11. Annexes

11.1. Annex: Other KPIs

Figure 37: Startup KPIs. Source a16z.com (Vital, n.d.)
11.2. **Annex: Pricing strategies**

![Diagram of Pricing Mechanisms]

*Figure 38: Business Model Canvas' Channels definition. Reprinted from "Business Model Generation" (Osterwalder & Pigneur, 2010)*

11.3. **Annex: Interview with Javier Marcipar (CIMNE Tecnología)**

11.3.1. **Transcription of the interview with Javier Marcipar**

Interview conducted on 4 May 2017.

The interview was conducted in Spanish. This is a translation of the conversation.

---------------------

**Javier Marcipar:** So, what do you want to know? Our history? Our model?

**Interviewer:** A little bit about everything. I am mostly interested in the process involved, the selection, and the mentoring.

**JM:** This starts at an investigation centre called CIMNE—the ‘Centre Internacional de mètodes numèrics d’enginyeria’. CIMNE is a public centre that depends on both, the UPC and the Generalitat; the two have participation of 50% each in CIMNE. We are a public entity and this conditions what we talk about to a great extent. CIMNE is 30 years old. It has 250 researchers and 30 to 40 service personnel, as well as project management, congress organization, publications, and more.
As researchers take part in projects, they develop technologies that seem good or that they think can be applied to the real world. They come from a theoretical background. They do a basic investigation and develop specific applications that can solve industrial problems or problems faced by regular people. The researchers realized this and, in the year 2001, we created five companies because we had mature technologies that could solve different problems. We created those companies with a model that we understood at the time. At our first events, it was frowned upon that companies created by the public sector were allowed to compete with the rest of the market. I was at fairs and people would tell me, ‘You are the one who uses my taxes to create a company that competes with me’. At the time, these things were seen in this way. Our companies were basically formed by the researchers with a little participation from CIMNE. In 2001, those companies went out of CIMNE, each one on its own. There was no help from CIMNE here. The researchers left CIMNE to run their companies. For example, I was a researcher and I left to the company of inflatable structures. We were lucky as one of those companies was sold in 2011, which helped us get a large sum of money. The other four companies were still working, not drawing astonishing profits but doing well enough. At CIMNE, this gave rise to an idea: ‘This is working. It is a profitable business. Why don’t we use the money from the sale of the company to create a service for company creation?’

In 2011, we created CIMNE Tecnología, which is where we are now. CIMNE Tecnología is an anonymous society and a company, but it is 100% CIMNE’s property. Moreover, we are a public company. So, we devote our effort to incubation and transferring technology. We carry out all the processes. We incubate the idea until it becomes a technology. Then we create the company and support it until it becomes profitable. And we do everything. There are no entrepreneurs here. Rather, we create the entrepreneurs. It is not that a researcher decides to create a company and leaves the university to do so, which is the case in other models. We believe that other models transform a good researcher into a businessman, most often with great trouble. Yet, it is not what these individuals choose in life. Because of the circumstances, they want to exploit a technology, but their vocation is not to be a businessman.

Our objective is not to de-capitalize CIMNE by turning researchers into businessmen. We tell researchers to research and support the project, and that we will take care of the company that emerges out of it. So, we create the company. We search for a company director and all the personnel. We prepare the business plan, look for investors, and do all the things that an entrepreneur would do. This is our model. It is different from other models, since we work as a company that not only transfers technology but also operates as an incubator. We have staff to support different companies with regard to accounting, payments, acts, banking—all of which are
part of standard management and administration tasks. Apart from this, we have a team of three people—myself included—which is in charge of business development. We prepare the business plan, manage commercial visits, focus on product design, and slowly create the team for the company. During the first three years, the company is in this zone, which is a cooking space for the company directors. Once the company is large enough, the team goes out and rents its own offices. There the company works autonomously, but in the first years the companies are mentored by us. If they do not work, we kill the company before it becomes a big problem. Once the company starts growing, we make sure the company is working. If not, we either bring in a redirection or kill it.

Thus, our model is to transfer the technology as well as the responsibility. When the project is an investigative project, all the responsibility belongs to the researcher. When the company is large enough, it is the responsibility of the company's director. In the middle, there is an extensive transfer process until you get a director. The director is autonomous and the company is growing at this stage.

How does it work? In the first step, there is shared responsibility between CIMNE and the researcher. They explore if the result of the investigation makes sense as product or service in the industrial world. If the answer is ‘Yes’, then we enter. CIMNE Technologia and the researcher share the responsibility to determine what should be the following steps. From that point on, we take almost full control and the researcher remains at a secondary level. We develop the business plan, the product idea, and search for investors and partners. Then we create the company and search for the director. There is also an incubator process, where the company is closely controlled and supported, but the director already has some responsibilities by this time. Once the company has run for three to four years and has some clients, as well as a proven product, we start to retire our control and part of our support. Then 100% of the responsibility lies with the director. This is our model in a nutshell.

I: You say the researcher disappears. Does it mean that he is not present in the final part at all?

JM: The researcher only works as an external councillor in the company. Many a time, he is not even a partner. We do not want researchers to be partners in these companies. We guarantee their economic returns through a royalty model and intellectual property recognition. There is a set of rules, which states that for every euro that enters CIMNE, a third is for the researcher, a third is for the researcher's team, and the last third for CIMNE. So, the researchers are a partner of the company through CIMNE without taking on the risk involved, whether economic or legal. The researcher participates in the profits without having to put in any money. We think that this model is fairer. It does not put the researcher on the management board unless told to do so. In
addition, the companies have service contracts with the researcher’s research group. So, every year, the researcher receives money whether the company is working or not. There is a licence contract, which says that the company can use any investigation that is carried out in CIMNE. Thus, that is another mode of payment for the researcher. We think this is a great deal for researchers.

I: And does CIMNE have participation in the company?

Yes. From Day 1, CIMNE has 100% participation in the company. Some companies are created with industrial partners or investors. Here, we have less participation. CIMNE usually has large participations in the companies. Over time, CIMNE dilutes this participation as it does not invest. The typical path is this: 100% at the beginning. Maybe once a partner enters, we have 80%. Then an investor comes in, which leaves us with 40%. A subsequent capital expansion may leave us with 20%. Then some stock is given to employees and we finish with 5–15% in the biggest companies.

I: How many companies has CIMNE created?

JM: Fifteen companies, of which we still have 13. We sold two and, from the 13, there are two that will disappear this year. Of the remaining 11, three companies are performing quite badly. Our main idea is to sell a company every three years. This is our business plan. If we accomplish that, our system is a self-sustaining one.

I: Full sale or only part?

JM: Full.

I: Before that, do you organize financing rounds?

JM: Yes. I’m going to one after this.

I: What is the typical age of a company before the sale?

JM: They always talk about break-even and so on. In our experience, that is not important. In our experience, during the first two years we do not understand the product or the market. We do not understand the value we bring. We only have a kind of intuition. We always have to iterate to find the right product. We do not come from the sectors we try to enter. We only have a researcher who has found something good but this researcher may not have any experience in the sector.

The first two years involve learning and trying to focus. Then you need an additional two to three years, with the product generating enough sales to break even, to have a solid company. This
may be between €500,000–700,000 in sales. Then there is a growth phase, which comes with more learning, such as how to go international and how to evolve. You achieve €500,000–700,000 in sales by brute force. To pass €2–3 million, you need a network, partners, and an international orientation. Often, the director from the first stages may not be useful for this expansion. We have to be careful to limit the participation and hopes of directors in case we need to change them. This expansion takes three or four years more. At that point, a full sale of the company is possible. It is usually not before eight to 10 years from the time of creation.

I: During this time, how do you dilute your participation?

JM: That is what I was telling you. We start with 80–100% and end with 5–15%.

I: And in the middle?

JM: It depends on the type of round. Normally, we dilute a lot in the beginning, which is where companies need the biggest part of the capital. The first investor can take up to 30%. In the second round, the investors normally take another 30%.

I: How many rounds do you generally go through?

JM: Two. Normally two.

I: What selection process do you follow when choosing a project, or when choosing the entrepreneur or company director?

JM: We do not do any selection from the outside; only from within the organization. So, we already know the project and the development of the research, as well as its possible applications. There are two types of projects: basic and highly applied. Among the applied ones, we see which ones can generate cash or solve a real problem. At first, there is an intuition. Working from the intuition, before anything else, we go and talk to possible clients. There we see whether what we want to do is interesting or not. Our objective is to see if the client is interested. We do not mention the degree of development, but we sell the idea as a possible solution. We ask a series of questions: How do they do this now? Are they willing to pay for it? How much? Do they know anyone doing similar things? Are there any competitors? If there are competitors, we try to go to fairs where they are present. We go as clients to understand the business. The search for information is one of the main steps, as we can define if our product has value and how much value it has. If the answer to the question, ‘Would you pay for this?’ is ‘Yes’, then it is good news. But if the answer is ‘I would pay if it was really good’, then it is bad news.

The next step is a transfer technology plan. In the plan, we need a product of this type. We will
need this amount of money, this amount of time. We size up the different parts of the project. Once we have the plan in place, there is the first decision to make: Should we continue or not? The decision is taken by the organizational structure of CIMNE.

Next, we need to create the company. We create companies without a business plan, which is not normal. We look for a company director with whom we can develop the business plan. This is necessary because the company director will be executing the plan. So, he must be a part of its creation. Of course, we know the profile and we have already created a transfer plan, but we must develop the business plan together.

Then we look for public funds to start the company’s operations.

I: How do you choose the director?

JM: We look at every source you can imagine. We consider those we meet in the courses we teach, former students, people we know, or their children. We also use selection processes. We use Michael Page a lot. Sometimes, an industrial partner may also recommend a director. At other times, it may be people who were in CIMNE but who left to work in the private sector.

I: What is the degree of development of the technologies you start working with?

JM: Normally, it is at the level of lab prototype. So, you have something that works in a controlled environment and for a series of very controlled problems. This is not a proof of concept. In TRL, I do not know which one it would be. But there is a pre-product. Or, depending on whether it’s hardware or software, there is something working as a prototype, or as a model in the computer, that is resolving some kind of problem. At this level, only the researcher may have used it. It may be difficult to use and it cannot be sold. It works but is far from complete. If it is a software program, the user interface and the system of pre-and post-processing are all missing.

I: So, even if by simulation, it solves the problem?

JM: Take water desalinization, for example, which is tackled by one of our companies. When we created the company, we had a machine in the lab to desalinate water. It was not optimum or scalable, but it existed. So, it is something close to a proof of concept, but not close enough.

For example, the company I’m going to present now deals in ultra-light bridges. We created the company with that (points to a prototype in his office). It seems a very simple thing, but it demonstrates how the idea works. There is software that calculates the structure and the results coincide with lab experiments relating to deformations of this model. So, we have a way to build this ultra-light structure and have software that predicts how it works. We also have a technical
team that knows how to run the calculations and prepare the design. So, the following step is to create the company. The first challenge is to create a real proof of concept that works in the market.

I: How do you decide if it is not worthwhile investing more effort in a company?

JM: The starting hypothesis for a company is that it might fail. You must always ensure that you are bringing value. If the product needs more development, the distribution is not adequate, you lack a sales structure, or the price is too high. All of this can be solved. All of this requires investment and effort. But if you do not solve a problem for anyone, it is an inflection point.

For example, consider the company with the bridge again. Our hypothesis is that when an emergency occurs, temporal bridges do not work. It is mandatory to design emergency bridges. What exists currently in the world is the temporal bridge. So, we want to design emergency bridges. If what we do is not better for an emergency than the current solution—that is, temporal bridges—we are not bringing value. If that is the case, we are only making a toy, which is very nice, but which does not solve any real-life problem. Then there is nothing to do. On the other hand, if the problem is the price or the complexity of assembly, this can be solved. What cannot be solved is if there is no value.

There is software to study the temporomandibular articulation for dentists. We went to talk to some dentists. They all told us that it is interesting. But once we had something to show, the dentists said that the software did not solve anything because they could evaluate the same with some movement of the articulation. If it clicks, the dentist could tell the patient to take some pills and do some tests, which they would otherwise have to do with the software. So, even though there is a problem, the software does not help much. Everything the software does the dentist already knows or can investigate by other means. In this case, the company is screwed.

I: At which point do more projects fail? Or when do you see that a project will not prosper?

JM: Once you have built this viable product and see that after two years you have not sold even one licence, then it is a good indicator that something is not right.

But it all depends on the product. In the desalinization project, we worked for five years. No one expects to sell something because we have nothing to sell yet. It depends on the product cycle. You can keep the company until you and your partners are completely sure that the product does not bring value. On the other side, there is this: The product brings value, but I do not know how to sell it. This requires a lot of reflection, expertise, and deciding how far you want to complicate your life.
I: Normally, when do you see that a product does not bring value? After the first round? In the second…?

JM: No. It happens when it must happen.

I: So, at any point?

JM: Well, it happens quite soon because if you do not sell, then you start to question it. Also, when you are unable to grow beyond the first 10 to 15 clients, you do not question the company but the strategy itself.

I: When a company leaves CIMNE, do you continue to support them? Or are they completely on their own?

JM: No, no. We continue helping them.

I: Is there any follow-up process?

JM: There is a very intense follow-up process. At least once a week, we meet with every company, even with the ones that left a long time ago. That includes even companies that left 15 years ago. I dedicate two hours a week interacting with such organizations.

I: Do you offer any course or training apart from the reunion?

JM: No. We should, but no. We advise our directors to do some training by themselves but we do not teach these courses. Some time ago, we used to do some. But we do not any more due to financial constraints.

I: On average, how much does it cost for you to launch a company?

JM: Do you mean the cost for us or the average investment needed?

I: Both?

JM: It depends. If it is software, it is one thing. If it is hardware, it is another. If it is software like the ones we handle, creating a first version may cost between €300,000 and €500,000. This is only to develop the product if the base is good. Then, to launch it in the market, it may cost around the same amount at the minimum. It may take five years to break even.

The money can come from three sources. There is us. We put in less money, although we do put in some. Public funds are another source, something we can access with relative ease. This is
the main source of financing. The third would be regular investors. About 60–70% tends to be public funds.

In hardware, a lot depends on the cost of the prototype. In the bridge company, the prototype costs €150,000. Then every assembly, which is done once a month, costs €20,000. The prototype for the desalinization of water is very cheap, maybe €30,000, but to make it work you have to work on it for a year.

In our sector, there is not a single company that works with only €200,000. That is impossible and it does not exist. Nor is it possible to do it in one year or in three years. It is not like an app that you can launch with €30,000. Our company is fed through long-term scientific research.

I: How much do you raise per round?

JM: Our rounds are never less than €100,000. So, I would say between €100,000 and €300,000 per round. Many a time, the rounds are divided into two payments and the second payment comes with some objectives or conditions. Normally, there are two private rounds.

I: This is for private funding, but what about public funds?

JM: It is quite easy to obtain €600,000 to €700,000 from public funds in these three to four years. For our part, we can provide around €20,000 to €30,000 in cash, and €100,000 in services or other resources.

The public funds usually come from either the EU or the Generalitat. These are normally competitive funds.

I: When you enter a new sector or one where do you not know anything, how do you approach it?

JM: We support the process with people we already know or people that are presented to us. We ask these people for guidance on which direction we should take. We also search for sector mentors. One of the main challenges is understanding how to enter a new sector. This takes up most of the time.

I: When you incubate what are your greatest challenges and dangers?

The main challenges we face are related to the ability of entrepreneurs to focus on the product and on the needs of the market, as well as to develop the commercial deployment. The main danger is not having correctly evaluated the market and penetration strategy. This may lead to the product not being sold either because of bad business strategy or, what is worse, because
there is no need for the product.

I: What is the most common conflict that you find in the companies created?

One of the main conflicts is with potential investors. It is difficult for them to understand the technology licences from CIMNE.

11.3.2. Data from CIMNE Tecnología

---

11.4. Annex: Interview with Judith Cruixent (EIT InnoEnergy)

11.4.1. Transcription of the interview with Judith Cruixent

Interview conducted on 4 May 2017.

The interview was conducted in Catalan. This is a translation of the conversation.

Interviewer: I would like to know the perspective of the staff in your company. How do you work?

Judith Cruixent: We are not an incubator but a project accelerator. For us, there is a difference between an incubator and an accelerator. The incubator offers space to startups and is like a co-
working space where other services can be offered. Nowadays, in Spain, we do not have a space for co-working (incubation). We are more of an accelerator because we invest money in the startups. We invest between €75,000 and €150,000. So, we have participation in the company and become partners.

I: How much participation approximately?

JC: That depends, but it is between 10% and 20%. How do we work internally? Once the company has signed our contract accepting all the conditions, we start to invest. Principally, our investment goes into four areas:

- Technology development. We invest to the extent of 30–50% of the budget.

- Market. A market analysis and client visits must be carried out. We cover all costs of the trips. We have a mentor that helps select the business model, sales strategy, marketing strategy, and finance strategy.

- Team investment. We can assist the company to cover its team expenses for up to two founding partners (like a salary), so that they can kick-start their project for 10 months. Also, we assist them in contracting new people, and we may pay their wages during the first six months.

- Financial area. We help them to connect with the investment ecosystem. We have a European network of venture capitalists.

These are the basic things that we do. In Spain, at present, we have 30 projects. Our support programme lasts about two years. After these two years, we have other ways to increase our investment.

I do not know if other accelerators work in this way, but we work like a business angel. We invest money and support the company to develop its idea.

I: How do you select the companies you want to invest in?

JC: We are changing it, though the basic selection process is the same. Now, we open annual calls for applications (this year, the first call will open in May). Earlier, it was open all year.

Once all the companies have submitted their applications, we run a first selection process. In this first session, the team must present their project for five minutes. This is followed by a round of questions (10–20 minutes). Here, we are looking for a business opportunity and for the startup to be in the correct phase so that we can invest. If a company meets these requirements, it passes to the final selection process, which takes place two months later. In the final selection process,
the startups present their case for 15 minutes, followed by a 30–40-minute round of questions. The evaluation is done by a formal committee of InnoEnergy’s executive directors.

Why do we wait so long between the two selection processes? That is because we enter into a small due diligence phase, during which we contract three external consultants. One of them prepares a market analysis and business model for us. The other gives us a technology analysis. The third provides a team and competence analysis, and evaluates the profiles.

After all this is presented to the committee and approved, the contracts are signed, and we can start investing.

I: What grade of development are you requesting?

JC: We usually request for a time to market of a year and a half. This means that the first sale will be accomplished at the end of this period. Moreover, it means a TLR of around 5, 6, or 7. They must have a team of more than one person. It is not essential that the startup is already constituted into a company. That can be done afterwards. However, each startup must have a clear business model, market, and market application. The business ideas should mainly be related to energy, such as improving energy efficiency in distribution, usage, and so on. We have seven themed areas.

I: You previously said that you put them in contact with venture capitalists. So, I understand that your contribution dilutes with time.

JC: It depends. We have the right to subscribe. The partnership contract says that we have the right to not dilute our contribution in case the valuation of the company drops once we are in. However, if the valuation is higher, and we decide not to subscribe, because we have the right to do this, then we dilute. This is the standard contract with a private investor.

I: You said that your programme lasts for two years. Do you sell your participation afterwards?

JC: No. What we do in most startups is to set up an administration board. And we have the right to designate a counsellor. During the two years, the support is more intensive because we provide them with services. After these two years, we can increase the budget, but we have no obligation to do so. After two years, the company will still have a counsellor and it may be provided with more indirect support. The idea is to exit after five to six years. We have been running our accelerator for five years now and we have not sold any companies yet. It is a slower area because the projects belong to the industrial sector. It is not like an app.

I: How much can you raise in a financial round?
JC: Who? The companies? It depends on what the company wants. Once they are in, we help the startups to contact investors. There are businesses that look for rounds of about 150, 300, 600, etc. More than 1 million is not usual in Spain because it is tough to raise funds.

I: How does the coaching work?

JC: We assign a budget to the coach. We also offer a mental training process that consists of eight phases. Depending on which stage the startup is in, it can start from the beginning or from where it needs the training. Some of the steps are: look at the team, do the customer validation, look at the business model, the sales strategy, the financial strategy, the industrialization, and so on. We conduct sessions of two to four hours. The coach comes here to conduct the session and we pay coach by the hour.

I: You mean that the coach and the company come here for the session? How often?

JC: Yes, they come here depending on the needs of the company. We adapt our programme to the different startups. Our value proposal is that we are flexible for every entrepreneur.

I: Could you tell me how often an average company may come here?

JC: Previously, we were doing approximately two sessions per month. But now we do it depending on each startup.

I: How do you designate the coach? Based on the needs of the company?

JC: Previously, it depended on the needs of the business. Nowadays, we have ties with 30 coaches. The entrepreneurs decide which coach they prefer.

I: These are coaches that you have previously searched?

JC: Yes

I: And all the companies that are here are from Europe?

JC: Yes

I: During these two years, do you only help with the business plan or do you also contribute with product development?

JC: At the end, the startups complete part of the product thanks to our investment, but we are more focused on the commercialization process. So, they should have the product ready.
I: For the future, are you looking to sell your participation after five to six years?

JC: No. We are seeking to sell our participation at the right time. After five years, we have sold one or two at the European level. Looking at the current state of the market, I think five or six years is required.

I: How do you finance yourself?

JC: We have the European Commission public funds of EIT. We also have a network of 27 formal partners, which contributes funds and more partners.

I: I found that you also have master programmes. Do you offer training to the entrepreneurs as well?

JC: Yes, we have a talent programme that creates training modules. This is one of the services we provide. We offer training opportunities. We conduct a meeting of all startups and people from the industrial sector at the European level. We have a support programme to do the landing in the US, and our master students can incorporate to the startups to do internships. They do this for free. The student salary is not paid by the startup. In every office where support is offered, we have business developers to help in the internationalization of the startups. Once they are in, they are assigned a project manager and a project director (that is the contact). At present, we are working on all these aspects.

I: The renewable energy focus is due to your public fund source?

JC: It is because the EIT as the funding institution created this as a theme. It is a European call made by the European Commission, and the winner consortium was that, but the theme was already decided.

I: I suppose that not all the startups are successful. How do you manage then?

JC: If they do not follow all the things established in the contract we can break it. Then, some may decide that it is pointless to continue. This is something that the startup chooses. But it must be reasonable. If the startup chooses not to continue because they are starting a new company, then they are breaking the contract, and we must reach an agreement based on the contract specifications.

I: What percentage of startups completes these two years successfully?

JC: I do not know really. Here we only had one case of a startup that failed, but at the European level, I am not sure. Previously we had some that decided to bow out before we started the
investment.

I: And how many do you have that are continuing?

JC: Approximately 33.

I: Based on the energy theme, I suppose your startups are more about prototypes than software?

JC: Well, we have a mixture of them.

I: What is the typical profile of the entrepreneur who comes to your company?

JC: It is usually someone who has already worked in the industrial field, someone with a technician profile.

11.5. Annex: Interview with Paloma Mas (Plug and Play)

Interview conducted on 11 May 2017.

The interview was conducted in Spanish. This is a translation of the conversation.

---------------

Paloma Mas: Hello

Interviewer: Hello.

PM: How are you? I am Paloma.

I: Thank you for speaking with me.

PM: No problem. Just tell me how can I help you and I'll be glad to do so.

I: I am working on my master thesis about accelerators and incubators. The aim of this interview is to know your opinion about the sector. You could start by explaining a bit about what Plug and Play is, how it was born, and a bit about what you do.

PM: Of course. Plug and Play was born 11 years ago in the United States to formalize something we had been doing for long time. Our boss is Saeed Amidi. He is an Iranian. In 1992, he was an expatriate from his country due to the wars there and he came to the US to start from zero. Once he arrived there, he pursued several businesses and, even did a bit of real estate. He was renting out a small ground floor space that he had on University Avenue, in the heart of what is now Silicon Valley. The first to rent this space were the founders of Google. The three founders of
Google, upon getting out of their garage, set up here for a year. During this year, they became friends with Saeed, and Saeed observed that this could be an interesting area to begin another new business. The next ones to rent the space, after the Google founders left, were the two founders of PayPal. Saeed felt this was the right moment to invest in these businesses. He invested in PayPal and started to make very good investments. Soon after, he invested in Danger, which you may not recognize, but it was the company that the founder of Android sold before setting up Android. Later, Saeed also invested in Dropbox. These investments, made 20 years ago, helped Saeed realize that it was a good opportunity to formalize what he was already doing—that is, to invest in startups. So, he created Plug and Play with the aim of setting up an open innovation platform not only for startups to get investment but also for the corporations and venture capitalists to participate. This was 11 years ago in Silicon Valley. Later, Saeed began to expand the business in Europe, Asia, and Latin America. At this moment, we have more than 21 locations around the world. What we do today is act as intermediaries between very powerful startups from different sectors and join them or introduce them to big corporations, which are really our customers today. Besides that, we have another path for early-stage businesses. Here, we teach startups how to keep growing and how to keep validating the business model. We are also investors. So, we have these three legs and this is what Plug and Play is today.

I: All right. I am more interested in your acceleration business. How do you work? How do you choose a startup? What programme do you propose to them?

PM: We have two programmes today. Let me explain to you how it works. At present, in Spain, the US, and China, we have a programme called Startup Camp. It is an early-stage programme. In United States is called Startup Camp, here it would be a normal acceleration programme. The acceleration programme consists of four months. In our case, the focus is on the digital field and digital sales. All the mentoring that we carry out takes the form of personalized lessons for each selected project. They are focused on sales, market feed, KPIs, and all digital fields for the improvement of the startup. During these four months, the startups have to report their metrics and how they are developing on a weekly basis. They also have to fulfil a series of milestones that we set for them depending on how we see the team. They can complete these four months in Valencia or elsewhere, depending on each project. They can do it face-to-face, which we recommend, but they will always have to be linked to Plug and Play. They will have a commitment with us constantly. What are the conditions of this acceleration? We invest a quantity in cash plus what the programme of acceleration would cost. That is €15,000 in cash plus €15,000 more, the latter representing what the programme of acceleration would cost. Therefore, we negotiate equity between 5% and 7%—at most 7%—depending on the valuation of the startup and what it has done previously. Afterwards, the quantity of money can change for the better or worse
depending on the milestones. But more or less it is this. The startup can later access €50,000 more, in exchange for a maximum of 3%. This would be the bill of Plug and Play. This would be the first acceleration programme that we have in Spain, China, and the US.

Let me explain to you the second one. Some startups do not stay with us for four years. When they leave, we track their evolution month by month and watch how they are doing. We ask them to submit metrics for all the months to keep tabs on how things develop. We are more able to deal with companies internationally because we expanded. It is easier for us to take a project that is more or less good and say, you will spend two weeks in United States to see how it goes. This gives rise to the second type of acceleration that we have, which we call 'verticales'. The acceleration by verticals is a three month not introduced programme for the startup. No equity is taken from the startup. We don’t invest. We don’t force the startup to obey a series of conditions. It is free for the startup. A sector is chosen and, based on this sector, we choose 20 startups that are in the mature phase. We do not take companies that are in the early-stage. We present the shortlisted startups to the corporations that are sponsoring or subsidizing this vertical. The corporations pay a fee to be a part of our network. What do they get in return? The startup gets to know about the innovations that big companies are working on and the big company gets to know about the innovation that the startups are working on. What is the aim? The aim is that they get to know each other. Besides, anything can happen here—from an exit to collaboration, a partnership, cross-selling. The model is different because it is not the startup that is handling the pressure here. Rather, it is the corporation within the programme that seeks to profit from the innovation that is being carried out. At present, we have 11 verticals spread around the world. They deal with food, travel, and hospitality, the Internet of Things, fintech, insurance, logistics, and mobility. We have a lot of verticals and each vertical usually has a minimum of seven brands—seven big corporations that support this vertical. From this model, which was born in Silicon Valley, we have to keep expanding. Now, we are also in France, Germany, Holland, and China. We have nine locations.

I: Okay. Now, may I ask you some more questions about the first programme?

PM: Sure.

I: How do you select the startups for the programme? At which stage of development do you contact the startup? Do you ask for a prototype?

PM: The conditions for the startup are three basic ones. First, they should have launched the product already. It could even be an MVP, but having completed the product launch is essential. Afterwards, they need to have a formed team. This is indispensable for us. The team must also be balanced. That is, it must have a technical part and a business part. The third condition is that
the team should have run and validated the business model by now. We need to know that they have achieved at least a customer and that the customer has liked the product. Then, with this base, we do the selection. Sometimes there are exceptions but I would say that the 90% of the cases follow these conditions. Under this parameter, we open the call two months before the beginning of the programme. The startups apply during these two months, although we do the scouting throughout the year. We go to fairs, get to know startups, and follow their evolution, if at the time we do not have any programme open. This is important for us. We select 20 projects that we think are the most innovative, balanced, and developed. These 20 projects will come to what we call Selection Day. The Selection Day is an event for which we invite experts linked with our community, as well as mentors, professors, former CEOs from other companies, CTOs, former students from Plug and Play, corporations, and the internal team of Plug and Play. On Selection Day, we introduce the 20 startups to the jury. The jury decides which have been the best projects (between five and 10 projects are chosen). These will then enter the acceleration programme.

I: Once they enter you have said that these four months are intensive. What kinds of trainings do you conduct?

PM: I will name them in order. They use KPIs to clarify what they have to present to us each week. So, they name their KPIs and define them clearly. Afterwards, they continue with the market feed. They continue to study their target customers, optimize time, and organize. After this, we begin with the basic mentorships. These deal with the functioning of their webpage, focus on growth for marketing executions to bring in more customers, explain that selling more and better is important, and so on. Later, there are modules on legal issues, pitch, and if requested, on marketing and communication.

I: Is there some sector or a type of startup that you do not accept because you believe they are not attractive sectors?

PM: If they have a good digital innovation, the sector does not matter. We understand that it will always be more complicated, but if the team is good and passionate, it does not have to end up badly. We do not accept projects in hardware because we do not work in hardware. At times, we have accepted a project that came with the hardware already integrated. We did not have to develop or validate it. So, in this case, we accepted it. But if the projects are very hardware-based we tend not to accept them.

I: So, you are more specialized in software.

PM: Yes, because we lack expertise in hardware. To accept somebody that you are not going to be able to help is absurd.
I: Within the programme, do you offer some kind of co-working space for companies?

PM: Yes, we offer it in Valencia. We have this free space for our startups and for their teams. They come here for the four months and we help them with all the logistics. For example, if they have to rent a flat or a car, we help them 100%. Afterwards, if they move out, we have agreements and ties with several co-working options in Madrid. We are on good terms with the people from La Terminal and Campus Madrid. And in Barcelona, we know the people at Activa. It is easy to find them a place if they need it in a city that is not Valencia. But we offer the free space only in Valencia.

I: Do you offer any other service apart from the training, guidance, and co-working space?

PM: Yes, we offer discounts, which we call perks. The perks result from agreements with technological companies for discounts, help, and so on for the startup. For example, we have tie-ups with Amazon, Hapstore, Google, Google Cloud, Intercom, and several others. They offer tools that the startups can purchase. The startups can use these tools for free for some months and later buy them for less than the original price.

I: What are the challenges for an accelerator today? What must be done to continue as a reference programme, as you are doing?

PM: The challenge for an accelerator is to find the best talent and then help that talent in the best possible way so that it becomes a success. This should be the challenge for any accelerator. How do we do it? By searching a lot, speaking with startups a lot, seeing what they need, and seeing where their difficulties lie. It is like being a good father and helping the startup with what they need when they need it. The final aim is to achieve success—that is, the general professional success of each person, helping them improve as professionals. This is profitable for us. The investments we make become profitable with time because the companies have been sold, because we have made our exit, because we have done a disinvestment, or whatever. That is a big challenge.

I: What are the challenges and what is the most important thing to do so that you can keep working as a reference programme?

PM: The most important thing is to have good projects. Even if we say we are the best, we must show the numbers. The good references are given by those who have gone through the accelerator and are happy with their experience. So, the mission is to keep the startups happy and satisfied with what we have offered them. At the end, what really satisfies you is if a new startup comes and says to you: 'I know this person that did the acceleration with you and he was so happy. He learnt so much that he has advised me to come here.' That is what the big projects
we had here are doing for us—providing references within the sector. The truth is that we are very happy. We haven’t had cases of people who left really disappointed or felt bad. All of them have seen the contributions of Plug and Play to their business and this is always satisfying.

I: You said that you take on between five and 10 startups every year.

PM: Yes, usually.

I: How many applications do you receive?

PM: In a year, we can have between 12 and 15 projects. Usually there are between six and eight projects in each batch. And how many applications? The last number we had was almost 400.

I: I just need a reference number. It is not really important.

PM: Yes, more or less about 400. We have three application paths. The open application process means that we do not know them at all. Last year, we had about 70 applications like this. Then we have the scouting process, which we do constantly. That is, we try to get to know new projects, see what they are doing, ask them, know them, follow-up with them, see where the entrepreneur comes from, head to fairs, look at recommendations. Then there are the projects referred or recommended to us by our partners. What does that mean? People from the Plug and Play community recommend projects—these are people like investors or they may be associations. For example, an investor may want to invest in this guy’s project but it is still not mature. This happens to us a lot with VC. They say to us: ‘I need you to train him for four months so that in six months I can invest a quantity of money in his business’. We help if the project is really good. If not, we say that it does not make sense to accept it. There is also the international aspect. What we have at Plug and Play in Spain is a very different model than the one in France or in Germany. Some startups that apply to them are in the early stage or cannot take advantage of these programmes because the selection is complete. So, our other branches send these applications to us and it is quite a big flow. We invite these startups for four months, help them in all the ways necessary, and that’s it.

I: Speaking of the exit of the companies, how many exits can you have in a year?

PM: In a year? We have had five in five years, so more or less one each year. This is in Spain. On the global level, I would say about 20.

I: Before an exit, do you usually have several investment rounds?

PM: No, we have to accompany the startup team to the first one. If they are very good, we may
go to the second one because it is worthwhile. But we are used to being seed investors. We invest between 50 and 100. Sometimes we have invested in the second round but that is very rare.

I: How long does it take between your training and the exit on average?

PM: More or less four years. Now we are starting to sell those that began in the first acceleration programme.

I: About four years. Okay.

PM: Those that were sold previously were projects that had a lot of traction. That made them easier to sell.

I: Apart from the recommendations, is there something else that attracts startups and venture capitalists to you? Why do they choose you over the others? Is it because you have a bigger international network, or is there some other reason?

PM: Yes, the main reason is that, and there is also the matter of the people that form our core team. We have three good qualities. One, the international network, is always attractive for any project that wants to present itself on a global level. They know that there is no network on the international level that is as powerful as like Plug and Play. It interests them because they know that they may spend a year in Spain improving the project, but in some months they could be in the US because we have brought them there. This is attractive. We also know how to choose the right projects. All our technological and digital projects have been moving very well. This has made us good startup providers. This is particularly attractive to venture capitalists. They think it is interesting. Another reason is the people behind Plug and Play. Everyone that is part of the team of Plug and Play—like Juan Luis Rubén, Alberto, and myself—are or have been entrepreneurs. This helps us to understand the startup itself and to see its problems. It helps a lot because we understand everything they go through. We were the first to have shut down our own companies, opened others, succeeded with some things, and failed with others. So, we understand the startup very well. This is also a value that Spanish accelerators tend to miss. They focus a lot on the execution and not on the person. We keep this in mind to see how the person feels and how we can help him even emotionally.

I: I suppose that not all the startups that enter are successes. How do you see that a startup is not going the right way, or after you have invested and maybe they have even completed the programme, you see that the startup is going to shut down?

PM: The main indicators are the KPIs. If you do not improve your KPIs and you keep on taking different actions, two things can happen: Either you will not find the right formula to commercialize
the project or the project may not be prepared for the market. Then, you have a dilemma. You can never know for sure. There have been projects that have had very good numbers but have suddenly had to close. Why? Because of the costs. Then there are a series of indicators where you see it, and afterwards you especially see it in the team, because the team does not feel comfortable, because there are a lot of discussions, whatever. The acceleration is useful for identifying the good things and the bad ones, helping the team integrate in a better way, allowing them to coordinate better, so that they turn into money-making machines. Or it could be the other way around, where the pressure breaks them and they realize they cannot stand it.

I: What is the most typical problem that startups have, which they may or may not overcome?

PM: The most typical conflict relates to finances. This is a concern for most startups, as they need to have money and customers. They need to look after their finances very well, control it, do the numbers, and never remain in the red. This is a worry, especially at the beginning where you have less capital. I also would say the customers. Many times it is very frustrating that you develop a product and you have a clear understanding of your clientele but your customer does not buy it and you cannot understand why does he does not buy it. This drives you crazy. You see it, change it, rotate it, and at the end it ends up being nothing at all. I think those two things generate more conflicts in a startup.

I: During the programme, what is the follow-up process for these startups? How do you stay in control, or if not control, how do you get the information?

PM: Yes, control or at least surveillance is necessary. Every month, the startups have to send us a mail reporting the metrics. This is compulsory. Later, we make sure to have a call with them every two months. We try to find out how things have been for them, how things stand at the time of the call, what they are working on, what they plan to do, and what they do not. We also try to organize a dinner every six months, one in summer and one in Christmas. We invite startups from all around the world. We say to them that the dinner will be in Madrid or Valencia. There are two reasons for doing this. One, this allows us to stay in contact with them and see them face to face. Two, the professional and social community does not get lost. At these dinners, we speak of KPIs and companies, and especially about personal experiences, but also work on keeping these contacts alive.

I: You mentioned that you have started selling the startups, especially those that began four years ago. Is your goal to fund your organization with the sale proceeds from each startup? I suppose that so far you have done it with the international support network.

PM: Yes.
I: You trust that you will be able to fund yourself with the sales you make?

PM: Yes, this is the aim of every investor and every accelerator.

I: There are accelerators that at some point begin to charge fees, commissions for use of the co-working space, and so on…

PM: I can understand if an accelerator charges a token amount, about €100 or €200 like we do. This helps people realize that having a real company means having expenses, like for renting an office and so on. But that is not our business model. I cannot understand how an accelerator can base its business on the charges made to the startups because that is not an accelerator; that is a business school. An accelerator must have risk, specifically capital risk. I understand that the aim of the accelerator is to improve the projects it has in the portfolio. Then there can be public help, non-lucrative associations, or whatever you want, but the basic concept of an accelerator I understand to be like this.

I: You have already mentioned the cost of the programme for the startups. I suppose that for you it is the €15,000 that you give them plus €15,000 more for the programme.

PM: Yes, more or less.

I: Apart from this, do you have any other associated costs? What could those be?

PM: Relating to startup acceleration?

I: Yes.

PM: That would be what we give to the startups: offices, lighting, water, kitchen services, all the logistical things, and afterwards, support related to regulations and various financial aspects. There are also our marketing actions: fairs, trips, congresses, that sort of thing. Of course, we pay everyone involved in the programme. There are accelerators that do not pay their mentors, for example. We make sure to pay all the mentors, including for their trips, deals, and everything else.

I: Is there something that you see in a startup that makes you ask, ‘Is this worthwhile?’ Is there something that makes you think immediately that a certain startup has a future?

PM: If you only refer to a startup or a project, you usually know with the numbers, the recurrences, and the users. You see it in the technology itself. When a startup is amazing, you know it will do well. Let me change the question a little: Is there some factor that pushes you to always accept a startup? Usually the factor that makes us accept a startup is knowing that it has a good
entrepreneur. So, we choose not because of the project but because of the team itself. You see it in how the entrepreneur is, how he expresses himself, how he handles the situation, how he answers the questions. You see it.

I: Thank you very much for answering all my questions.

PM: You are welcome. Good luck with your thesis.

11.6. Annex: Interview with Juan Carlos Morales (Emprèn UPC)

11.6.1. Transcription of interview with Juan Carlos Morales

Interview conducted on 15 May 2017.

The interview was conducted in Catalan. This is a translation of the conversation.

---------------------

Interviewer: I am doing the final work for my master thesis and my objective is to design a type of accelerator incubator. So, I wanted to know a bit about Emprèn, which is not an accelerator incubator but a co-working space where several actions take place.

Juan Carlos Morales: We say that we are a pre-incubator. This is the word we use. There is a lot of literature about the generating incubator. I will send you an article that classifies incubators, accelerators, and such entities. We say we are a pre-incubator because this is a space where various kinds of entrepreneurs are being yield, where the project must have at least a student or recent titled of the UPC. The entrepreneurs do not need to have a formal business yet, but they must have an idea and a definition of their business model. This is necessary for developing the first prototype to see if there is a business opportunity or not. Then if these entrepreneurs remain here and start working with us, they have a place for their work, a physical space, a meeting room in case they have a visit from a potential customer, investor, or supplier. They already have their headquarters here even though they are not constituted as a company. They can say they already have a sort of technological company. They are working within the domain of UPC and can receive business contacts in the office.

Besides, the connections with other projects help too. When these entrepreneurs come here, we do this process of accompaniment until leadership. At this stage, it is important to define the business model, to check a lot the subject of the market with engineer profile, as well as focus on the product, its design, and its build. It is a lot about the product. We say speak with your client to
see which characteristics your product must have. Even though it is innovative technology, it must satisfy a need for your customer. If not, he will not buy it. Yours will not be a company in that case. It will be something else.

To avoid this becoming a study room, we charge a token price of €10 plus VAT per project and per person. This payment does not cover the costs of the space nor of the mentoring and training that the businesses receive. But it is a way to get students to commit to their project. For example, during your degree studies, it is useful to have an office, right? The goal is to avoid this. This is a pilot test for the UPC. The pilot test has been done on the North Campus, now it will begin in the Campus of Terrassa and maybe in the Campus of Besòs and in the Campus of Castelldefels. There should be a discussion on whether it makes sense to begin it in the South Campus. What is true is that the proximity is important. I have projects in Terrassa and in the South Campus, but sometimes there are limitations because someone might say it takes too much time to go there and come back. The majority of the people are from the North Campus, especially from Telecommunications and Computer Engineering within the TIC area.

I: How do you select the projects?

JCM: There is a simple form that needs to be filled. People arrive with ideas in different phases of development. Their ideas can be very undeveloped. There is a form that can be downloaded easily from our website. What is the need or the problem that I am solving with my project? What solution am I proposing? Who are my customers? How do I define my customers and my team? In which state is the project? And what next steps are necessary? A paragraph needs to be written for each. Next, we conduct an interview and meet the entrepreneur team. They must explain the idea and we must get to know them. Their application then goes through to a council director. But mainly it is the interview that decides the selection. Right now we have space. But had you come in the past week, we were full and there was no space. But now it has opened of continuity place, the K2M. There is another co-working space that has opened recently, which offers 300 m². We charge a price here. It is not the market price, but it is between the market price and a very subsidized price to ensure a soft landing for the companies in the normal price space of the market. In the past week, some projects were still being run from here. But now that this other space has opened up, there are no problems of space. If the project has nothing to do with the fields of knowledge dealt with in the UPC, we don’t accept it. For example, it can be a very good franchise for a fish market. But since it is not a technological project, we do not accept it. It must have some link with the disciplines handled at the UPC. It must also be legal and must meet some minimum requirements.

I: But basically you accept the majority of projects that are presented to you?
JCM: If it makes sense, if the team is not a constituted company, if there is somebody that is studying or has finished studying one or two or three years ago. Sometimes, there are projects belonging to senior people. They should to go to a co-working space, or to people that have already raised money or have an important investment. Then you are on another level. You do not have to be here.

I: You mentioned that you offer co-working facilities but do you also offer any training?

JCM: Yes. We do conduct training programmes and activities. Like this afternoon at six, and I invite you to come, there is a talk by an Argentinean entrepreneur on the subject of the fashion. The guy has many franchises and he is well known in America. He will be opening the first shop in Barcelona next year, on the Vèrtex. And he will hold a conference about entrepreneurship and creativity. We organize these kinds of activities, we do networking together with ESADE, we do training with people who come by to explain different projects, and we also have a space to hold the training sessions. Apart from that, we develop different programmes here. We have trainings for businesses every year. There is the training from the UPC. There is the Yuzz, where you can win a trip to Silicon Valley and become a part of the project. There is a training programme for six months. Each week there are training sessions and you have a tutor to guide you with your project. This programme involves lots of training and mentoring. Also, we have completed the first edition of a programme called From Science to the Market. We work here with PhD thesis and master projects, where a technological development that is susceptible to valorize on the market is done. We run training of 250 hours, which is quite long and intensive, about how to valorize a project, how to protect it, how to licence it as a patent, and how to set up a company. This covers the different roads that you must take to bring a technological innovation to the market and valorize it. This is followed by the mentoring. Also, we have some programmes that are carried out with the CER, ESADE, and the Design School. There are also people from CIC and telecommunications. They form groups where there is a business designer and an engineer. Then they create a problem and solve it. They work with mentors and provide a solution. Also, there is another programme relating to the Internet of Things, where Imagine takes part with the same format, it is a design of Elisava and the Business school, EADA. We conduct different programmes. Thalos Barcelona, for example, is a lighter programme that is carried out over five or six Thursdays. The attendees visit different parts of the city that are linked to entrepreneurship. One of the places is here. There is also a conference on INEF working. We do everything to incentivize and promote entrepreneurship so that people think about it as an option.

I: Is the training more about the design of the prototypes or is it more about sales?

JCM: It is more about the market. Suppose someone has a technical problem and thinks that
there is a research group of the UPC that can help him. He comes here and asks for a contact. We facilitate it, but usually on the product level they are the ones who develop it. They are the ones who have the knowhow. We help them with the definition of the business plan and the market.

I: From what I can see, the training programme is more for the students who need a structured thing right?

JCM: Yes, here they collaborate and participate in some subjects within telecommunications and computer science that they study together with the people from ESADE. Some subjects in the degree course can be studied in the traditional way by doing a project or can be done as projects together with people from ESADE. If you need a space you can come here. Alternatively, you can attend a conference here or a session at ESADE. The subject is usually this because it is about the management and creation of projects. But it is not a academical training and it does not give any credits.

I: How do you fund yourselves?

JCM: The space here originally opened through collaboration with Barcelona Activa. The UPC provides the space, sanitation, lighting, and air-conditioning. With the help of Barcelona Activa, we have a person who is dedicated to this, which is me. The rest are assistants, subsidy. From Science to the Market is a programme subsidized by the Generalitat. In the Yuzz contest, we have some sponsors—the Santander, for example. We neither have a budget from the UPC nor the schools. We simply try to raise money from wherever we can. What the students pay is a token amount. The €20 fee does not cover much.

I: Apart from €20, do you ask the students for participation in the companies?

JCM: No.

I: From which sector are most of the startups that come here?

JCM: Because of the location, we have more startups from the TIC area. They are platforms and applications. We also have industrial, some gadgets, some machines, but mainly they are linked to TIC platforms. Since we are in the campus that has the TIC department, we draw the most entrepreneurs from here because with a few resources they can check the market and achieve their goals.

I: Do you have any data about how many startups you have supported?
JCM: I don’t know. I could say more than 10 or 12 startups have grown into businesses. I will give you the updated data. It was inaugurated on December of 2013, but it started to work on 2014. I am not sure right now, but we have been working for three to four years. Little by little, you must create a brand. The people must know you. Here, we are invigorators and connectors. We know the entrepreneur ecosystem. We are linked to it and we have contacts with people who can help. We get mentors and people who can help give value to the projects.

I: Almost all the training that you do is with people you know, people from your network?

JCM: Yes. Or there may be some specific training from the UPC or someone who wants to position his marketing agency. If you want to hold a conference on digital marketing, you come to the conference and say that you have an agency. It serves to you for positioning with a target that is people that is beginning and that perhaps can consume your services. But in return for coming here and introducing yourself, you must hold a conference that interests me a lot. With the contest Yuzz, we provide a lot of training and a lot of movement.

I: How much time do people spend here?

JCM: We ask for €10 for the project, plus €10 for each person. We sign an agreement for six months. This can be renewed for six months more. More than a year makes no sense. In a year, you will have either discovered that your project makes no sense or you will have already gone out to the market and tested this out. We have no projects where one research group is doing development work for the last two years. Here they are students with ideas who check the market quickly. If even after a year you are not selling, the project is mature enough to go to another accelerator in the city. Following this agreement, their work is monitored at least once a month. Usually it provides them with a route map. It forces them to know that they have to do this and they have this obligation. Also, given the agreement, we can tell them where they are. Usually, on average, there are projects that end in a year and projects that need to be given up after two to three months. They may give up because that is not what they want to do. The main reason some projects do not progress is because of the team. You meet in the faculty bar with beers and say, ‘Yes, we will do this’, ‘Ah, very good! I am in’. But at the time of working, each person has his priorities and values. When the examinations or the summer holidays arrive, you see if this is a close group that wants to give up the project or if they are only just realizing that it requires a lot of work. Setting up a company is hard and requires a lot of work. The easiest option is for it to not work. There are others that last until a period of high stress. The group may not be able to take the stress and they abandon the project.

I: What percentage of startups continues?
JCM: I don’t know the numbers at this moment but I will send it to you later. There are some projects that come in with a quite advanced product. There is no company yet but you can already see that this will last. The project is already advanced. The team says, ‘Now we want to ask a nissa, that it is a public aid that is for participative projects and that one of the requirements is that you are already constituted. They will only constitute to ask the money.’ Then there are projects with a lot of enthusiasm but they lack the necessary profiles to make their goal a reality. Of course, the entrepreneurs should figure it out themselves. You cannot say, ‘You will not enter because in two months you will come to say that you do not want to continue with this project’. They have to figure it out for themselves. For us, the result where they set up a successful company is as valid as somebody who discovers that entrepreneurship is not what he wants to do. For me this is also a positive result. You have to give the students the tools so they can test it and say, ‘I have tried it. I will not spend the rest of my life thinking that I had a big idea. Here you can try it.’

I: Do tell me about the teams. Do you ask for a minimum number?

JCM: No. If there is only one person, it does not make sense for him to come here. Because although you are not here, I am opened to the people from outside. It is a service that I give to all the community of the UPC, me and the service of management and innovation that is the entity to which I belong. If you are a one-person team and what you want is some progress in your business model, see which profiles you need to incorporate into the team. What is certain is that you need to incorporate somebody, perhaps not as a partner but as an employee. As a single-person company, you can do three project developments on your own, but you need mentoring. And if at the beginning you are alone... We have had people who have come to us alone and said: ‘No, no, I want to come here only because I like it when I come inside. I stop thinking about the exam and I begin to think about the project.’ For me it is important to have the place, because I can speak with more people and it contributes to my own development. And we have had a couple of projects run by one person, but usually these are projects that progress. The persons concerned have meetings with me and when the moment arrives perhaps they start a team.

I: And do you connect people?

JCM: There are many mechanisms for forming teams, but it is very difficult. Being partners in an entrepreneurial project is no more different than marrying this person. Like with any couple, it is not easy. And it is easy to fight because you will be together for many hours. We do networking activities. We hold talks. But you have to know somebody, see that there is a feeling and that he understands you, and then explain to him the project. But the entrepreneurs themselves have to do it. Many people come to me and say: ‘I have an idea but I need a developer. I need a technological partner who can do the computer development because I do not understand it. This
is a very big demand, because computer developers are a scarce resource today. I say to him that he can come to talks, to our networking events. If you send me an email saying, ‘I need this,’ then I can pass it to someone. Here there are three student associations in the space. This is another key characteristic. There is JEDI, which is a junior company of computer developers. There is BMA, that is Barcelona Mobile Apps. And there is UPC Founder Labs, which is an alumni organization focusing on entrepreneurship subjects. Then I can pass the email to associations of students from the computer or telecommunications departments. Or you can approach the alumni, who have an employment bureau, and say that you want the profile and you can put in a work offer. You can say that you cannot pay a salary, but will give participation in the company. There is no platform where you can find your partner. There have been a lot of platforms of this type but the truth is that they have not worked.

I: Emprèn UPC is somewhat different because it is a pre-incubator. So, it is neither an incubator nor a co-working space.

JCM: It is a co-working space. Those that are here receive mentoring to help them transform from a project to a startup. Theoretically, when they go out from here they start earning a turnover or they have a well-constructed project. Whether or not it is a formal business, it already has a base and some first metrics with which it is possible to go to an accelerator. If you go to an accelerator, you could say: ‘I already have these metrics. I already have my beta project. I already have the first commitments of customers.’ It must be a very attractive project to have the first capital in an accelerator.

I: Do the majority of people who set up startups leave for accelerator programmes?

JCM: There are some that have done so. Others have left for Barcelona Activa which is not an accelerator, but is more like an incubator. There are some that have gone to Connector, another to ‘Lanzate’ from Mercadona, and some that have gone to Valencia. Still others have set up their firms and are reaping the benefits. Others have not made any money and have shut down.

I: Do people go from here directly to a funding round?

JCM: Yes, and there are people here that are receiving funding too. They are here with a prototype. They need this already functional prototype to do the pilot test on the market. They need money because the projects involve machines that have a building cost. Now, for example, a project today was supposed to close a funding round. It needed €120,000 to set up seven or eight machines and put the pilot test in the market. These have set up a business now so that they can receive the money to build the first machine and launch it. They will receive the first benefits, so this is already the moment to leave.
I: What about mentoring to create the legal company?

JCM: We rely a lot on Barcelona Activa, which is our partner. I have experience with this. I have been through many processes of setting up a business but I tell them to go to Barcelona Activa, where there is someone to guide them. I can explain to him how the mentoring process will be. We have an agreement with different lawyers who will come and give you a free first session about the doubts you may have and they will solve them for free: ‘Look, you must get this document and this other. If you want I can do the budget for you.’

Or there may be fiscal problems. We also have some advisors in case you have doubts about the legality of an action or what you need to declare on the fiscal level. So, you can come one day and resolve these doubts. This is a marketing action for them. You resolve the doubt and reconfigure your project. At the moment you need it, somebody you will say, ‘I know this professional who does it for me.’

I: At times, you might see from the beginning that certain projects will not succeed. What could be done to prevent startups from failing? I suppose the biggest limitation that you have is the budget.

JCM: The process of selection is not just an interview here, but to make a call to open a two-month programme. Developing a project and ensuring progress is an intensive process. When the project ends, people may leave it. But those who leave will already know that it is people that will be useful to him. that they have developed the idea or not, that they abandon it, that they see clear what they must do, that they see clear that they want to undertake but no with this partner...
So, we could do a two-month programme like the lean startup. This is very intensive because it causes tension within the teams. This will be useful to see if you have passed and can continue forward. Here we have a space that allows you to continue working. Within two months, they can be here. We would have to be able to do the filtering, but it needs a budget.

I: Is it better to do this only at the beginning of the two-month programme? You mentioned that many of them just have an idea. Doing the two months at the beginning...

JCM: At the beginning is important. At the end, do you control the lean startup methodology? The canvas model basically consists in working on this and nothing else. You come here with your idea. There will be people on the first day who will say to you ‘I have this, this, and this, and here I already have corroborated it with the market, I have done custom and discover...’ And there will be people who will say: ‘I haven’t asked myself these questions and it will be harder for them to do it, but I think that it is a first step that everyone must take.’ There will be somebody who will go faster. The first day they will be already be doing surveys with potential customers. Some others
Design of a Startup Acceleration Programme

will need a week or two to write out their hypotheses and then will have to test these out. I think that is the beginning. I see that the idea makes no sense; that I would need to dedicate too much energy to it. So, I do not want to undertake it. At the end, what makes you an entrepreneur is that you have a lot of energy. Somebody else must have had your idea, for no one has a new idea, No one has technological knowledge that no one else has among the billions of people that are living on earth. Somebody may have had the idea before, somebody with the same technological knowledge. The difference between success and failure is the energy you put in. I may realize that I don’t have this energy, that the idea is not good enough, or that it already exists, or that speaking with potential customers, there is no market or the market is very small. For me, all these are valid results. Then this initial programme of two months will be useful for people to know that it is not what they want to do. It is better to know this as soon as possible. All that the lean startup process is ultimately based on is this: If you are making a mistake make it fast and with the minimum possible cost. Therefore, doing this at the beginning is ideal.

I: Do you know if here you have to provide some participation to the UPC or if it only applies to research centres?

JCM: Here there are two differences. There is an innovation. Who has generated this innovation? You as a student or as part of a research group? Who is the owner of the innovation?

Is this the result of a research group where the innovation has been carried out by some public civil servants or PhD students? They may have had a salary from the UPC while working on this innovation. Say, you are in a group of I+D at Telefonica and you work on an innovation. The owner of the innovation in this case is the company. Whether its shares the credit with you or not will depend on the company policy. What doesn’t make sense is this: A research group works for three years using public money. Their salaries are paid with public money. Then I arrive, take this innovation, and profit from it in a private market. In fact, the UPC only participates in companies to raise a legal restriction for the public civil servants. The UPC does not want to participate in the companies. But say you are in the research group and there is a researcher that wants to participate in the company. He cannot do so as a public civil servant. He is bound by certain rules and cannot be a part of the administration council. He has several restrictions even though he is working on a product in the same field. Makes sense? I do a development with public money and set up a private company and earn profits from it in a private way. Then there is no return on all the public investment. At first, it was forbidden and illegal. Another thing is that someone did it. The lawyer says: ‘It is good that these companies exist, because at the end these are companies that bring the technology to the market. The consumer can enjoy it. Plus, it generates work for very qualified people.’ It has sense that they exist, it generates value for the society, then it can be done, but just because there is something in return to the university so that it doesn’t happen
what I told you before, then the university should take part with a percentage. Then, this civil servant that wants to do the things legally comes to the UPC and says to him: Take part, because then I can raise my legal restriction and I am not breaking the law. That is why the UPC takes part in the companies even if it doesn't really want it.

I: Since it is the UPC, I just wanted to verify it.

JCM: At the end, the question is who is the owner of the innovation? When you use the knowledge that the degree has given you at home, that innovation is yours. You have paid for the matriculation and, in return, you have some knowledge that is yours. Now, say, you are using a product from a research group. That the patent has given to the SL, to the private company in exclusivity. The patent, that is property of the UPC, in exchange for some royalties, when you make money you have to give me a part. And if in addition in the entrepreneur team there is a researcher, a public civil servant, a percentage should be taken...But we are doing a favour to this person. The UPC wants to commercialize his technology. It is a way in which the technology arrives at the market. With this money from the royalties, the UPC gives 50% to the main researcher. The patents have an owner: the UPC, the discoverer, or the researcher. Suppose you work in Telefónica I+D. Perhaps in the patent you appear as the researcher, but the owner is Telefónica. And the UPC gives 50% to the researchers, 20% to the research group, and the 25% that remains is for the UPC to use for patents and other things.

I: Do tell us a bit about the demography of Emprén. What kinds of students come here?

JCM: Usually they are people in the final year of their courses. Or they may be working on the final degree project or have more free time. Sometimes the project is linked to what they do.

I: So, these are students from the third and fourth years of a degree programme?

JCM: Yes, or if they are doing a master’s degree. Usually, these are the profiles. But there are exceptions. There are people from the first year of the degree too, but those tend to be people who had set up a company while in high school. The entrepreneur profile has no age. The majority are men and 90% are mainly TICs.

I: What is the cost of the programme?

JCM: Basically, the costs are the ones that the UPC assumes—the cost of the place, security, air-conditioning, lighting, and maintenance. All the costs are very diluted in the structure of the UPC, but they are costs. There is also my salary.

I: Because you are the only employee.
JCM: I am the only employee dedicated exclusively to this. I also have people to support me. I also ask for favours, many favours.

I: Finally, is there any special characteristic that an accelerator must have?

JCM: There are so many kinds of accelerators that everything depends on what its aims are. Is it an accelerator where somebody invests money and wants a private or public incentive? It all depends. What would work very well for the projects here would be to first invest some money. You may say, ‘I invested €20,000 to complete the prototype and to do the first marketing sessions’. This would be very good and private accelerators already have this. They say I will put you here if you do the work. If you have some metrics I will look for an investment. The format involves people who have already begun a startup that has succeeded. They have money and what they want is to help other entrepreneurs to make some money. I think that to have an especial place and have your project does not work. There should be someone to check on you and encourage you. I cannot help them with everything but I always give them an answer: ‘I don’t know, but I can speak with this person that knows somebody’. I always rely on my network. I help by encouraging. So, I think that there should be someone to do the mentoring, somebody who knows the ecosystem. The ideal would be to have resources. What we do is this: Now I have this opportunity and it interests me. Then now there is an offer of patents and someone that wants to do a talk on patents. Then come here to do it because it interests you to make yourself visible. That ideal would be ‘I have this budget and I want to do this programme because I need it and not because someone could do me a favour’.

I: You said that the UPC cannot have companies.

JCM: No, I have said that it doesn’t want to have companies. The UPC has participation in more than 20 companies, but only because of the legal aspect. Here we are contributing a value that can translate into 2% of participations. In the moment that a student comes in here and accepts the conditions, he will receive the training and he will have a place to work. There are some initiatives that try to do this, but that is another thing.
11.7. Annex: Interview with Joaquim Ferrer (Grupo Intercom)

Interview conducted on 15 May 2017.

The interview was conducted in Catalan. This is a translation of the conversation.

-------------

Interviewer: My final master project is based on how incubators and accelerators work. I want to know what kind of programs there are in order to create a design that could be replicated at our school. My first question is: What is Grupo Intercom and what do you do? We could start from there.

Joaquim Ferrer: Grupo Intercom was founded in 1995 as an internet service provider. At the time, it was the base of modems and internet connection. In 2000, Cable & Wireless made us an offer to buy this part of the business. At the time, Antonio González-Barros, the president and a...
visionary, had written a paper on ‘Why Don’t We Stop Providing Services to Third Parties and Start Doing Things for Us?’. In the year 2000, we started to incubate businesses on the internet. We started with an incubation model. We had started a little earlier, so we had three small active projects. One was called Infojobs and it was born in April 1998. The other was called Sherward, though it is now named Softonic. The third was Noticias.com. When we sold the internet service provider part of the company, these three activities separated. Thus began our history of internet business incubation. The focus was on incubating only businesses on the internet. Our model was very clear in 2000. It was believed that traditional paper businesses were all going to migrate to the internet. We were looking for market niches that could migrate, and that is how Infojobs was born. The software somehow was also classified. The purchase and sale of vessels, apartment rental, training. In the end these were classified, which we tried to replicate because everything was on paper yet. It seems impossible ... La Vanguardia or other newspapers ... were really thick, did you see it?

I: Yes, yes, yes.

JF: They had so many announcements in the paper and the vision was that all this would migrate to the internet because it is much more efficient. We devoted ourselves to incubating businesses. This was the vision of incubation at that time. The model was not looking for an entrepreneur with an idea, it just needed an entrepreneur. We tried to convince the entrepreneur with this idea, that was a classified, a vertical. We have been doing this for many years. We did it from 2000 to the present. With this business model, we incubated about 50 different businesses and had about 20 participations. The entrepreneur was able to start in an ecosystem where he could focus on the idea and forget quite a lot of things about the environment.

In this way, we continued growing by using a model in which the initial phase belonged to the entrepreneur and which involved equity participation. Besides, there needed to be a group of entrepreneurs. Many businesses were born from one person. But many were also formed by three, four, or five people. Also, in that period, SoloStocks and Emagister were born. And we went giving it shape from a person that was not an employee, but that it was a co-owner of the business. Usually, they had little participation because they hardly ever invested money. But they invested hours of work on a salary that was slightly below the market rates. We could say that they put their salary with actions. In that period, we learnt that when the businesses grew really fast, the entrepreneur (usually a person with a lot of passion, common sense, and a big vision for the business) quickly became maladjusted. So, we had to substitute the initial team of entrepreneurs with a management team. We substituted that entrepreneur (who usually began another business) and looked for a management team to run the business. In that period, the businesses that grew were Infojobs, Softonic, Emagister, SoloStocks, and Verticales Intercom. From these
were born several businesses, among them bodas.net, which is a very big business today. Like this, there were roughly 50 ideas, of which some became very big businesses and others ended up being nothing. Those have cost nothing because they have not progressed.

I: And now you are continuing to do this?

JF: We began to internationalize all this from 2005–2006. It seemed to us that if we did it here, we could also do it in other countries. Many businesses went out. But this model of incubation (being a bit paternalist because we also invested a lot of money) is a business that I would say that no longer works. For us, it worked during some years and we made the mistake of not seeing that this no longer worked in the ecosystem of the internet. Perhaps, it works in other places. On the internet, things are much more complex. They must be done in a much more professional manner and with a lot more investment. It is not enough to have an entrepreneur with passion and enthusiasm. But it is usual to begin the businesses with a team of several people with multidisciplinary backgrounds. That it is not the first time that they undertake something or that they already have a professional experience, because nowadays our model no longer makes no sense. In fact, we no longer incubate in this way. We don’t have a model of incubation. We are in a phase in which we are examining the assets that we have, to start with a new stage where we can invest in some other way. The kind of incubation we did through the internet no longer works.

I: What is the new way that you want to pursue?

JF: Let me first explain to you what our errors were. We were too paternalistic with some entrepreneurs. The entrepreneur knew that somebody would always back him with the money. I remember years ago, in the Ministry of Industry, speaking to a person that had many centres of incubation across Spain. I do not know which network has the Ministry. He said that he had arrived from US. It surprised him a lot because in the US when you reach a centre of incubation, you know that you have two years, you have the pocket money, and that is it. Everybody knows that it follows a very concrete cycle. Instead, he explained, if you go to our centres of incubation and acceleration, you see the same person there and that he just got married. Next time, you see that he already has a son, or two children, or three children, and this carries on over and over again. Some of this happened to us too. You face this problem if you are too paternalistic. But if you are too aggressive, like the Americans, sometimes you may lose opportunities that need more patience.

But suppose you are too patient and too protective because the idea is good. You go on and on with it. This leads to accommodation of the entrepreneur and it finishes turning it his modus vivendi. This has happened to us several times, in several businesses. That is why the technological innovations each time have shorter cycles and you should focus a lot on the cycle.
The way it works today will not work tomorrow. And in the classified sector, there are numerous examples of this. We were disruptive, from the paper to the internet, but the internet has been disruptive several times on its own. A business in which we are not involved but which is a good example of this are the general classified, the purchase-sale of several thing. Primera y Segunda mano was a print magazine here in Barcelona. It went from paper form to Segundamano.es. Segundamano.es had a competitor in Milanuncios.com, which was bought by the owner of Segundamano.es for a large sum. Then they chanced upon a competitor named Wallapop, which did not want to make money. It had no interest in turnovers and it only wanted to invest a fortune. All these models emerged in a very short cycle of five to six years. Now Facebook Market Place has appeared. It wants to get rid of all these business models because it wants to be the marketplace of the generalists. All this happened in a very short period of time and people are not looking to make money because of Wallapop. Now, Wallapop has developed a source of income, an income model. But four days ago, it had zero income. And Facebook does not need to develop any business model around the marketplace concept because it already makes money through advertisements. Nowadays, each technological cycle is becoming shorter and you should be more attentive. This affects us in the technology sector but I think that it affects all industries. It is the same goal. You should look for the opportunity and know the moment to make a successful sale in order to add your company to a bigger project.

I: It has become very sophisticated.

JF: Yes, and we need to do the same.

I: Now, knowing your errors and successes, what kind of business model are you setting up?

JF: We think that what makes sense now is to follow the keys that I have given to you. A model in which the process is based more in acceleration than incubation would work, but the term doesn’t matter. It should be a fast incubator or an accelerator. In the technological industry, you cannot take seven or eight years developing a business because you will fall behind. Now it is all about the opportunity. You develop quickly. You have the talent to accelerate a lot. You have access to the capital and you have a window of opportunity to take a concrete market. Our model was much more about patience and now it doesn’t make sense. All the models today focus more on acceleration. You should have the resources to do all that you want to do and to do it in the shortest period. At the end, you need talent and access to capital. Perhaps it is more about talent than capital. Many things can be done with a little money if you have the right people at the right time.

I: Then you want to be a fast accelerator?
JF: Yes, ours is more oriented to be a mix. It is a bit peculiar. First, we want to have around five to eight projects, in which we could have participation and active influence over what is being done. Second, we want a mix of several emerging technologies. These should be very selected. They should not be in the initial stage nor should they be big. And with a participation that is not the project total weigh. For many years, we have been responsible for most of the investments in our businesses.

I was saying that it’s a bit peculiar because we have are a bit tired of this. We look for the element that will defend the project. But know that the entrepreneur is not always looking up to you, since he knows you will do the investment. We think that it works better this way. We felt like doing it this way since we have spent many years doing it the other way.

I: More or less what level of development would you prefer? I understood that some time ago you asked for an idea and very little more. What do you look for now? A prototype?

JF: More than a prototype, we want a clear idea of a business that has taken the first steps. It has a clear vision of what it wants to become and has a reasonable team, but it does not have to be 100% complete and have enough experience to continue developing.

I: I understand that you look for people have worked in the industry or who have already worked on several such companies.

JF: Yes, or a combination of some profiles. I believe more in powerful people with combined business, finance, and technological profiles. If you join these three profiles in a company in the technological field, it is the perfect combination. But at least one of them needs to be a visionary. At the end, the people and the talent are more important that the idea.

I: You mentioned that earlier the businesses spent seven to eight years with you. How much time do you think the companies should spend with you now?

JF: There may not be a fixed rule for this. The concept is that the entrepreneur should not depend on us for the development of his business. For example, this business has been around for three years and is a really successful model but it is not yet developed. It is quite unpredictable how much time it will take to complete the entire development. It could be four to six years easily.

I: Initially, did you provide any co-working space or did the people directly go to offices?

JF: In Grupo Intercom, we have always had common spaces. Do they contribute a lot? I would say they do not. What they generate is a lot of cross-fertilization. People get to know other people or go to work on another project. Somebody who moves to another project may suddenly get
fatigued because he is an entrepreneur. We saw people falling behind because entrepreneurship in the initial stages is more genetic. Some people have it in their blood, in their DNA. It is passion, common sense, and illusion. In previous generations, there was a grandfather with a butcher shop and initiative. He turned this shop into a business that supplied meat across the province. Maybe with great enthusiasm he turned it into a sausage factory. But then the following generation arrived. They had already gone to business school and contributed to the management, which involved introducing order and direction, and organizing things differently. When this happens within a short time (as with many revolutions), few entrepreneurs are able to take the step into management. This is why it is important to combine the two in the initial phase.

I: I understand that during the first months you run stricter monitoring. Afterwards, do you continue monitoring only the companies in which you have participation?

JF: Our model has always been about monitoring. We have not done this really closely because we had many businesses. When we had more businesses, we had around 40 active ones. So, we could not do close monitoring. But there has always been some tracking of the business. In the actual model, there is much more monitoring. We have fewer businesses now. We do not track them day by day but do a closer monitoring of the investments.

I: Do you offer training to the entrepreneurs or only support?

JF: Our model had a co-working space. We always said that this was like a growing child. A newborn is dependent, but when he develops well, he goes through his adolescence and reaches adulthood. The ideal situation would be when a business reaches adulthood after having completed all the projects successfully. It becomes independent and transforms into a separate company with its own resources. At the beginning, there was an incubation phase of two to three years, and then a similar growth phase. When the business was mature enough we told them to become independent. In this first stage, we have always taken care of the entrepreneur. During that period, they underwent serious training, had access to common spaces, guidance on all they may need, and even an advisor to give support to the entrepreneur in the areas where he was weaker. We tried it. Now if you ask me if this has been the key to success of the businesses that have done very well, I would say no. The key is to have found a suitable person at the appropriate time with a correct idea for the moment. It was necessary to attract the person who would be the leader, so that the business could grow in a balanced way.

I: How do you select the people, the entrepreneurs, and the project?

JF: We have been developing projects for many years around the idea I described to you earlier. We had a clear idea that it had to be about internet, something relating to the classifieds, because
for us the classified had a very clear effect on creating economies of network. In other words, we started businesses. In the case of Infojobs, the more curricula you have in your database, the more value the network has. The more offers the companies add, the more value there is for the candidates because the candidate looks for many offers. This network economy, where each member added to the community generates more value for the rest, is what we have been developing, because this is typical of the classified. We had a very clear business model. We planned to begin offering it for free, in such a way that it would grow and then we could develop business models around it.

We always looked for things that generated more value but which was additional value for which the people were willing to pay. We tried to use our model in different fields. For the profile of the entrepreneur, we looked for people with a big passion for the idea, who considered this a vital project, looked at the idea like a son, and constantly thought about the idea. He had to have a big business curiosity so that he could ask the right questions.

I: Do you think that passion is one of the main characteristics of entrepreneurs? Does passion bring success more than other things?

JF: I think so. If you analyse other businesses that have succeeded, half the time there is this passion. You cannot look for someone that thinks like an employee. When we started it was the boom era. The 2000s were the period of the dotcom. Anything that ended with a dotcom was making millions. And we saw people with business plans on excel sheets and asked: ‘What is the salary for entrepreneurs?’. I’m not saying that an entrepreneur should not have a basic salary, but he has to feel that it is a vital project for him and that if he does not push it forward he will have problems and may have to look for another ambitious project. But his top priority cannot be a good salary. We always ensured that the entrepreneurs had participation and the participation had to come from their salary. They had to have actions of the company. If it is people that says: or bonus shares or a very high wage and next day I’ll see if I invest in the company...It does not work, does not work. The passion is a fundamental thing.

I: How much participation do you reach in these companies?

JF: When we began, we had really high participations because we invested all the money. I would say that is one of the things we learnt. This was not the ideal model. The ideal model is where the entrepreneur team owns a high percentage of the company. We have learnt this over time.

I: What percentage do you think will be good for you?

JF: It depends on the investment and what the project is like. I think that there is no one answer
here. Some projects can be done with few resources and the entrepreneur can take a high participation. Where you reach with the development of the initial phases is the key. If you go far in the initial phases with few resources, the entrepreneur can have high participation. If the business needs a lot of economic resources in the first three or four years, it may have to dilute a lot. It would depend a lot on the type of the project.

I: For example, in this new accelerator that you are working on, what percentage of participation would be ideal for you?

JF: I think the most comfortable would be a participation of 15% to 30%.

I: Without being the main investor but with some participation...

JF: Yes, because having 3–5% is not worthwhile if you are investing time. Again, it depends on the business. But if you have 10–15–20%, you can dedicate a lot of time and effort. If you don’t have this participation, you don’t have the paternalist feeling. If you have an entrepreneur that is risking his job, he will fight for his business.

I: Based on your experience, how many rounds of funding do you usually do?

JF: It depends.

I: On average?

JF: I do not know. We have businesses that have not had any rounds; that have practically been self-financed since Day 1. These are few in number but there are some. I would say that the majority needs three to six rounds on average. This is quite normal.

This is not the typical start of seed capital, which usually repeats once or twice, each time a bit more. It depends on the expansion of each business. We have done few things with big capitals. We have never been able to raise a lot of capital, among other things because we did not know how to do it. We have not dedicated ourselves to this. There are people who are specialists in this. They do rounds after rounds. Sometimes it is good and sometimes it is bad.

I: What is the most common problem of startups that you have come across? Is there any problem that you see as repetitive? For example, with respect to getting the first client.

JF: Good question. Each business has a different history. Perhaps the most challenging thing would be to achieve a good product and to focus on this in the initial stages. Carry out a lot of measurements. A typical error is building something without checking the market. Say you invest a lot in the development of the product. But when you run the first tests, it appears to not be useful
for anything. You have to check the market to see if it values your product or not. Your first customers will demand more from you and say ‘Yes’ or ‘No’. Constantly checking the market helps you to do things well. This is especially true when you have a technological product. It has to be perfect. You do not take the product out to the market until you have the best version. The best products are those that create value; that provide a solution to the market. Compare yourself with your competitors and with your customers.

I: Is there any indicator that a startup is going wrong?

JF: What happens to entrepreneurs or those working in the entrepreneur’s world is that you fall in love with your own business. It costs a lot to recognize that you have made a mistake and that your project is not going anywhere. You always think: ‘No, this is a matter of time. If we work three more months it will work out. We will do a new version that will fix all the problems.’ You set your goals and you say I will launch this product and I want that many users at the end of three months, that many at the end of six. If you do not achieve this number, you have to question yourself. You must be very critical with this, because we justify ourselves very well; we like the project so much that we have excuses for everything. It is the season, it is the market, it is because I have this competitor who does the same thing, but I will do it better. So, you go on giving yourself opportunities, making investments, and doing rounds that go nowhere. It’s hard because this passionate quality has its negative aspect. You are so convinced about your ideas that sometimes it’s difficult for you to accept that your product is not exciting for the market.

I: Approximately what percentage of ideas that you started and began to develop ended in failure or did not create value?

JF: In our case, out of 50, about 10 have done very well. They have been leaders in their field and contributed important value. About 20 had something of value or are in the process of providing this value but we got no profit from the investment. About 15 to 20 in our case finished with a value of zero or almost zero, selling for less than the investment amount.

I: When you have a success, do you sell your participation at one go or over a period of time?

JF: We have tried everything. In this sense, we have been very pragmatic. There are stakes that we sold within five to six years. We first sold part of our stake in Infojobs in 2004 and the last part in 2008.

I: I understand that things can vary a lot, but when do you begin to think something is a success? Which is the average or between which values is the age when you usually sell?

JF: We have had diverse cases. Some companies disappeared after two. That you can see that
the active that you have in your hands is less valuable than the one is someone else, that can be for many reasons. For capacity of management, because the potential buyer has a strategic value that has added to your agent much more value, for one thousand reasons and the most intelligent thing is to be always opened to this. After two or three years, it is good to have conversations with a lot of people, especially those who understand strategy, work in the sector, or are doing the same thing as you in another country. At a specific moment, the technology speeds up and so does access to the technology in terms of the product or the capacity of the market. It may even expand to different places. I always say it is better to have a small part of a big cake than a small cake that is only for you, especially if this small part of the big cake is bigger than the small cake. If you ask me whether it is better to sell all or only one part, I would say that it depends. You can remain a minority participant with some specific clauses that allow you to go out at a later date. This may speed up the business and you will earn more than what you have now. This is something worth thinking about from the second to the fourth year.

I: How do you fund yourselves?

JF: Our case is a bit peculiar. We are three main partners that began with Grupo Intercom. Next, we attracted many friends and funded ourselves with our successes. We have reinvested almost all our successes and sometimes have incurred losses. But our funds have mostly been from sales. We have reinvested a big part. Our model is one of constant reinvestment.

I: This is also a risk because between sales you have to live on the investment, right?

JF: Yes. We have had casual VC in Grupo Intercom but our model is peculiar in this sense. More than an investment fund incubator, we ourselves are entrepreneurs. The typical model is funding. You set a fund and from here you begin to do your investments. This has some rules. As you go on investing, you have to divest on those that have more time. We have never played this.

I: I understand that the money you invest on every company is variable and it depends on the type of business.

JF: Yes, and what we have learnt is to initially invest small quantities. The other day I was at a presentation and there was a young boy from Malaga. He began his business with €4,000 and explained how he managed this. He spent only €2,000 on computers and explained how you smart up when you have no resources. Having money is a very bad thing. In fact, during our initial stage, when the dotcom bubble was in full swing, the best thing that happened to us was that we had already funded the company with our own resources. So our resources were already quite limited. In that moment, people spent lots of money; everybody invested and put funds away. When all this blew up, you had nothing left because the businesses did not have a solid base.
You built your business thinking that someone would do the following round. I think that it is healthy to have limited money for companies that are starting out. You need to have enough so that you do not lose focus on the business because of the stress, but not too much because then you start to hire more people and you inflate it. I have seen this happen so many times.

11.8. Annex: Interview Oriol Bes (Founder Institute and Reimagine Foods)

Interview conducted on 17 May 2017.

The interview was carried out in Catalan. This is a translation of the conversation.

---------------------

I: I am doing my final master thesis with Edgar and Emilio, and my project is about designing an incubator–accelerator for the ETSEIB. Emilio informed me that you are part of Reimagine Food and Founder Institute. Could you talk a bit about your experience here?

OB: The idea of the project is an academic exercise? Or do you really think that the UPC could at some point have an interest in setting up something like this?

I: It is only an academic project. Maybe in future they may start something like this but I don’t believe it will be related to this work.

OB: Okay. Then I will explain to you a bit about the things that can be done around entrepreneurship at a university. As you said, there are two things here: acceleration and incubation. The main difference lies in the duration and the allocation (or not) of spaces.

I: Usually the incubation begins earlier, from what I understood.

OB: Yes, but this depends. The incubation is longer, usually involves a physical place, and can begin earlier. It depends because, for example, Founder Institute is an acceleration programme, but it works in the ideal phase—at the beginning. If you want, I can explain how the programme works so that you can have it as a reference.

I: Yes, that was one of my questions. Could you explain a little bit about Founder Institute and Reimagine Food? What are they? What do you do? This would give me some context.

OB: Founder Institute is an acceleration programme for technology-based companies. It helps entrepreneurs go from the idea to the business. What we do in this phase is contribute to them with methodology, tools, and mentoring to increase the possibilities of success while they are
creating the business. What happens? Often, when the entrepreneur begins an undertaking, he thinks that his idea is wonderful. But there are many things that he does not know. He does not know if the market will accept it or not. He does not know what kind of competitors are there. He does not know what price customers may pay or which business model will bring him more success. He does not know the size of the market. There are many things that I think are essential to learn before spending anything on a program, an app, a web. Before starting to build, you have to know if the idea makes sense. What the Founder Institute does is organize all the things that an entrepreneur needs to do before starting, and gives him a structure and a format. For example, at the time of defining your idea, your value proposal you can dedicate a year or a day. Then in Founder Institute you dedicate a week. You have to make sure that you have gone through a series of stages, tasks, validations, and reflections at the time of concretizing your idea. What about the market? If you look at the Fi.co curriculum, you will see each of the stages. These are: the idea, the market, the competition, the economic model, the team, how to achieve investors, how to do a diffusion of the value proposal, and how to get customers. So, each one of the stages has a knowledge part, which you already know. There is also a part that is more about putting it into practice. You need to know whether the customer will pay for this. The only way to know this is by speaking with real customers. So what Founder Institute does is to provide a structure. You need to do what is called time boxing. That is, each step has a deadline and a specific time that you can dedicate to it. Accelerators contribute to this component to ensure that people do not waste more thinking about something that is not critical. We make entrepreneurs go through these stages, ensuring that they do everything. This is what we do: provide an order, introduce time boxing, provide tools, resources, and reference websites, and then the mentors. Once a week, the Founder come, those that fund the programme, they come to the place where we meet, to the Founder Institute and. We put them in front of the three mentors who share their experience regarding the subject of the day. For example, suppose the subject is analysis of competition. Then three people who are entrepreneurs in successful companies with a technological base come and explain how they did their analysis of the competition, which steps were useful, where they went wrong, and what they wish they had done instead. Essentially, the mentors at Founder Institute share their experiences.

Our idea is that the theory is already in the books and in the universities. What we look for here is practical experience. The focus is on what the founder does during the programme or the experiences of the mentors.

I: A quick question. In the Founder Institute, is there any sector that you avoid or prefer when selecting projects?

OB: At Founder Institute, we focus on technology-based companies. In practice, that means
computer-based ones. Mechanical engineering also comes under technology but we hardly get such projects in the Barcelona founder charter. About 90% of the mentors from the Barcelona charter come from the digital world.

I: So especially software, apps, webs.

OB: Yes, especially things like these. There is software, some hardware too, but it has to have an online sales component.

I: Emilio also said that you work with Reimagine Food.

OB: Yes, to understand that you must have an idea about the model of Founder Institute. Founder Institute asks for a small amount to join the programme. It looks for people who will take part and show commitment, not just people who are looking for training.

I: And how much is this amount?

OB: It is €900 per person. If they want to complete the programme, they also have to yield 3.5% of their company.

I: This is not negotiable? It is 3.5%?

OB: Exactly, it is 3.5%. Then we also earn if during the next year to the creation, the company receives an investment higher than €100,000. The entrepreneur will then pay us €4,500. That is 4.5% at most.

I: And if they receive less than €100,000?

OB: Then they do not pay us anything. This is the economic model of the Founder Institute and it is a long-term one. We haven’t had benefits yet, because the €900 pays the royalties of US. What we have is a licence.

I: Edgar is waiting to come in.

OB: All right. Wait a moment while I add him.

Edgar Fité: Hello, had you already begun?

OB: Yes, because later I do not have much time. So I took advantage of it and we started earlier.

EF: Yes, perfect. Please continue.

OB: So far, I have explained the operations of Founder Institute, how it works, and the economic
model behind it. The goal is to be able to apply it to the university. One of the peculiarities this has is that the mentors who collaborate with us do so in an almost altruistic way. They provide the service free of charge. But then we take the 3.5% participation from the companies that join Founder Institute. From the earnings, a third goes to the mentors. Another third is for the participants in the programme. Those who graduate have some interest in supporting each other. The other third goes to the Founder in United States and Barcelona.

I: How do you select the projects?

OB: We do not select the projects. We select the entrepreneurs.

I: And how do you select the entrepreneurs?

OB: This is a key subject for the Founder Institute. The Founder Institute has a test that seeks to predict the probability that this person has an entrepreneurial spirit and can set up a company. The test predicts if you have entrepreneur DNA. It tests values like character and intelligence.

EF: It is like a psycho-technical test?

OB: Yes, it is a 15-minute test.

I: Is it face to face? Do you conduct it in your offices?

OB: No, it is online. You can even take it in different languages. You get a grade and the selection process starts with numerous cases. At the end of each chapter, it will be able to accept between 20 and 30 people. Then depending on the demand and the grades, those with the better grades and who have paid move on to the next step. During our selection process, people come to the events and to the information sessions. They think that is cool and they do the admission test. When they pass the test, we tell them they can join us. Then they say, ‘You know what? I have rethought it and I do not want to pay or do this already. Maybe next year...’

I: Out of curiosity, how many sectors do you tackle in one year?

OB: One. Well, the first year we did two. But as I said, this is an additional project for us. We do not earn our keep from this. So we did not see the value of doing two. We do one, which helps us to see interesting projects, network with entrepreneurs and investors, and continue learning about the subject. But doing more does not contribute as much.

I: How long does the preparation of the programme take?

OB: About four months.
I: Okay. Can you explain a bit how the Reimagine Food works? Then I will ask you general questions about the two.

OB: Reimagine Food is a different model. Reimagine Food is a for-profit company that has a mission: to bring innovations to the food system, to the diet world. We work with manufacturers, distributors, restaurants, and so on—all the players. And in some moment it creates Prometheus, which is the acceleration programme. Founder Institute supports the entrepreneur to go from the idea to the company so that the company has the maximum probabilities of success. In Prometheus, we offer support to companies that are already constituted. They already have the capacity to bring services to the big corporations of the diet world. We help you to access and introduce yourself to each one of them, both food businesses and investors. Then we do a call on global level, looking for companies that we think will be interesting for our customers or potential customers. We take five in each edition and put them through a preparation phase, in which they explain their project to us. We see if the potential customers fit in or not. We see what would be the message. We already know their potential customers because they are our customers and we meet them periodically. We can provide guidance like: ‘He will not like this. You have to explain things like this. You have to put more focus in this application that you have. This can be interesting for Gallina Blanca, which is our customer, but this will not be interesting’. We help them prepare for these meetings with the customers.

After this phase, we accompany them through the next steps. Over the next three weeks we have around 25 meetings with companies within the industry, those with a customer role, others with a mentor role. The majority have a customer role: Coca-Cola, PepsiCo, Gallina Blanca, Heineken, Mahou, Grupo Vips, Area, Corte Inglés, Carrefour, and so on. These are a lot of first-line companies and a good opportunity for a young business. Without this programme, they would have to hire a sales agent and spend a year trying to do what we do in three weeks. It is the same with investors. Altogether we did about 40 visits. I calculate that as 21–22 customers, three or four former industry directors, the general former directors of Danone and Condis, people with a perspective. The fact that they are no longer in a buyer position makes the dialogue much easier. Since sales are not the key here, feedback and orientation are important.

I: To my understanding, this is more than a training programme. It is an assessment and networking programme with customers and investors.

OB: More than networking, the objective is the development of the business and ensuring sales. This is important given Prometheus’s economic model. We have an agreement with the startups that if they sell they do not have to pay. They do not have to yield any percentage of their company. But if they sell to the companies that we present to them during a period, they have to pay a
commission.

I: Is this commission variable or is it fixed?

OB: It is a sales percentage.

I: Comparing the two programmes, what is the profile of people who go to one or to the other? Do you have younger people at the Founder Institute and people with more experience at Reimagine Foods?

OB: No, age is not a differential factor. The average age at Founder Institute is 34 years. So, we get people aged as much as 50 to as little as 23–24. Most people already have a career; they are not just starting out. There are some recent graduates but they are an exception. People who started their career years ago may not want to do something on their own. Or there may be people in a moment of professional transition. There may even be people with an aptitude for entrepreneurship. The latter kind may have tried and failed. So they come to Founder Institute to see if they can achieve it with help. At Reimagine, there are companies that are already constituted. Here too the entrepreneurs are in the range of 20 to 50 years. The age does not make much difference. The only difference is that in Founder Institute, the participants are in the idea phase. The most mature ones may have a company constituted already but it is not working for them. So, they come to Reimagine, to Prometheus. They will be companies that already have any case of success to explain.

I: How many years do the companies in Reimagine have? How many years have they been working?

OB: I would say between one and five years.

I: Going back to Founder Institute, once businesses abandon the programme do you do a follow-up?

OB: The contractual obligation that we have with them ends when the programme ends. What happens is that we are interested in their success because we have participation in the company and some gadgets. The proposal is that the founder should organize meetings with us every two months. This holds for all graduates from all the editions. In practical experience, it is not every two months because the founders may not always organize the meets in time. But when they do, it is a very positive experience because they are all in different stages and they can share opinions and networks. They share the real experiences they have had.

I: And you don’t provide any co-working space in any programme?
OB: Not in any of the two.

I: In Founder Institute, you end up with a stake of 3.5% in the company. Do you go to the founding rounds with the companies?

OB: Everyone does what they think is best. I only introduce investors to those companies that convince me or in which I would invest. I do not present companies that I do not believe in to investors.

I: If Founder Institute accompanies these businesses, will the investors invest more?

OB: No. Not because of Founder Institute. Only the mentors can personally invest in the projects they see.

I: Basically, 3.5% is more for the return that you can have than to continue to be tied up to the company.

OB: Yes. There are two things here. At the end, what we look for is... Therefore, they yield a part to the mentors and a part to the promotion team. what we look for is that there is some kind of clan and the mentors if they see an opportunity for a graduated of the Founder they pass it to him because they also have interest that there is this bonding. It is the same for me. I have an interest in the startups that graduate from Founder Institute receiving funding, but I also have an interest in my reputation. That is why I said to you that I will not present to others what I think is a bad investment. That they are in Founder Institute does not mean that they are good investments. Some are and some aren’t. And it is a subject of chemical. If a guy is unreliable, I will not present his business to the investors I know.

I: Once people enter the Founder Institute programme, do they leave mid-way? Do people finish the programme?

OB: No, no. Many leave.

Also, a point from earlier, so it does not remain a misunderstanding. Earlier I said to you that I do not present all startups to investors. During the programme, there is a series of stages where we bring investors to the programme. This is in the end phase where Founder Institute has already finished the work. I support those entrepreneurs that I see have passion and that fit in with the type of people I know. During the programme, they meet business angels, investment funds, business angel networks, as well as people from ESADE, IDC, and Malta capital. The majority of funds and business angels that invest come to Founder Institute for the networking.
I: So, there are people you throw out if they are not going well?

OB: Yes. The vision of the Founder programme is that not everyone has the aptitude to be an entrepreneur. It begins with the DNA test. Moreover, not all ideas or projects have the probability to survive. The aim of Founder Institute is that about 25 people join each edition, and five to 10 complete the course. In the third of the programme, there is the Mentor Idea Review. This is a session where more mentors attend. Of these, the majority are analysts of fund investments or business angels. They are used to seeing many projects, many startups, and making investment decisions, or scoring people. We say to them that they have to punctuate their thinking. What if the guy was a friend of theirs? Is the idea worthwhile with that person? If it is worthwhile, should he continue spending effort and money on the project? We tell them to give scores from one to five. They cannot give a three; if they do not see it clearly, they will give him one or two. If they see that the idea is not fully developed, there is a lot of work to do, and there are things that would have to be clarified but they think it is worthwhile that he continues investing these resources, then four or five is fine.

I: What is the usual thing you say to people at the end? ‘It is not necessary for you to come anymore because the idea was bad.’

OB: To begin with, more than the half of those that leave decide this by themselves. When they begin to confront the reality and study the market and the competition, they understand that what they wanted to do has more complexity than they had thought. If they do not have the entrepreneur profile and the idea is weak, they get scared and leave. A person with the right profile is passionate and wants to continue no matter what. He does not leave.

I: Then it is a personal decision.

OB: It is a personal decision. But it is also because the mentors do not see that a project is viable. In most cases, the idea is a bit linked with the entrepreneur. Sometimes there are entrepreneurs that you say: guy, I do not see you undertaking... There are people who would like to be entrepreneurs, but their mind says no, no, no.

I: And coming to Reimagine Foods, in Prometheus, once you accept these five companies, do you stick with them until the end or do you sometimes say no to them?

OB: What we have here is a previous selection. In the selection process, before admitting the five, there are 20 others that we consider finalists. We speak with these 20 projects and ask them to submit a series of documents. We analyse them in depth and make them work a bit. You can already see the level of commitment they have. If you tell someone that you need this, and days
pass and he doesn’t submit it to you, he can stay at home.

I: I do not think that this could happen in Reimagine but Founder Institute is an acceleration programme in the beginning. Those that graduate already have an idea. They are looking for investors or for more advanced accelerators.

OB: Both. The truth is that from the day that they graduate, even after four months, most of them are not prepared to receive the investment, except if they have someone that has a lot of confidence in them. In Catalonia and in Spain, you cannot find an investor that puts money on someone that he does not know, especially when this business has no customers and the product is not working yet. It is very difficult.

I: My aim is to design a possible incubator for the ETSEIB. Can you tell me something that you think an accelerator would need to cater to people younger than those who go to Founder Institute and even for the teachers?

OB: Yes, for me it is very clear. Most entrepreneurs with a technical profile, like those coming out from the UPC, tend to focus too much on the product, and too little on the customer and the sales—that is, all the things that design thinking and the lean startup approach tell you to put the focus on. Before writing even a line of code, make sure that it covers a need. Be sure about the problems that the customer has. Make sure that you can solve it better than the solutions he has at the present. This is very important because most engineers start writing lines of code directly. Then you see a guy who has wasted a year working on something that makes no commercial sense. Why? Because he has not spoken with any customer. He thought it was great idea and started coding. When he shows it to the customer, the latter says: ‘No, I already have this and with zero costs’. Or ‘No, this can be very good, but I do not need it.’ To reach this conclusion, it is much cheaper to review the project before rather than after you have done the work. Also, there are many entrepreneurs, especially from technological base, who have started to validate the product and know the product has a commercial value. But they do not know about going to sell it. To achieve investors, customers, and employees, you have to have the skills, opportunities, and energy to sell. Otherwise, it will impossible to build a company.

I: Is there something that is an advantage for these entrepreneurs?

OB: One big advantage of an entrepreneur with a technological background over one from business or from marketing is that he can build a product.

In the methodology of the lean startup, there is the concept of the minimum viable product. An entrepreneur with a business or marketing background does not know how to program. It will be
difficult for him to find someone to do this for him. The advantage that someone with a technical background has is that even if you are not a programmer there are many things that you can use and modify because you know the code bases. The other advantage is that engineers are smart.

I: At Founder Institute, how do you select the mentors and the people who go with the companies to find new clients?

OB: Our first selection is very clear. They have to be successful entrepreneurs with a technological base. That doesn’t mean that they have raised a company of €500 million and sold it. Successful means that they have surpassed more stages than the entrepreneurs attending Founder Institute’s programme. They need to have launched a startup, whether paid or not, raised funding, acquired customers, done marketing campaigns, and more. Then they can share their experience. The other profile comprises investors, investment analysts, and funder investors who spend all day looking at projects they wish to invest in. Consultants and academics lack practical experience and are not included here.

I: Is it the same for those at Reimagine Foods?

OB: No. The mentors there are people from the industry. That includes the ex-general director of Condis or the innovation director of PepsiCo. These people would formerly have been customers but they can also give advice without the constraints of a customer–supplier relation.

I: In the two programmes, do you provide any extra service apart from training and mentoring?

OB: No, I already know that there are accelerators that do this. There are accountancy services, for example. We do not do it.

I: Have you sold any company? Because you told me that the model of Founder Institute was not sustainable yet.

OB: It is beginning to be. To ensure sustainability, you need the backing of an industry, company, or institution. In other countries of the world, what Founder Institute does is what Barcelona Activa does. Here, Barcelona Activa is our competitor. Barcelona Activa from other countries runs a contest where Founder Institute has presented and won. Then the city learns of the programmes of the Founder Institute to promote entrepreneurship. Here this does not happen. These countries have it very good.

I: But I saw that you are a contributor of Barcelona Activa?

OB: Yes, yes. It helps us in diffusion. It is a conceptual competitor. They offer free services for
entrepreneurs. But from our point of view, it is much less structured. I would recommend that you to speak with IQS.

I: I'm trying to speak with them.

OB: I would say speak with Oriol Pasqual because he manages the acceleration programme of the IQS. Just as Founder Institute does projects with a technological base, IQS does projects with a scientific base. What they look for is the typical profile of a university researcher or people that collaborate with a university department, who have done something cool and have a cool product but lack entrepreneurial skills for sales. The programme supports them in these fields. Of entrepreneur, of employer. They offer support in accountancy, administration, and so on because it is very different to work in a department than to be the owner of your company, and to have fiscal obligations, administrative obligations, and sales obligations. I think that could be an interesting interview for you. Look at their website or their programme and you will see a bit more. Now, I don't remember the exact name of the programme.

I: Yes, yes, I know their programme. What happens is that right now in Barcelona there are many accelerators, many incubators...

OB: I think that for you the one from the IQS is important. It seems to me that it is doing really well in attending to the university world. The approach, as with the example of Salle Technova, is more about infrastructure than acceleration. Salle Technova does really well, for example, in the subject of accompaniment for public funding.

11.9. Annex: Interview Oriol Pascual (IQS Tech Factory)

Interview conducted on 22 May 2017.

The interview was conducted in Catalan. This is a translation of the conversation.

Oriol Pascual: We will have a short conversation now?

Interviewer: Yes. I am doing the final work of my master thesis on acceleration and incubation. I know that you manage the acceleration programme of the IQS. So, I wanted to speak a bit with you on this.

OP: Wait a moment. I will put on the hands-free and speak more comfortably. You can hear me well, right?
I: Yes. Does it matter to you if I record the conversation?

OP: No.

I: I do not want to publish anything, but I must do a transcription of the work and it is much easier like this than by taking notes. If I have this recording, I can do it calmly.

OP: No problem, Albert. Shoot.

I: I'll start with a general question. How it is that IQS has an accelerator and how does the accelerator work?

OP: In fact, this is not an accelerator. Now it will do two years that the IQS did a bet for innovation and the entrepreneurship, and mounted a centre of entrepreneurship. We call it IQS Tech Factory. What we do here is promote entrepreneurship, especially of the science, science-technical, and industrial variety. We also back projects of entrepreneurs, projects of new companies that have an industrial character. Our programme perhaps makes us more of an incubator than an accelerator. It is an interesting subject for you and us. As a rule, our programme is under demand. We identify projects. Usually, the people who approach us are people with a technical profile. What they have is a product, a new technology, or a new technique. They think there is a market and want to commercialize it. What they need is support in the development of a strategy of intellectual production, support to look for funding or a mentor, or help with structuring the project from the point of view of business, and so on.

We meet with the entrepreneur and identify his needs. Based on these needs, we develop a plan of action. What we do next is provide support either directly or via a network of partners that we have. In this network of partners, there are lawyers, patent writers, and people who look for public funding. In that sense, we are more an incubator than an accelerator. An accelerator would be a programme with a start date and an end date. The programme carries on for a limited time, usually from a month or to three or six months at most. It usually features a curricular programme with a series of formative sessions, and is accompanied by a mentorship programme. Generally, the acceleration finishes with a Demo Day. By then, the projects have acquired maturity and are much more prepared. This is proven on the last day with a presentation where they defend or present themselves in front of other companies.

In this sense, we are more an incubator than an accelerator. Last year, we ran a small test of an acceleration programme jointly in collaboration with England, Cambridge. This was called Innovation Forum and it went off very well. This year, in three weeks’ time, we are launching another acceleration programme called IQS Next Tech. You can go to www.iqsnexttech.com to
find out more about it. It is a six-week programme where we select 10 startups. There is a curricular programme of eight sessions and some mentoring sessions.


OP: Good question. We support projects within the IQS and outside the IQS. Today, 30% of the projects we support are from IQS; 70% are outsiders. Thus, the profile of the entrepreneur is varied. There are many students who approach us, though perhaps in a more explorative way. The student has an idea that thinks that would be bestial but does not know what to do and here guide them in the initial parts, and is very possible that many times this do not finish evolving, but the exercise is interesting because give them to practice. But our profile is varied. Yes, there are students but they are fewer in number. In fact, the average age group is 30-somethings. Usually there are people with professional experience. They have worked in companies and now see themselves as having the capacity to start a project on their own.

I: In Next Tech, will you limit the sectors applying for the accelerator programme or accept them all?

OP: There two answers here. The reality is that our field of action is entrepreneurship of a science-technical and industrial character. On a practical level, this means that we back projects relating to medical devices, robotics, energy and environment, new materials, diet, and so on. This is a glimpse of the areas that we touch. What we do not consider are things like ecommerce, web devices, mobile devices, web and mobile applications, and so on. But yes, if someone knocks on our door, we receive him, and seat him. We expect that he has an idea. It does not matter what type. We will consider it and give it the same support as any other. But yes, we are interested in projects with a science-technical and industrial basis.

I: My work is precisely on something like this. I would like to design a basic accelerator. What do you think is the greatest challenge faced by the people who come to you? I suppose many of the profiles will be very technical. Which are the challenges and the obstacles?

OP: For the entrepreneur? Then, I would say two. One is that the people who come here usually have a science-technology background. They may be very good in developing the product and the technology, but not as good in developing the business or carrying out the management of the business. This is the starting point. The consequence thereof is that it is usually necessary to include somebody on the team to make up for this lack of aptitude and contribute to the business management. Or there is a need to train people to acquire the capacities to take this route. The latter is perhaps more challenging. The people who approach us tend to have a technical profile. They think they can do it all but it is not like that. We have to make them understand that they
need to include or leave a part of the project because it must be managed by another who has more aptitude to manage the business. This is very difficult.

I: Do you provide space for co-working?

OP: No. This is something we do not have. We support, but we do not earn for our services. We do not take participation in the companies.

I: Neither? Not even participation?

OP: We do not take participation and we do not earn for our services. This does not mean we may not change our stand regarding participation over time. But as of now we do not go in for participation. And regarding the space, the spin-off relates to the companies that have been created out of the research done through the IQS. They have an office. But unfortunately, we have limited space. Although we would like it, we do not have the space. They can come here to work but we can fit a maximum of eight people at any one time. There are days where we are full and there are days when things are much easier.

I: How do you fund yourself without participation?

OP: Today this is a cost centre of the IQS. The IQS has taken a gamble. It wants to be a referent in science and technology. Innovation and entrepreneurship hold the key here. Our current plans will change this year. Our intention is to earn revenue via big companies.

I: How?

OP: Via big companies, because we work in four areas. The first strategic area would promote entrepreneurship in science and technology. This means we will focus on many activities, like presentations, talks, fairs, contests, and workshops. Nearly every two weeks, we organize an activity to create a community feeling. The second strategic area is providing support to the entrepreneur. This means having a catalogue of services, a network of partners, and a network of mentors. So, we can offer this support to the entrepreneur. The third area relates to the relation between the startup and the corporation. Today, we speak of corporate ventures. A big company realizes that its department of innovation and development is not sufficient to keep being innovative and competitive. So, it looks for innovation, new technologies, and talent outside the company. It looks for startups doing research in new technologies and searches for new opportunities. It looks to establish relations with these startups. We have relations with many big companies in different sectors, such as water, pharmacy, stickers, and many others. We know what their needs are, how to look for projects for them, and how to connect them with the right projects. From now on, this is where we want to obtain economic returns. So far, it has been an
experiment to see how the subject worked but there are many opportunities. The fourth area is more internal and relates to technology transfer. We want to ensure that the research of IQS is increasingly market-oriented. So, the goal is to end up in the market as a licence or a spin-off.

I: As this is more of an experiment at the moment, do you ask for a minimum stage of development for the projects.

OP: Nowadays no. But we back 21 projects. These projects have a prototype, a technology that it is protectable, and a team. For us, these criteria are the tipping point. Before this, the company may be too small or young; after this, it may be too mature. Now that we are involved in the programme of acceleration, the selection criterion is that they must be projects that have a functional prototype, an own technology, and a team. And they must have a scientific base.

I: You said that you usually meet with the entrepreneur and then go from there. Is there any process that you follow or any indicator that shows if the company is going where you want it to or is going the other way?

OP: Well, no. On the one hand, we have these meetings and plan out the route. We also have mentors. Every two weeks or so, the entrepreneur meets with the mentor and marks out milestones. Then they focus on the attainment of these milestones.

I: basically, is more something for the company and in the periodic meetings with the mentor they see the development.

OP: Yes. A characteristic of the service we offer as an accelerator is that we are very personal. In the acceleration model, if you do classes, it is more general, more volume-based. We meet one project at a time, work with them closely, and provide a very personal experience.

I: Has any startup died during the process?

OP: Not yet. Perhaps there is a project that has not died but is like a zombie. It reached a level of maturity but has not advanced from there. Therefore, we call it a zombie. Yes, there is a product, there is a brand, and there is potential. But it has not been able to advance enough to look for customers and so on.

I: Have any projects become very successful?

OP: Yes. We have projects that are selling. We have one project named Dr. Sails that sells to 45 countries. The product is a sticker that sticks on wet, dries ultra-fast, and is very flexible. It is used in the navigation and nautical sectors. We have three projects more than they have taken out first
series of product to the market with 50 units. Perhaps another way to measure maturity is the relation with the industry. A few projects have already finalized agreements with big companies. This is important because collaboration with the big company is essential to ensure stability. As a startup, you can produce a limited volume of stickers each week or month. Your distribution is limited. And because your quantity is limited, your product becomes quite expensive. But when you make a pact with a big company, this big company has economies of scale and can produce more efficiently. Besides, it has better distribution, which is important.

I: For how long does a startup remain under your supervision?

OP: That is a good question. We have not marked a beginning and an end. Perhaps we could say, for example, three years. But we like to think that a startup approaches us when it has a need. It knocks on our door because, apart from the knowledge, we have the network. One thing happens to us very often. The entrepreneur knocks, even though we have not worked together for the past three months, and says: ‘Oriol, we want to launch a round of investment. Can you help us structure it? How can I structure it? Who can I call? Can you help me with some introductions to investors in this sector?’ So, we work a lot like this, on demand.

I: Great. So, apart from being a connector, you accompany them to the rounds of funding?

OP: Yes, depending on the case. But we help them to structure the round and help them with making pitches. We do not go to all the meetings but to the first ones yes. We do the first meeting, even the second, and from there on we leave. It is the same with the big company. That is because we understand the language of the big companies and of the startups. In the first and second meetings, we act as mediators between the two. This helps to direct the conversation.

I: Is there any point of inflexion in the startups that is recurrent? Something that needs to be solved for the startup to move forward?

OP: I think a key aspect is the team. More than the team, I would say the capacity to adapt—the capacity to learn fast, take decisions fast, and execute them quickly. If an entrepreneur thinks over things 10,000 times, it costs him in taking decisions. He will not do anything. A key aspect is the attitude. There must be an attitude of not emergency but agility. There must be a need to absorb as much as possible, like a sponge, and realize the need to surround itself with people that can help him.

I: In the programme you plan to launch, what are the main areas in which you will help startups to improve?

OP: We will do a bit of the same. What happens is that we have eight sessions of conjoint funding.
This ranges from financial subjects and subjects of business to recruiting the rest of the team. The talks and pitches we organize are by people to explain their project. On the other hand, we also have more formative sessions regarding business models and life science—all you need to know about a partner contract. Now we have joined all these training sessions in a structured way.

11.10. Annex: Survey to UPC and ETSEIB teachers

11.10.1. Survey questions

1. És Professor de l'ETSEIB? // ¿ Es Profesor del ETSEIB? // Are teacher of ETSEIB?
   a. Sí / Sí / Yes
   b. No, però sóc treballador de l'ETSEIB i/o alumne // No, pero soy trabajador y/o alumno del ETSEIB// No, but I work or study at ETSEIB
   c. No, però sóc professor d’un altre centre de la UPC // No, pero soy profesor de otro centro de la UPC// No, but I teach in another center of the UPC
   d. No
   e. Altre // Otro// Other

2. De quin departament/institut de l'ETSEIB forma part vostè o imparteix classes? // De qué departamento/instituto del ETSEIB forma parte usted o imparte clases? // From which department/institute of the ETSEIB are you part of or do you teach for?
   a. Ciència dels Materials i Enginyeria Metal·lúrgica
   b. Enginyeria de Sistemes, Automàtica i Informàtica Ind
   c. Enginyeria Elèctrica
   d. Enginyeria Electrònica
   e. Enginyeria Mecànica
   f. Enginyeria Química
   g. Estadística i Investigació Operativa
   h. Expressió Gràfica a l'Enginyeria
   i. Física
   j. Ciències de la Computació
   k. Màquines i Motors Tèrmics
   l. Matemàtiques
   m. Mecànica de Fluids
   n. Organització d'Empreses
   o. Enginyeria de Projectes i Construcció
   p. Resistència de Materials i Estructures a l'Enginyeria
   q. Institut d'Organització i Control - IOC
3. Té vostè alguna responsabilitat organica a l'ETSEIB? // ¿Tiene usted alguna responsabilidad organizativa en el ETSEIB? // Do you have any organic responsibility in the ETSEIB?
   a. Sí, Cap de departament/secció/institut // Sí, jefe de departamento/sección/instituto // Yes, head of department/section/institute
   b. Sí, membre electe de la direcció de l'escola// Sí, miembro electo de la dirección de la escuela // Yes, elected member of the direction of the school
   c. Sí, altres // Sí, otros// Yes, others
   d. No
   e. Altre // Otro// Other

4. Estaria vostè interessat en que hi hagués una acceleradora/incubadora al ETSEIB? // ¿estaría usted interesado en la existencia de una incubadora/aceleradora del ETSEIB ? // Would you be interested that ETSEIB had its own accelerator/incubator?
   a. Sí / Sí / Yes
   b. No
   c. Pot ser // Tal vez// Maybe
   d. Altre // Otro// Other

5. Per què?// ¿Por qué?// Why?

6. Ha rebut vostè alguna vegada una petició per ajudar/tutoritzar el desenvolupament d’algun projecte per a la creació d’una empresa/startup?// ¿Ha recibido usted alguna vez una petición de ayudar/tutorizar el desarrollo de un proyecto para la creación de una empresa/startup? // Did you ever receive a petition to help or tutorize a project for the creation of a company/startup?
   a. Sí / Sí / Yes
   b. No
7. Quin tipus de persona feia la petició? (escolliu només més d’una opció si el volum de petició es similar) // ¿qué tipo de persona hacía la petición? (escoger sólo más de una opción si el volumen de peticiones es similar) // What kind of person was making the petition? (Choose more than one option only if the volum of petitions is similar)
   a. Estudiants de Grau // Estudiantes de Grado // Bachelor students
   b. Estudiants de màster// Estudiantes de máster // master students
   c. Doctorands // Doctorandos// PhD students
   d. Altres professors // Otros profesores // Other teachers
   e. Exalumnes// Exalumnos// former students
   f. Altres // Otro// Other

8. Quantes vegades?, o com de freqüent (vegades any)? //¿Cuántas veces?, o ¿cómo de frecuente (veces por año)? // How many times? or how frequently (times per year)?
   a. Mai(he respòs no, a la pregunta anterior) // Nunca (he respondido no, a la pregunta anterior) // Never ( I answered no, to the previous question)
   b. Una vegada // una vez // Once
   c. Més d’una vegada, però menys d’una vegada l’any // Más de una vez, pero menos de una vez al año // More than once, but less than once per year
   d. 2 vegades l’any// 2 veces al año // 2 times per year
   e. 3 vegades l’any// 3 veces al año // 3 times per year
   f. 4 vegades l’any// 4 veces al año // 4 times per year
   g. 5 o més vegades l’any// 5 o más veces al año // 5 or more times per year
   h. Altres // Otro// Other

9. Estaria vostè interessat en utilitzar una acceleradora/incubadora de l’ETSEIB per donar sortida a projectes del departament? // ¿estaría usted interesado en utilizar una incubadora /aceleradora del ETSEIB para dar salida a proyectos del departamento? // Would you be interested in using an accelerator /incubator in the ETSEIB to give exit to project developed in the department?
   a. Sí / Sí / Yes
   b. No
   c. Pot ser // Tal vez// Maybe
   d. Altres // Otros// Other
   e. 10. Per què?// ¿Por qué?// Why?
11. El fet d'haver de deixar la universitat per llençar una empresa d'un projecte, ha fet/faría que no llences l'empresa? // ¿El hecho de tener que dejar la universidad para lanzar una empresa de un proyecto, ha hecho/haría que no lanzase la empresa? // The fact that you will have to quit the university to launch a company to pursue a project, have/will make you to not launch the company?
   a. Sí / Sí / Yes
   b. No
   c. Pot ser // Tal vez// Maybe

12. Hi ha alguna altra raó que hagi fet que vostè no hagi llençat una empresa, des de un projecte viable? Quina? // ¿Hay alguna otra razón por la que usted no haya lanzado una empresa, desde un proyecto viable? ¿Cual? // Is there any other reason, which made you to not launch a Company, from a viable project? Why?
   d. Sí , seria mentor // Sí, seria mentor// Yes, I would be a tutor
   a. Sí, faria xerrades // Sí, haría charlas // Yes, I would fo talks to startups
   b. Sí, faria ambdues coses// Sí, haría las dos cosas// Yes, I would do both things
   c. Ajudaria pero en altres coses // Ayudaría en otras cosas // I would help but in other things
   d. No
   e. Pot ser // Tal vez// Maybe
   f. Altre // Otro// Other

14. Perquè?// ¿Por qué?// Why?

15. Quantes hores per setmana podria vostè dedicar-hi? // ¿Cuántas horas por semana podría usted dedicar? // how many hours a would you be able to dedicate?
16. What types of projects have you seen that could use the incubator or accelerator?
   a. None
   b. Energy
   c. Construction
   d. Apps for smartphones except games
   e. Mobile games
   f. Ecommerce
   g. General mechanics
   h. Civil Engineering
   i. Aeronautics or fluid mechanics
   j. Automotive
   k. FinTech, blockchain
   l. Optimization software
   m. Other softwares
   n. Other

17. What characteristic in your opinion should an ETSEIB incubator/accelerator have?

18. What kind of project should it potentiate?

19. Other comments?
11.10.2. Survey analysis: Additional charts, data from the full survey pool

2. From which department/institute of the ETSEIB are you part of or do you teach for?

Figure 41: Survey Question: 2. From which department/institute of the ETSEIB are you part of or do you teach for? (the full survey pool)
Figure 42: Survey Question: 3. Do you have any organic responsibility in ETSEIB? (the full survey pool)

- No: 76%
- Yes, others: 13%
- Yes, elected member of the direction of the school: 9%
- Yes, head of department/section/institute: 2%

Figure 43: Survey Question: 4. Would you be interested that ETSEIB had its own accelerator/incubator? (the full survey pool)

- Yes: 6%
- Maybe: 31%
- I do not know what is an accelerator or I do not have enough information: 53%
- No: 10%
5. Why would you be interested that ETSEIB had its own accelerator/incubator?

- It can help/educate students
- It can help researchers in either creating business or transferring technology
- The more services the university offers the better for the university and its stakeholders
- It can help both students and researchers
- Not useful for the school
- I do not know what an accelerator or incubator is or I do not have enough information

6. Did you ever receive a petition to help or tutorize a project for the creation of a company/startup?

- Yes 30%
- No 70%

Figure 44: Survey Question: 5. Why would you be interested that ETSEIB had its own accelerator/incubator?(the full survey pool).

Figure 45: Survey Question: 6. Did you ever receive a petition to help or tutorize a project for the creation of a company/startup?(the full survey pool)
7. What kind of person was making the petition? (Choose more than one option only if the volume of petitions is similar)

- Master, Bachelor, Former, PhD students and other teachers
- Teachers and former students
- Teachers
- PhD students and teachers
- PhD students
- PhD and master students
- Master and former students
- Former students
- Both, Master and Bachelor students
- Master students
- Bachelor and former students
- Bachelor students

Figure 46: Survey Question: 7. What kind of person was making the petition? (Choose more than one option only if the volume of petitions is similar) (the full survey pool)

8. How many times? or how frequently (times per year)?

- Other
- 4 times per year
- 3 times per year
- 2 times per year
- More than once, but less than once per year
- Once
- Irregular

Figure 47: Survey Question: 8. How many times? or how frequently (times per year)? (the full survey pool)
9. Would you be interested in using an accelerator/incubator in the ETSEIB to give exit to project developed in the department?

11. The fact that you will have to quit the university to launch a company to pursue a project, have/will make you to not launch the company?
13. Would you be interested in mentoring a Project or do talks to the startups in the possible accelerator/incubator?

Yes, I would go talks to startups
Yes, I would do both things
Yes, I would be a tutor
Maybe
No
I would help but in other things

Figure 50: Survey Question: 13. Would you be interested in mentoring a Project or do talks to the startups in the possible accelerator/incubator? (the full survey pool)

14. How many hours a week would you be able to dedicate?

Four
Three
Two
One
less than one
Zero
depends

Figure 51: Survey Question: 14. How many hours a week would you be able to dedicate? (the full survey pool)
15. What types of projects have you seen that could use the incubator or accelerator?

Figure 52: Survey Question: 15. What types of projects have you seen that could use the incubator or accelerator? (the full survey pool)

11.10.3. Survey Analysis: Additional charts, only ETSEIB teachers

7. What kind of person was making the petition? (Choose more than one option only if the volume of petitions is similar)

Figure 53: Survey Question: 7. What kind of person was making the petition? (Choose more than one option only if the volume of petitions is similar), (only ETSEIB teachers)
11.11. Annex: Perpetuity Formula

\[ PV = \frac{C}{(1+r)^1} + \frac{C}{(1+r)^2} + \frac{C}{(1+r)^3} + \ldots = \frac{C}{r} \]

*Figure 54: Perpetuity formula, retrieved from Investopedia ("Perpetuity," n.d.)*