recognition if applicable.

5.1.7. Reward for Students

Although students are willing to apply their knowledge in real-life business problems (Chesbrough, 2003) and although it is a chance for them to network with the company and earn recognition (Filkenstein, 2021), having a reward makes them more motivated, especially when it is something related to the challenge (Victor & Kuster, 2021).

The reward itself should be defined by the company in accordance with the university. However, it is highly recommended that it somehow relates to the challenge, such as an offer for an internship in the company, a participation in the percentage of sales of the solution (if applicable), a trip to get to know the company's headquarter with a guided tour, a prize money, tickets for the an interesting event (such as the Web Summit for example), a mentorship with a company's guru, or even have the opportunity to follow-up the implementation of the solution in real life. It is important to keep in mind that giving a prize money generates greater expectations on the corporate partner.

Sustained by the fact that universities are a big crib of start-ups (Roshani, Lehoux, & Frayret, 2015, p. 9), another way to reward student is to invest in their projects. Companies can, for example, invest in students' start-ups through the offer of mentors to accompany it or invest money itself (if applicable) as they can be acquired afterwards.

It is also important for students to gain any type of recognition even if their idea is not the winning one as this is a way of motivating their work. This could be done through the distribution of a certificate and a recommendation letter for the best students.

5.1.8. Investment

The financial investment for the program will be done by the company in agreement with the university and the mentors. The amount should be enough to cover the main costs (mentors, company's employees time, needed material, and pitch day) and any additional costs should be agreed between the stakeholders.

Even if the cost is considered high for the company, they should take into consideration that this program is a way for them to be more known in the academic community, reduce costs with R&D, optimize time, access human resources (Roshani, Lehoux, & Frayret, 2015, p. 6), and improve existing products or create new ones, being able to test and validate new ideas in a safe environment (Lee, 2000).

5.1.9. Next Steps

If it is of stakeholders' interest, they can implement the winning project in the company involving students as the IP will be shared between them and the corporate partner. In this case, students can act as consultants so that the company's team can better understand the idea, explaining the details of what was thought and/or coming up with improvements, or can be hired as interns.

5.2. Venturely: How it can be adapted?

To answer to this program's challenges, some adaptations must be done in Venturely so that it can better attend its needs. The following suggestions are based on the interviews done with the different stakeholders and on an analysis of Venturely to better understand it. See figure 8 for the summary of adaptations suggested.

<i>Suggestion</i>	<i>What Venturely has</i>	<i>What should happen</i>
Ideas Development section	Three types of projects: Business Model, Pitch Deck Generation, and Venture Creation	Inclusion of a new type of project called Ideas Development in Brazilian Portuguese
Video tutorial on how to navigate in the platform	Does not have a translation to other languages	A video tutorial should be recorded by Venturely's team explaining the platform's functionalities and should be made available on it

White labelled	Does not have a white label version	A white labelled version should be made available for the Ideas Development section
Theoretical content	Does not have theoretical content that can be accessed by users	Theoretical content on topics related to the structure of the Ideas Development
Everything inside the platform	Some steps require a download of the template to be used so that the user can fill it and then an upload	All the templates should be inside the platform, without the need to download and then upload again
Publication of projects	Users do not have the option to publish their projects	Allow users to publish their projects and create a profile so that others can get in touch
Testing and validation	There is not a section dedicated only to testing and validation	Include a section called Validation Survey so that students can create surveys for validation directly in the platform

Table 6. Suggestion for Venturely adaptation.

First, it is important to create a new type of project on Venturely with the same structure as the Venture Creation part, but with the changes cited below. This new section should be called Ideas Development and needs to have a version in Brazilian Portuguese as many Brazilian students do not speak English fluently. As a new section will be created, the icon should also be changed. Instead of using the rocket as in the Venture Creation, the following image can be used as an icon (see figure 9).

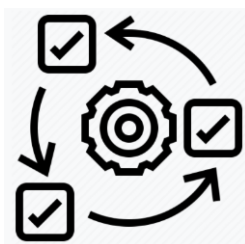


Figure 8. Icon for the Ideas Development section.

Adapted from ICONFINDER. Available at

https://www.iconfinder.com/icons/6084023/agile_development_methodology_process_work_icon

It is also important for the Ideas Development to have a general video tutorial in the beginning of the journey for both mentors and students to know how to navigate in the platform and get the most out of its functionalities. The video should contain an explanation of how to use the components and how to optimize the use of the platform to answer needs but should not get into details about each step and how each part should be filled.

An important aspect to be taken into consideration is to make the Ideas Development white labelled so that companies' logos can be placed in it. According to C1, having the company's logo in the platform is important to give participants a more immersive experience, while for C7, "it adds value to the company" (Cordeiro, 2021). However, as it is important that the essence of the platform continues there (Salvi, 2021), Venturely's name should not be completely left out, but the company's logo should be inserted, as well as its colours (see figure 10 for an example).

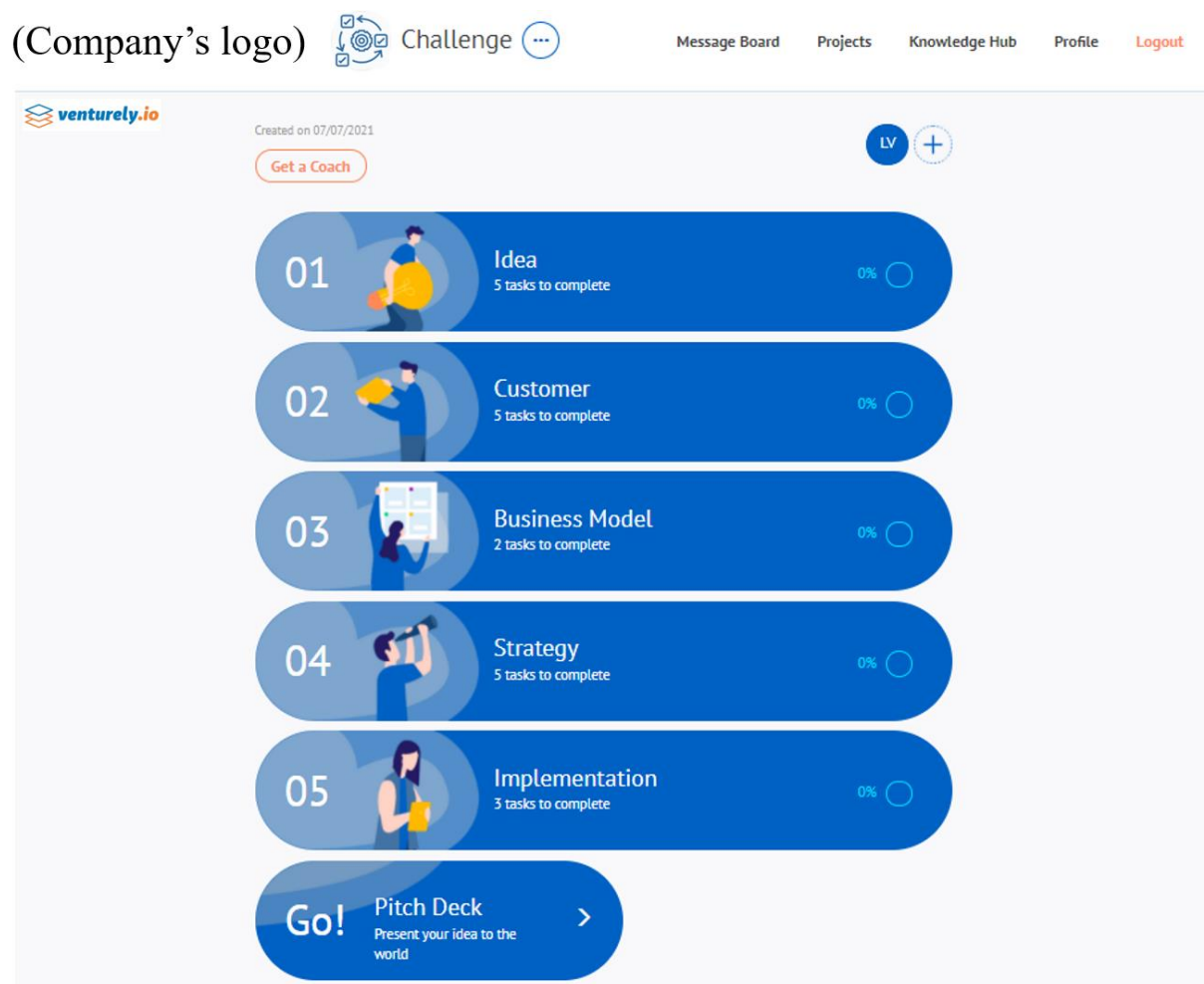


Figure 9. Example of Venturely adaptation with company's logo.

According to P4, P5, and P6, it is fundamental for students to have theoretical content that they can access whenever they need as, many times, they need to remember what was explained in the beginning. The theoretical concepts should be related to the methodology used, explaining the importance of each step and how to better use it to develop the solution. It should be done in the format of a video class, with the same content as mentors will explain in the beginning of each module, but made easier and quicker so that students can go back to it quickly and easily.

Another important aspect to be included reported by P1 and P3 is that the platform should centralize everything because “if students leave the platform to search for a missing information, he may not come back to it” (Salomão, 2021). In practice, Venturely should have all the templates integrated within its structure so that students do not have to download the template, fill it, and upload. This makes it easier for them to work as a group as each person can log in and work on the last version available.

According to S3 and S4, users should have the option to publish what they did, classifying it according to predefined tags related to the industry in case, and to create a profile to do so, making their email visible if they want. By doing so, others could search for an existing profile or projects in that area through a search engine. This would allow the creation of learning communities (Collis & Margaryan, 2004) and would increase the interaction between students themselves and with mentors (Keengwe & Kang, 2012, p. 480).

Venturely’s Ideas Development should also have a section dedicated to testing and validation. However, as most times the platform is not the best way to do so as students can test on the market, it can, at least, have a sixth section called Validation Survey, in which students can create surveys directly on Venturely instead of doing it in another platform. This section would generate a code for each survey so that testers could access the website and type the code to access it. Results would be displayed for the groups so that they can analyse it directly in the platform.

6. Conclusions

Literature showed the importance of collaboration between companies and universities for both stakeholders. While companies are interested in improving their products, services, and launch profitable innovations, students are interested in being put in contact with the market and apply the theoretical knowledge they get in universities (Lee, 2000). At the same time, professors see it as an opportunity to get funding for their projects, test theories, and arrange job opportunities for their students (Lee, 2000).

However, although literature recognizes the importance of this partnership, there is lack of explanation regarding how this could be done and of a pre-defined set-up for this to happen. For this reason, this dissertation had as purpose the development of a blended open innovation program between universities and companies in Brazil, a country with great potential to innovate but lacking incentives to do so.

The result was a blended program in the form of an extracurricular activity happening in two semesters and including students, professors, mentors, and companies' experts, which may come or not with a pre-defined challenge. The program set-up includes three modules that accompany Venturely's step-by-step process for venture creation, with some adaptations so that it can work for the given purpose. The final moment includes a pitch for a jury and a reward for the winning team.

Although an area still with big potential to grow, open innovation is now seen as a mainstream area, so that it is now used as a strategy for some companies (Gassmann, Enkel, & Chesbrough, 2010). As future trends, Gassmann, Enkel, and Chesbrough point out the expansion of it as an even more mainstream area, becoming more popular, including low-tech, expanding not only to large firms but also to smaller and medium-sized firms, migrating from stage gate to probe-and-learn, creating alliances specially with universities, spreading open innovation knowledge, expanding innovation not only related to products but also to services, and accepting the idea of IP as a tradeable good (Gassmann, Enkel, & Chesbrough, 2010).

Even with an extensive research and inclusion of stakeholders' insights to the program, this study has some gaps and limitation that can still be explored by future researchers. First, it does not reduce bureaucracies directly, an aspect seen as a big issue by the interviewed, and the established timeline may not be applicable to all universities due to their specific academic calendars. Another matter of concern is the investment needed to be made by companies since they have different priorities, as well as their availability to give students a proper reward.

Other risks related to companies have to do with the acceptance of shared IP as, sometimes, they want to have the full ownership of it, and the fact that this thesis did not establish a path to the definition of the challenge by the firm, which can be an issue for them. Lastly, the given program depends on the availability of the stakeholders involved to be successful.

References

- 100 Open Startups. (2021). *Ranking TOP 100 Open Corps*. Retrieved 12 03, 2021, from 100 Open Corps: <https://www.openstartups.net/site/ranking/rankings-corps.html>
- Bouças, C. (2020, February 05). *Concorrentes avançam sobre a Ambev*. Retrieved 12 01, 2021, from Valor Econômico: <https://valor.globo.com/empresas/noticia/2020/02/05/concorrentes-avancam-sobre-a-ambev.ghtml>
- Chesbrough, H. W. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston: Harvard Business School Press.
- Collis, B., & Margaryan, A. (2004, December). Applying Activity Theory to computer-supported collaborative learning and world-based activities in corporate settings. *Educational Technology Research and Development*, 52(4), 38-52.
- Esade Creapolis. (n.d.). *CAP (Corporate Acceleration Program)*. Retrieved 11 28, 2021, from Esade Creapolis: <https://www.esadecreapolis.com/corporate-acceleration-program?lang=en>
- Esade Creapolis. (n.d.). *Co-creation Labs*. Retrieved 11 28, 2021, from Esade Creapolis: <https://www.esadecreapolis.com/co-creation-labs?lang=en>
- Esade Creapolis. (n.d.). *Esade Creapolis*. Retrieved 11 28, 2021, from Esade: <https://www.esadecreapolis.com/?lang=en>
- Esade Creapolis. (n.d.). *Idea-Labs*. Retrieved 11 28, 2021, from Esade Creapolis: <https://www.esadecreapolis.com/idea-labs?lang=en>
- Esade Creapolis. (n.d.). *Innovation Projects*. Retrieved 11 28, 2021, from Esade Creapolis: <https://www.esadecreapolis.com/innovation-projects?lang=en>
- Esade Creapolis. (n.d.). *Programa Empenta X*. Retrieved 11 28, 2021, from Esade Creapolis: <https://info.esadecreapolis.com/es/programa-empenta-x>
- Esade Creapolis. (n.d.). *Retail Forum*. Retrieved 11 28, 2021, from Esade Creapolis: <https://www.esadecreapolis.com/retail-forum-esade-creapolis?lang=en>
- Esade. (n.d.). *Rambla of Innovation*. Retrieved November 27, 2021, from Esade: <https://www.esade.edu/en/about-us/ESADE-method/rambla-innovation>
- Gassmann, O., Enkel, E., & Chesbrough, H. (2010, June). The Future of Open Innovation. *R&D Management*, 40(3), 213-221.
- Gattringer, R., Hutterer, P., & Strehl, F. (2014). Network-structured university-industry-collaboration: values for the stakeholders. *European Journal of Innovation Management*, 17(3), 272-291.

- Hall, B. H., & Link, A. (2001). Barriers Inhibiting Industry from Partnering with Universities: Evidence from the Advanced Technology Program. *The Journal of Technology Transfer*, 87-98.
- Harvard Innovation Labs. (n.d.). *Harvard i-lab*. Retrieved 11 28, 2021, from Harvard Innovation Labs: <https://innovationlabs.harvard.edu/harvard-i-lab/>
- Harvard Innovation Labs. (n.d.). *Harvard innovation labs*. Retrieved 11 28, 2021, from Harvard innovation labs: <https://innovationlabs.harvard.edu/>
- Harvard Innovation Labs. (n.d.). *Harvard Life Lab*. Retrieved 11 28, 2021, from Harvard Innovation Labs: <https://innovationlabs.harvard.edu/our-labs/harvard-life-lab/>
- Harvard Innovation Labs. (n.d.). *Launch Lab X*. Retrieved 11 28, 2021, from Harvard Innovation Labs: <https://innovationlabs.harvard.edu/launch-lab-x/>
- Higher Education Statistics Agency. (2021, June 10). *Intellectual property, start-ups and spin-offs*. Retrieved from HESA: <https://www.hesa.ac.uk/data-and-analysis/business-community/ip-and-startups>
- Keengwe, J., & Kang, J.-J. (2012, January). A Review of Empirical Research on Blended Learning in Teacher Education Programs. *Education and Information Technologies*, 18(3), 479-493.
- Lee, Y. S. (2000, June). The Sustainability of University-Industry Research Collaboration: An Empirical Assessment. *The Journal of Technology Transfer*, pp. 111-133.
- Lehoux, N., D'Amours, S., & Langevin, A. (2010). A win-win collaboration approach for a two-echelon supply chain: a case study in the pulp and paper industry. *European Journal of Industrial Engineering*, 4(4), 493-514.
- Lin, Q. (2008). Student satisfactions in four mixed courses in elementary teacher education program. *Internet and Higher Education*, 11(1), 53-59.
- Loof, H., & Brostrom, A. (2006). Does Knowledge Diffusion between University and Industry Increase Innovativeness? *Working Paper Series in Economics and Institutions of Innovation*, 73-90.
- Moules, J. (2021, March 19). *Pandemic accelerates growth in online MBAs*. Retrieved from Financial Times: <https://www.ft.com/content/ee971fc7-9c90-4911-b5ea-6a00cc01c216>
- Open Startups. (2021). *Ranking TOP 100 Open Corps*. Retrieved 12 01, 2021, from Open Startups: <https://www.openstartups.net/site/ranking/rankings-corps.html>
- Palloff, R., & Pratt, K. (1999). *Building Learning Communities in Cyberspace: Effective Strategies for the Online Classroom*. San Francisco: Jossey-Bass.

- Roshani, M., Lehoux, N., & Frayret, J.-M. (2015). *University-Industry Collaborations and Open Innovation: An Integrated Methodology for Mutually Beneficial Relationships*. CIRRELT.
- Santos, A. M., Haegeman, K., & Castello, P. M. (2021). *The impact of Covid-19 and of the earlier crisis on firms' innovation and growth: a comparative analysis*. Joint Research Centre.
- Singh, H. (2021). Building Effective Blended Learning Programs. *IGI Global*, 15-23.
- Van Dierdonck, R., & Debackere, . (1988). Academic Entrepreneurship at Belgian Universities. *R&D Management*, 18(4), 341-350.
- Varga, A., & Parag, A. (2009). *Academic Knowledge Transfers and the Structure of International Research Networks*. Pécs: IAREG.
- Venturely. (2021, 10 23). Retrieved from Venturely: <https://venturely.io/about-us/>
- Yeh, Y.-C., Huang, L.-y., & Yeh, Y.-I. (2011, January). Knowledge management in blended learning: Effects on professional development in creativity instruction. *Computer & Education*, 56(1), 146-156.
- Zhao, F. (2003). Enhancing the quality of online higher education. *Quality Assurance in Education*, 11, 214-221.
- Zucker, L., Darby, M., & Brewer, M. (1998). Intellectual Human Capital and the Birth of U.S. Biotechnology Enterprises. *American Economic Review*, 290-306.

Interviews


- Bragança, V. d. (2021, 11 26). (L. Villardi, Interviewer)
- Ciraudó, L. (2021, 11 20). (L. Villardi, Interviewer)
- Cordeiro, R. (2021, 11 28). (L. Villardi, Interviewer)
- Dantas, M. (2021, 11 29). (L. Villardi, Interviewer)
- Figueiredo, H. (2021, 12 09). (L. Villardi, Interviewer)
- Filkenstein, A. (2021, 11 29). (L. Villardi, Interviewer)
- Fonseca, M. V. (2021, 11 30). (L. Villardi, Interviewer)
- Lima, T. (2021, 11 29). (L. Villardi, Interviewer)
- Pires, P. G. (2021, 11 29). (L. Villardi, Interviewer)
- Salomão, L. (2021, 12 10). (L. Villardi, Interviewer)
- Salvi, N. (2021, 12 01). (L. Villardi, Interviewer)
- Stuber, E. (2021, 12 04). (L. Villardi, Interviewer)
- Victor, C., & Kuster, V. (2021, 12 01). (L. Villardi, Interviewer)
- Yamaguchi, A. (2021, 11 30). (L. Villardi, Interviewer)

Appendix


Appendix A

Types of Project in the Venturely Platform


Select type of project



Business Model
Build a viable and scalable business model



Pitch Deck Generation
Create a 10-slide pitch deck



Venture Creation
From idea discovery to implementation

<https://app.venturely.io/>

Appendix B

Venturely's Smart Business Model Canvas

Smart Business Model Canvas ?

Build your business model by adding Post-its and Patterns to the canvas

Key Partners	Key Activities	Value Proposition	Customer Relationship	Customer Segments
	Key Resources		Channels	
Cost Structure		Revenue Streams		

[Download as PDF](#) [Clear](#) [Save](#)

Business Model Canvas layout by strategyzer.com (CC license)
Business Model Patterns by Remane et al. (2017), Lüdtke-Freund et al. (2018), Lüdtke-Freund et al. (2017) and Braun et al. (2018)

Post-its

Title...

Description...

[Create](#)

Business Model Tools

- [Cash Flow Calculator](#)
- [Ecosystem Radar BETA](#)
- [Auto Business Model BETA](#)
- [Hypothesis Testing](#)

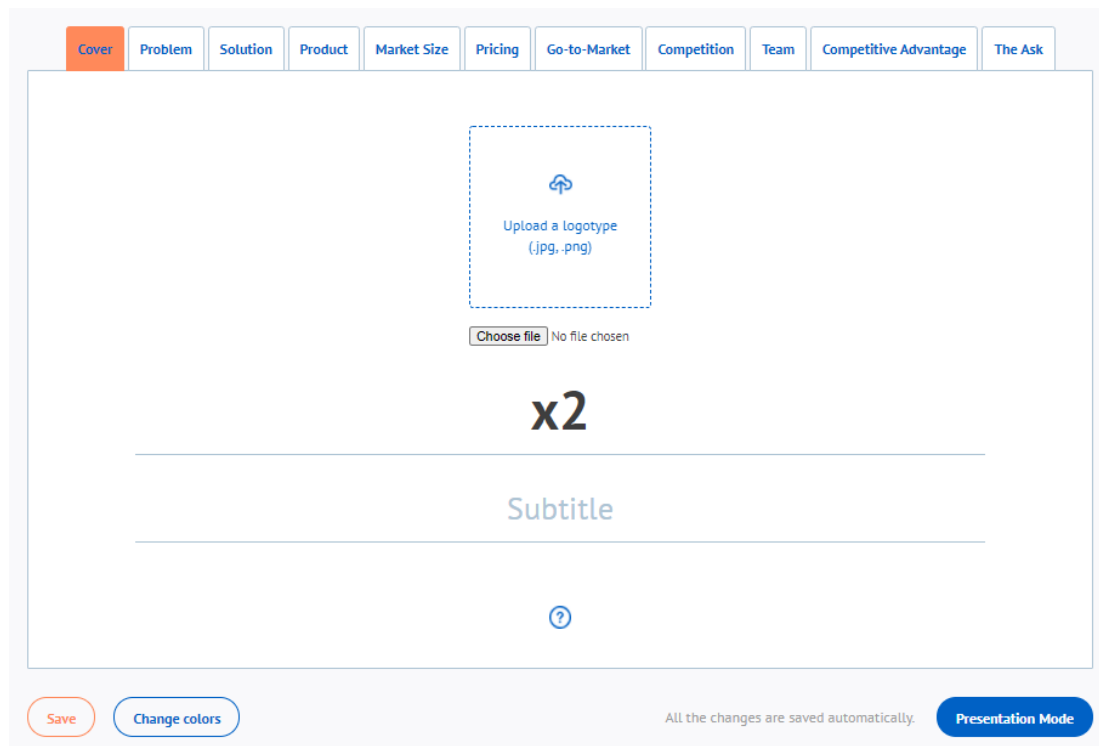
Business Model Database

Search

- [Essential Pack](#)
- [Digital Transformation Pack](#)
- [Circular Economy Pack](#)
- [Sustainability Pack](#)
- [E-Mobility](#)

Appendix C

Venturely Pitch Deck and Venture Creator



Appendix D

Benchmark of Open Innovation Programs and Initiatives

Esade's Sant Cugat campus in Barcelona, Spain, is a good example of an innovation initiative that involves both the university and companies. In the so-called Rambla of Innovation (Esade, n.d.), Esade built a space dedicated to home-grown business research and innovation that includes labs dedicated to innovation and experimentation involving students, faculty, and companies. It includes: the conception of a new idea (Fusion Point), investigation and feasibility of that idea (Decision Lab), the manufacturing of prototypes (Fab Lab) and the definition of the business model (eGarage), to the creation and implementation of a company (eWorks). The fact that they have all the phases of development in just one place allows the process to be faster and to involve the academic community (Esade, n.d.).

Also based in Esade's Sant Cugat campus, there is Esade Creapolis, built to foster innovation, entrepreneurship, and business development. It includes: the Co-creation Labs, the Idea-Labs, the Innovation Projects, the Empenta X program, Corporate Acceleration Programs, Corporate Venturing Services, and Forums (Esade Creapolis, n.d.). The Co-Creation Labs provide

specific solutions to various challenges faced by organizations working with multidisciplinary teams formed by start-ups, researchers, government, the company's employees, clients, competitors, and suppliers. The objective can be either to refine a company's project or to create a new product or service (Esade Creapolis, n.d.). It takes into consideration a client's real needs and forms a multidisciplinary team of students to develop innovative ideas to solve specific challenges in partnership with the company or institute, either by creating new products or services or by improving existing ones and testing them with the client. The Idea-Labs use the design thinking methodology, clearly defining the problem and needs before jumping into the development of the solution itself (Esade Creapolis, n.d.).

Another initiative by Esade Creapolis is the Innovation Projects: the identification of new market opportunities and the disruption in existing markets through the capitalization of those. They can be done in two different forms: co-innovation or design of experiments. While the first one is focused on the development of new business models, attracting new clients to the business, the second one organizes empirical experiments that enable statistical information to help in the optimization of existing products or services (Esade Creapolis, n.d.).

The other Esade Creapolis' programs are related to the acceleration and incubation of technology start-ups (Empenta X Program) (Esade Creapolis, n.d.), fostering the collaboration between companies and start-ups (Corporate Acceleration Programs and Corporate Venturing Services) (Esade Creapolis, n.d.), and promoting innovation through reflection, debate, and action in specific areas (forums) (Esade Creapolis, n.d.).

The Harvard Innovation Labs support Harvard students and selected alumni to create their own business or simply to learn about innovation. It holds a network of mentors, fostering collaboration and support through the mix of multidisciplinary people in the i-lab, Launch Lab X Geo, and the Pagliuca Harvard Life Lab (Harvard Innovation Labs, n.d.). The i-lab is Harvard's dedicated community to boost innovative ideas coming from undergraduate and graduate students from all Harvard schools, a place where they can meet physically, find support from mentors and experts, and put ideas into practice (Harvard Innovation Labs, n.d.). The Launch Lab X Geo connect Harvard alumni's ventures to foster their relationships and scale their business through talks, workshops, and pitch feedbacks (Harvard Innovation Labs, n.d.), while the Pagliuca Harvard Life Lab is a co-working space for early-stage biotech start-ups founded by Harvard students, alumni, faculty, and scholars. It offers access to diverse resources: programming, mentors, advisors, and experts (Harvard Innovation Labs, n.d.).

At Nova School of Business & Economics, in Lisbon, the Co.Innovation Lab is responsible for open innovation programs between companies and students, such as the Business Open

Experience (BOX), Hackathon, and Design Thinking module. BOX is a one-week challenge including three companies with three different challenges, with each one being solved by three groups of, at least, three students. All of them are accompanied by a member of, preferably, the company's innovation team, which pays to take part in the BOX challenge, while the students' winning team gets a prize money. Hackathon is a 24-hour challenge in which students are also divided into teams to solve a company's real case, but only have that limited time to do so. In this case, they also get a money prize. In a more different model, the Design Thinking module is part of the students' mandatory program, as a three-day challenge to tackle a company's real case using innovation. In this case, students do not get a money prize but receive ECTS. In all of the programs cited, design thinking is the methodology used, students receive mentorship from the Co.Innovation Lab team, and pitch to the company in the end. An initiative that is not directly school-related but can be said to be an open innovation program between companies and students is the BRASA Summer Journey, happening twice a year for four weeks each. BRASA is the biggest association of Brazilian students abroad and, since 2019, conducts an open innovation program between Brazilian students and companies, in which the only criteria for the first ones is to be Brazilian, to pay a fee, and come a pre-defined challenge. With mentorship from companies' experts (not necessarily from innovation areas), students are expected to dedicate twenty hours per week and pitch to a board chosen by the company, who selects the winning team.

Appendix E

Interview Questions

Target: Brazilian universities > Professors

1. Have you ever done innovation programs between students and companies?
2. Would you see value in developing a program with students focused on a company real problem aiming at the development of a new product, service or business model?
3. If the answer to 1 is yes: Did you use any platform to guide students about how this should be done? Which one? Do you have any feedback?
4. If the answer to 1 is no: Why?
5. Do you think a platform/tool that enables the development of new business models would add value in an open innovation program between the company and students?
6. What should not be missed in this platform?
7. What should the platform include to have the "icing on the cake"?

Show Venturely

8. Do you have any feedback of any kind? About the platform itself or about the display/design.
9. Do you see value in hybrid programs (part online and part in person)? Do you think a program of this type would work between companies and university students?
10. How long would be ideal for a program of this type? Should it be something punctual and fast or, for example, be the length of a semester?

Target: Brazilian universities > Students

1. Have you ever participated in a project focused on the development of a new product, service or business model with a company? Or a project that aimed at solving a company's real issue?
2. Would you find it valuable if the university offered a program focused on solving a company's real case? Why?
3. Considering it could be something not related to a subject itself (apart from your obligatory subjects), how would you feel attracted to take part in a program of this type? Through the acquisition of ECTS, financial prize, internship in the company, etc?
4. Would you find it better if there were a platform that guided you through the process of development of the new business model? What would you expect from it?

Show Venturely

5. Do you have any feedback of any kind? About the platform itself or about the display/design.
6. For how long would you be willing to participate and with which workload?

Target: Brazilian companies (may or may not have participated in this type of program)

1. Have you ever taken part in a program of any kind with an university?
2. Does your company have an innovation sector inside it? If so, do you work only with closed innovation or also with open innovation?
3. What do you think of the open innovation idea? What could be the benefits of it? Do you think there could be any "harms"?
4. Would you see value in doing a program focused on the development of new products, services or even business models with university students?

5. Would you have any concern in investing in an open innovation program in hybrid model with public universities?
6. How would you measure how much you would be willing to invest in it?
7. What do you think about the students having an online platform that could guide them in the development of new products, services and business models?
8. What should not be missed in this platform?
9. What should the platform include to have the “icing on the cake”?
10. In your opinion, would it be interesting if the platform was “white labelled” and could be personalized with the company’s logo?
11. For how long and for which workload would you be willing to lend a team to follow the program? (In terms of checking what makes sense and what should be changed, as well as explaining what the company already does)

Target: Companies that already participated in this type of program

1. What was the program you participated in?
2. How was the experience of letting students think about a problem of the company?
3. What was the best part of the program?
4. What could be improved?
5. Did you use any platform to guide students through the process?
6. If not: Do you think a platform to guide students through the process would have been helpful?
7. Do you think a program like this is a hybrid learning model would work?

Appendix F

University Professors Interviews

P1 is the former Sales and Marketing Vice-President of Stihl, Brazil’s leading company in portable power tools for forests, farming, gardening, cleaning, and civil construction, founder of Stuber Mentoring for Executives, and professor at Insper and São Paulo University (USP) in Design Thinking and Artificial Intelligence. He also holds a Master of Science in Strategic Design and a Doctoral in History and Philosophy of Science and Technology. With a background in the executive world, P1 started at Insper as a consultant to improve students, candidates, and employee’s experience, and was invited to teach Plan-Do-Check-Act (PDCA) as the university had partnerships with companies to solve real issues of those, moving to

teaching Design Thinking after two years in PDCA. According to him, “it is not enough for students to only look at case studies, the best way to learn is solving real cases” (Stuber, 2021), a fact he also associated with the feeling of delivering something to companies, which are usually so drowned in routine that need a young and unbiased team to look at the issue from a different perspective. P1 uses a platform called Sprintbase to work in design sprint, which allows you to have all the steps of the project registered in only one place, to upload pictures, and check group and individual progress. From what he sees, the value of a platform is this type is that it centralizes everything and allows both students and mentors to check the step-by-step process. After showing Venturely to P1, he pointed to the importance of having an initial part explaining the student that that is not a linear method of learning and that it would be a good idea to use the Double Diamond approach. Another suggestion given by him was to allow the user to build a prototype and to validate it based on his initial assumption as a step one since it is not enough for the student to hear that his initial idea might be wrong or not enough. To justify that, the interviewee cited John Maynard Keynes, claiming that “the difficulty lies not so much in developing new ideas as in escaping from old ones”. P1 strongly believes that open innovation programs should happen in a hybrid way as it brings practicality, allows the company to make data available easier, and allows the professor to keep track of the progresses. As a challenge to this model, the professor claimed that it might be difficult to convince companies to work in a hybrid model with students, which could be solved with a testimonial from anchor companies. As this type of project requires a change in the mindset, P1 believes it shouldn't be something done in a semester but, to be great and robust, should last, at least, a year. He would start with a face-to-face initial approach to meet and brainstorm, pass to the online until the problem is very well defined, meet in-person to design the solution and test and collect feedback, and do the pitch as it fits the company and students, being the most irrelevant part to be in-person or virtually. P1 made himself available to test a pilot once this program is structured.

P2 is the scientific director for the Research Centre for Gas Innovation at São Paulo University (USP) and professor of Mechanical Engineering at the same university. Although he is not a professor on directly innovation-related fields, he does open innovation programs between companies and master's and doctoral students since the nineties on subjects related to gas. According to him, this type of projects is of huge value as companies may be limited and biased, while students are always up to date with new trends and in top-notch universities. At the same time, he believes each problem might have a specific scale of time which should be answered according to the program's and students' course duration. As his main focus is on

technical-scientific problems, P2 never used a platform to help in the development of the solution, although they are starting to think about it now that he sees a need for the creation of spin-offs and start-ups. In his opinion, due to the content of his and his students projects, it is important that a platform can attach the idea and the technical-scientific part, transforming ideas in algorithms and mathematical models. When talking about the program being hybrid, he points out that fully in-person programs have more advantages than the fully online, but that being hybrid would ease interactions between people that are far. At the same time, P2 made very clear that the body language is fundamental to perceive what a person thinks about your idea. In terms of time, the professor believes it should be measured and does not support the idea of intensiveness to the fullest as it can be tiring for participants.

Besides being a professor on topics related to Branding and Entrepreneurship at Santa Catarina Federal University and Senai and developing projects at IADE, in Lisbon, P3, created the TXM methodology¹², focused on the development of new business, on the improvement of existing ones, and on pre-incubation. It has been twenty-five years he does this type of projects and connects students with companies, which, after all this time, now comes after him to take part into this initiative. According to him, “universities have really high walls that separates them from the outside” (Salomão, 2021), reason why he created the TXM methodology and the Cocreation Lab¹³, an ideation laboratory that adopts the methodology in projects. Nowadays, the Lab has more than forty units in Brazil and works with pre-incubation, ideation, open innovation, and future entrepreneurs who want to develop ideas, always focusing on sustainable results (economical, financial, social, and political). He stated that universities give all the theoretical support to the development of ideas and that students’ proximity with the market is fundamental even for those who want to pursue an academic path as it enables networking, boosting ideas, and even financial resources for research from companies, asset that, in P3’s opinion, doesn’t come from the government anymore. According to the professor, “a tool to organize ideas with an effective methodology is not important, but truly fundamental for the creative process to happen” (Salomão, 2021) as, according to him, “the creative moment only happens in a little bit of chaos, but even this chaos need order” (Salomão, 2021). In platform of this kind, it is fundamental to give freedom and all the information needed to the user as if he leaves the platform to search for a missing information, he may not come back to it. The icing on the cake would be to have a follow-up with mentors both inside and outside

¹² <https://txm.business/>

¹³ <https://cocreationlab.com.br/>

the platform, online and in-person as “the homo sapiens only exists because he is collaborative, talk to others, and discuss ideas” (Salomão, 2021). In his projects, he usually does 60% online and 40% remote, with a non-defined part in-person as he believes people should have freedom to choose when it is necessary to meet. After testing many different options for duration for the TXM methodology, they believe that five months is the ideal time, with the first month of discussion and information, mentoring from the second to the fourth month, and validation in the fifth month. They also make available video lessons and e-books to their participants, update their canvas every six months, and have a chat and a link to meet within the platform. P4 has background in Chemistry but is currently the General Coordinator at LabrInTOS, UFRJ’s Technological, Organizational, and Service Innovation Lab and teaches Innovation in Organizations and Innovation and its Maps. As a professor, P4 already did projects between companies and students through LabrInTOS, hired a student to work in his company to focus on issues to be solved, and always incentivizes students to do extracurricular activities. P4 stated that in the post-graduation courses, almost all students also work and use one of their companies’ issues to work on in during the course. He truly believes innovation programs with students are a great way to explore new solutions and build new business, so that they have a program with MIT, called MIT REAP, and another one focused on energy and sustainability called EnergINN. While MIT REAP is focused on regional development through entrepreneurship, EnergINN (powered by MIT REAP) is a program focused on investing in the creation of entrepreneurs and start-ups in energy and sustainability. In his classes, P4 uses a tool from the Florida Institute for Human & Machine Cognition (IHMC) to build conceptual maps and applies design thinking and lean start-up. In his opinion, there should also be a preoccupation with Environmental, Social and Corporate Governance (ESG) in the methods used to develop any kind of solution or business. For him, it is fundamental that platforms to guide students have a theoretical explanation of all the steps as, many times, students and even entrepreneurs don’t have a clear idea about what is really needed to structure an idea, and that there is a financial part well structured. The icing on the cake would be to have a matrix showing, with colours, what is good, what could be improved, and what is bad. P4 likes the idea of an hybrid program of this type, but believes that “the eye-to-eye is a must” (Fonseca, 2021), and that the ideal time would be less than a year but should not be fast as students would value it much more if they had to work hard.

Besides being a professor, P5 is also the Head of Product and Marketing at eMotion Studios, a Brazilian venture Builder. She has an extensive list of subjects taught: Business Model Canvas, Innovation and Creative Data, Digital Marketing Strategies, Growth Hacking Techniques,

Technological Innovation Project, Innovation and Entrepreneurship in Data Science, and Mobile Marketing. As a professor, P5 never did innovation programs directly between companies and students, but tries to boost this relation incentivizing students to get to know companies and innovation ecosystems, such as Raja Valley, and to make them work on real issues their companies have (in the case of post-graduation students). For students, she believes doing innovation programs with companies is a one-time opportunity to gather experience and gain visibility, as for companies she believes it is a great way to solve problems and have results. However, it is indispensable to have supervision also because companies can see students as too young. From what P5 sees, professors lack support from universities and their related coordinators to do this kind of program, believing that companies would want to involve more if universities showed more involvement as well. She believes that the use of a platform would depend on the objective of the program, but could be useful to gather common points from different methodologies (design thinking, design sprint, jobs to be done) and use them, always with the supervision of an expert who knows a lot about the subject. It is also indispensable that students learn the theoretical part, have mentorships both with professors and with the company, and work in groups. As feedbacks for Venturely, P5 believes that it is great for students to have a guide of this type in which they can go and come back any time and use at home. As a professor, she would “for sure use it” (Pires, 2021). When talking about having a program of this type in a hybrid model, P5 believes it is possible as it allows to scale and to build an initial simple MVP to test and collect feedback, which could be interesting to do in-person. In terms of time, she suggested that it lasts for at least one year, depending on students’ maturity to do so, as it is a time that allows the generation of value. For her, the phases should be clearly defined as it is important to generate value not only in the end of the project but in each step. P5 made herself available for a pilot test and knows people who would also be interested.

P6 is a professor at ESPM, a school of marketing and advertising in Brazil, besides being a consultant for companies and start-ups mentor. In the post-graduation courses she teaches, the project was the development of a new business, but she never did project between companies and students directly. However, P6 believes this would be a good theme for a thesis, for example, as some students already work on innovation projects for real companies (but without their support) for their thesis. Although writing their thesis based on a real company, students do not have their support directly, fact that the professor attributes to the lack of openness from companies. For students, P6 believes that this type of approach is beneficial as they can get in contact with the market while, at the same time, she sees companies not very interested in this

type of project. In her opinion, a tool to guide students in the creation process would be good specially when they are not very mature as long as it doesn't block their creativity, besides saving professors' time. In a platform of this kind, P6 believes it is essential to have theoretical content which students can access at any time in the same place, blocks that allow the person to understand the path she must follow, and an explicit guide containing what will be asked and evaluated. Regarding Venturely specifically, the professor believes that it is fundamental to have feedback from mentors anyway as students usually tend to skip steps, especially the structuration of the problem itself. She thinks that a hybrid program could work, depending on how it is structured as students tend to be more present in-person and distracted in the online. The online, however, allows scalability and the presence of international companies and mentors. When talking about duration, P6's opinion is that, independently of how long it is, it is important to have the deliverables of each phase clearly defined as it stimulates students to make decisions. The professor made herself available for a pilot once this thesis is ready.

Appendix G

University Students Interviews

S1 recently graduated with honours from Babson College and Insper (exchange program) and is currently working at as a Venture Builder at eMotion Studios. During her course at Babson, S1 did a Foundation for Management Enterprises course, focused on the creation of a real company which can, later, receive a loan from the university so that students can develop their ideas. She also took part in an open innovation program between Insper and Shopping Center 3, in São Paulo, during three months in which the CEO of the shopping centre accompanied the teams and their ideas giving constant feedback. Although the project lasted for three months, in S1's opinion it could be smaller and more intense. For students, S1 sees as an opportunity of networking with the company, especially if it a company they are particularly interested. It is also a chance for students to learn new methodologies and in which they should receive any kind of recognition, even in a ceremony with the company's high levels. To attract students, S1 suggested giving extra ECTS, allowing students to be absent from other courses to focus on the open innovation project (if it is a few days project), having a trip to immerse in the idea, partner with the Junior Enterprises, organize a demo day with important personalities for the area or top entrepreneurs, give prizes such as tickets for the Web Summit, and even give to the students a percentage of the revenue the idea generates. She would not involve a prize money as it may create a high expectation in the company which may not be accomplished

and, at the same, might not be very significant to students. She believes that the idea of having a platform to guide students is great, but does not exclude the need of a mentor. In her opinion, there is a lot of opportunity in Brazil for companies to collaborate with universities, but this is not explored by the first ones. She would bet in a program of this type in a fast but intensive model, with the duration of days. At the same time, S1 recognizes that by doing so there would be no proper time for validation.

S2 is a student from the tenth semester of Environmental Engineering at Fluminense Federal University (UFF). Although she never participated in a program with a company directly, S2 had a class in which she had to develop a sustainable product mentored by the professor, but didn't have the step-by-step experience as the only instruction given by the professor is that the product should be viable (no tests were done). The student believes it would be much better to develop an idea for a real company as it would be much more focused and specific. According to S2, as in Junior Enterprises students usually leave because there is no clear definition about the project and too much responsibility, organization, and clearness about the project to be developed would be crucial. Besides that, the area should be relevant and, as rewards, there could be a monetary prize, a paid internship in the company, or even count as a complementary activity¹⁴. A platform to guide student would be a great option as it is not easy for everybody to focus on certain ideas and making them punctual and with clear deliverables would smooth this process. In terms of duration, S2 states that it would depend on the methodology: "while in a short period people may be unable to dedicate time, in the long-term this could be possible as the person would be able to manage the time better" (Lima, 2021).

S3 and S4 were interviewed as a focus group since they are in the same semester of the Management bachelor at UFRJ. Both of them have never participated in an open innovation program directly with companies, but S4 participated in a project to create a business model for an app of events requested by an events agency while S3 teaches financial education, entrepreneurship, and digital marketing at Télós Conecta¹⁵, a learning platform dedicated to teaching contents focused on the professional market to Junior Enterprises (JE). An insight given by S3 was that Télós was restructures its target audience from students to JE as the last ones have money but do not know how to properly spend it as they can't have profit. According to S4, the value of a program between students and companies is that it helps understanding everyday problems of the real world and, according to S3, this makes the students feel more

¹⁴ In Brazil, it is mandatory for students to have complementary hours/activities to graduate.

¹⁵ <https://telosconecta.com/>

prepared to the real market as universities lack the practical part and could use to apply the theoretical part. Both students believe others feel more motivated when there is a reward, no matter of what kind it is. The main suggestion was that the reward should have something to do with the challenge presented by the company and that it should follow the intensiveness expected from the project. The prize could be related to ECTS, internships, coupons in delivery apps, money, or trips. A certificate and a symbolic prize are also good and can be put in the curriculum. When talking about a platform to guide students in the creation process, S3 and S4 believe it is a great idea as it can also help those who doesn't have much experience, building a safer and more inclusive environment. As feedbacks for Venturely, S4 suggested the inclusion of a possibility to connect with people who have already done similar projects through SEOs and S3 believes it would be great to have a space for published projects (optional) so that others can look at it. In this case, the student should classify the project in terms of area before publishing and create a profile so that other can find it and get in touch. In terms of time and duration, both believe one year is too much, but believe it could last one semester once or twice a week for two hours.

Appendix H

Companies Interviews

Ambev, part of Anheuser-Busch InBev, held 59% of the Brazilian beers market share in 2019 (Bouças, 2020) and is the company that runs more open innovation programs with start-ups in Brazil (Open Startups, 2021). C1, design leader at the Sales Innovation Lab, stated that the company already worked with students during the BRASA Summer Journey challenge, cited previously, to solve a company's real case and have some partnerships with universities, such as the Innovation and Technology Centre at Rio de Janeiro's Federal University, but, as far as she knows, do not run programs directly with universities and students. Ambev does have people dedicated only to innovation inside many areas and a director focused only on innovation projects, being very open to open innovation programs. According to her, "before developing the solution ourselves, we go to the market to see if someone already did it" (Yamaguchi, 2021), doing co-creation projects with start-ups for existing challenges in their so-called Programa Além. For them, the not so good part of open innovation is to deal with the bureaucracies that may arise from the university-company relation, while, at the same time, it offers different lenses to existing issues since, most times, those coming from the outside do not have a biased view of the problem. When talking about a hybrid open innovation program,

C1 thinks it is fundamental to adopt a flexible approach as it can include more people. According to her, it would be amazing to have a platform to guide students through the innovation and creation process as the biggest problem she sees is that they do not know how to start and what is the step-by-step process, ignoring the structuration of the problem and wanting to go directly to the minimum viable product (MVP) development. In this case, it would be essential to give them access to templates, and the icing on the cake would be to allow connections with people who can help, as, according to C1, “innovation is all about connecting to people that can help” (Yamaguchi, 2021). Having this platform white labelled would be good to give the participants a more immersive experience in the company’s culture. On the other hand, participants can feel too attached to the company and this may affect the creative process. According to her, “the best way to train someone to work with innovation is through practice” (Yamaguchi, 2021).

C2 is the CEO of São Paulo’s oldest shopping centre, called Shopping Center 3, besides being a mentor and investor of start-ups, member of the Alumni Committee of Entrepreneurship at Insper, and member of REP Insper (a project-based learning course between Insper students and companies). Although his company does not have an area dedicated only to innovation, he already did a problem-solving challenge based on design thinking between the shopping centre and Insper and, during the pandemic, asked ESPM students to draw a solution for the six movie theatres he saw empty. According to C2, it is important to clearly define the problem before designing a solution as some people start ideas even without being sure that it represents someone’s problem. In his opinion, open innovation may bring some issues as companies and other stakeholders diverge a lot in the way of thinking, companies tend to see start-ups as belonging to their business, and the first ones have a lot of bureaucracies. As he sees, only now universities in Brazil are understanding the need to teach and talk about innovation but, at the same time, are facing challenges to create new teaching models as the Ministry of Education tends to hamper disruption. C2 showed himself as very open to lending teams to accompany this type of program with a university.

C3 is the Executive Director of Sales and Shareholder of Solar Cuidados, a home care company based in Rio de Janeiro, Brazil, that have never participated in a program with universities and do not have an innovation sector, although they have already thought about it but gave up due to lack of human resources. According to him, new ideas and solutions are welcome, but, as they are already absorbed by what is there, it is difficult to pay attention to new opportunities, even believing that students are a tourbillon of ideas. In terms of investment, C3 stated that “at the moment we live right now, I would invest in something guaranteed to work, and not in

something I am not sure if it will work or not” (Ciraudo, 2021). He also stated that “if there is an established method and someone to coordinate and help, the chance to work is much bigger as it allows control and track” (Ciraudo, 2021) but would be indispensable to take into consideration the return for shareholders as, in the end, “this is what companies live for” (Ciraudo, 2021). Something he would also value is the platform having a part dedicated to the validation with clients and being “white-labelled”, so that he could use his brand on it. In terms of dedicating a team for that, C3’s company is very open to that and showed interest in doing a pilot when this thesis is completed.

C4 is the Executive Director of Finance and also a Shareholder at Solar Cuidados. The interview was also done with him as, according to C3, he is “more active when talking about the willingness to innovate” (Ciraudo, 2021) and, according to himself, has the dream of “automatizing everything” and “having as least employees as possible” (Dantas, 2021). Although they do not have people dedicated only to innovation, they recently hired a manager to focus on improving processes and see every opportunity for improvement as valuable. According to C4, students are super tuned and have a more disruptive vision of business, questioning the status quo and bringing new solutions to old problems. For him, the process of designing new solutions should be done in a way that allowed forgetting everything done before, but a platform would be a good way to help focusing on the client. He would pay less for a solution applicable to any homecare company but would invest more in a personalized solution for Solar Cuidados.

C5 is the Strategic Design and Innovation Culture Leader at Suzano, a top 10 company in open innovation with start-ups according to the 100 Open Startups (100 Open Startups, 2021). From the way the company sees it, innovation is not only an area but a movement and should be embedded throughout the company. Although they have never done innovation programs with universities themselves, they already did four editions of JA Startup, a program aiming at the development of an idea from scratch to becoming a real start-up with young people focusing on the United Nations Sustainable Development Goals (SDGs), sustainability, diversity, and inclusion. Suzano has innovation areas and does lots of open innovation, especially with start-ups through the connection of innovation hubs, designing and co-creating products and solutions. They usually go with start-ups already structured, but also run mentorships with early-stage ones. When talking about innovation programs with students, C5 mentioned that this is something they discuss a lot, but worry about low engagement and the level of maturity of solutions. However, they see students as high potentials as they are always tuned on new tendencies and tend to think outside the box. According to her, a platform to guide students

would be great depending on its user experience and on the easiness of using it and should have a place where mentors can check progress. Besides that, a section to deeply explore the problem should exist so that users can be sure they are looking in the right direction and can clearly have in mind the client profile. The personalization of the platform would be important as she believes it adds value to the user. As one of the goals of the current CEO is to increase Suzano's work in innovation and as the benefits of open innovation are very clear to them, she believes the company would make a proper team available to accompany a program with universities. C6 is the director for R&D at TXM Methods and Cocreation Lab, a pre-incubator for start-ups aiming at transforming ideas in real business as entrepreneurs often find difficult to structure the issue they are solving, study the market, conduct a company, build a pilot, and take it to market. They have already worked with Santa Catarina Federal University, but usually with students who already have an idea and want to create a business, not connecting them to companies or using students who doesn't have an idea yet. In C6's opinion, open innovation enables the fomentation of opportunities, knowledge, and collective construction as it helps growing an organization while it also benefits those around it and contributes socially and economically. According to her, students have a lot to add as they have too much access to theoretical knowledge but lack practical experiences to apply it. When talking about building a hybrid program, C6 states that this could be an added value as it enables a broader reach, but the in-person part is indispensable. She also believes that this type of program might be better accepted in already established innovation ecosystem, such as Florianópolis (where she is based), but even there are lots of bureaucracies. For her, it would be interesting to have a platform that guides students through the whole process as a space where they can have access to contents and valuable information for each step, besides being a generation that is very attached and used to technology. It would be indispensable for it to have a first step dedicated to structuring the problem and the client, a space with theoretical content, and to be flexible so that students can progress and come back whenever they feel the need to do so. The icing on the cake would be to highlight crucial points to consolidate a solution: resources, team, fundraising, and investments. For the platform to be white labelled would depend a lot on its strategy as, while having the corporate partner's name can underpin it, the name and essence of the creator should be there.

C7 is the former CEO and founder of Stone Age, one of Brazil's pioneering companies in Big Data solutions. Even having a team dedicated only to the creation of new products, meaning they do only closed innovation, C7 believes that the implementation should be strong so that the investment on the development of the new products is worth it. Although usually going to

universities to look for human resources, they never did innovation programs directly with students, even believing that those are the centre of ideas and always coming up with new things as older people can't keep up with everything anymore. "Collaborating with young people is a matter of survivance" (Cordeiro, 2021). The problem for him is that there is a lack of human resources in technology and, many times, the technology depends only on one person, with a need to spread this knowledge so that more people can have access to it. As his experience with smaller universities have never been good while with big ones it did, he would be more available to invest in open innovation programs with big universities, also since, usually, professors in this schools have more to add. In terms of investment, Stone Age used to invest from 5% to 10% of revenues in innovation and stimulate its employees to dedicate 20%-30% of their time in external experiences that would add value to their job. When talking about having a platform to guide students in the creation process, C7 believes it could be good as long as it doesn't limit their creativity and as long as it is approved even being a simple idea. It would also be indispensable for the platform to be white labelled so that the client (in this case the corporate partner) believe it is something they own as this adds value to their experience.

C8 is a project manager at Grupo Ageas Portugal, one of Portugal's biggest insurance companies. Since 2017, they do an open innovation program together with Nova School of Business & Economics' Co.Innovation Lab called Hackathon. This program lasts twenty-four hours and includes students from three different universities (Nova SBE, IADE, and Nova FCT) in which they have to bring solutions to answer the challenge given by the company. To do so, students have sessions with Nova SBE professors and specialists from Grupo Ageas Portugal and are accompanied by the Co.Innovation Lab team. In the end, they pitch for a jury who selects one or two winning ideas to be developed between Nova and the students, who may or may not be the same that developed the idea according to their availability. In this phase, they validate the idea, run a prototype and do a Minimum Viable Product (MVP). According to C8, this type of project is positive as it brings unbiased ideas from the outside by younger people, who also have academic knowledge that the company may not know (or may not remember), and allows testing inside the university itself as they see it as a safe place for testing. On the other hand, sometimes students lack a more professional positioning, which interferes in the accomplishment of deadlines and quality. Although they did not use any type of platform to guide students in the process, C8 believes this would be helpful as it would have defined methodologies and, at the same time, may help achieving a more professional

positioning. He also strongly believes in a hybrid program of this type as the company already worked in this model before the pandemic and as he believes this is the future.