

Rodolphe Roy

SME's Owner
ATS



COUNTRY
France

DATE OF INTERVIEW

04.06.2021

METHOD
Zoom Interview

LENGTH
45 Minutes

INTERVIEWED BY
Adeline Leroy

ATS is an industrial engineering company founded in 1989. Originally it was only the design office for mechanics and industrial piping, operating as a subcontractor in the steel and chemistry industries. Transitioning from the service to the design office and producing new works to create industrial products means developing a new process or product for the customer. Before integrating into factories in large groups and before products, machines and buildings integrated are in three design offices in the factories: BE produces, BE methods and BE new works. The investment cycles became more and more distant and the BEs were working less, so they began to outsource, and independent design offices were created by recovering dismissed employees from different groups and integrating private offices that were able to work with different groups in different industries.

Since then, they have grown from 10 people and have developed products for energy, nuclear, automotive, aeronautics, naval, hydrogen, water treatment and more. They are truly a transversal service of most of the 18 industrial sectors counted in Bercy. In fact, there is a 19th sector that was created transversally: those that offer solutions for industries of the future. The company now consists of 200 people, creating 16 million

euros of turnover over four sites. They are historically located in Burgundy, Creusot and Dijon, and have an agency in Nantes and a site in Porto, Portugal. Their *raison d'être* is to help factories grow, which help make people grow, to spur performance but also to develop humanity.

Rodolphe Roy has a humanist vision of his profession, which ultimately is only there to make technological advancements. After joining the company in 1997, he purchased the company in 2011, bringing a more important mission with him into his ownership role. He developed the group and he understood that we were living the fourth industrial revolution, that of the digital transformation of industry after that of automation, bring more security and less arduousness to the company. This fourth revolution requires performance but also require bring recognition and pleasure to work. There are magnificent things to do in the industry and we must use this digital revolution to bring people who work in factories to take pleasure in their profession with new means of intelligent production and accelerate the digital transformation of the industry.

NOTE

HEI = Higher education institution | SME = Small and medium-sized enterprise

Understanding of Growth

At the beginning, they had a small structure at Creusot consisting of only 10 employees. This was followed by the creation of two agencies to be closer to large accounts in Dole and Dijon and to promote organic growth. Every five years they have doubled in size, so in 2000, they had grown to number 120 people, with the customers all coming from France since the beginning.

Then when he bought the company back in 2011, for six to seven years, he had to repay his LBO so he did not take on any risk. He developed the customers and the sector, but did not revolutionize the company.

After 2016, five years after the acquisition, he decided to accelerate his growth by creating the Porto and Nantes agencies to take advantage of naval and aeronautical investments of the Pays de Loire, giving them access to new job pools as well. The Portugal agency was created because they were very heavily solicited in terms of tariffs, which made it difficult to have an optimal cost structure on large projects. So rather than cutting wages, they have decided to set up in a European country that is in the process of transforming itself into a service country with real engineering skills. The 15 initial people in Portugal will double in size within 15 months.

In 2017, he decided to be part of the BPI SME accelerator program since he already had links with BPI Regional. There, the national called him to ask him to join, but he did not have time, though he eventually agreed to come on board. He spent two years reworking his organization strategy, which

was very pyramidal and patriarchal. He set up innovation, created innovation labs to create new business, and new business models and marketing, which has created an accelerated growth. Existing economic models were aging, and his new model was able to stand out and take the turn into this 4th industrial revolution.

He had a lot of private office time because the previous boss was leaving the company and behind it, there was nothing left in terms of values. With the existing employees wondering what they were going to do, he desired to bring value and sustainability to the company. This transformation has brought meaning, they have worked on their shared value system too, bringing life to the company and constructing internal and external rules for the reports. He also did a lot of work on innovation. Until now, they were structured to meet specifications as subcontractors. He wanted to change the company from large top-down contractors to their subcontractors, an approach that has always been very well received by customers.

They do open innovation since they are not a research laboratory, working with their customers to bring them of new services and products.

Motivations for Growth

He has a strong and intimate relationship with the company. He has always had a humanist ambition of the company, an ambition to accompany a transformation and bring an improved well-being. What really motivates him is being happy at work, otherwise he wouldn't be able to get up in the morning. This philosophy must be the same for customer, the aim being to bring pleasure into the industry.

He knows what he is doing today, he does not know what he will be doing three years from now. Serving a just cause is what brings different keys of motivation for him, such as the management committee, and his responsibility to all the employees. The gap is huge because the industry does not have too much fun, owing to the fact that the industry was poorly handled when

public authorities wanted to transform France into a service sector. We are now realizing that this policy was not successful. He and his fellow entrepreneurs have brought back a desire to work in an industrial sector and that is what carries them. He is an ambassador of France to try to restore this desire to other countries.

From the beginning, he found himself invested this movement. He had two motivations: (1) pleasure at work and more importantly (2) accelerate the digital transformation and social and environmental responsibility. For him it was never cosmetic, if the current generations who join them have undergone no real transformation and have no real CSR commitment, they will not return.

Challenges from Growth

We need a long-term industrial policy, not short-term vision, that will allow them to do what they want, but if there is no national or European commitment, they will find it difficult to accelerate growth. France is not only a country service but one of production. If we develop production capacities, then we can further our service sector. A vision must exist that goes beyond each 5-year term. We must go back to longer industrial plans to be able to project ourselves and our capacities.

We need strong support from the large groups that support industry vis-à-vis the SMEs and mid-caps with which they work. Today, we do not know how to work in packs. In Germany, when a large group takes over an export market, it takes its SMEs and mid-caps. In France this is not the case where major contractors still look at them as subcontractors. There is no such national link and there is no transparency. In the nuclear sector, for example, there are long-term projects, but these are not explained nor accompanied. There is a real concern, particularly regarding the lag in communication. There would have to be a real difference with SMEs in the long term for a real partnership.

TRAINING: If we want there to be real progress, we must be able to manage capitalization and transmission of knowledge. This is a big topic within companies and a strong rapprochement with schools. In the USA, businesses are often on campuses or schools are often incorporated into industrial parks. In France, businesses are unhappy that students are not easily accessible, meaning that they are forced to try to go knocking on the doors of the schools to express their needs.

The university management must understand that it starts physically, meaning they must be together in the same place. It is not only higher education, but we must also be able to make ourselves known from college. Today, even his children did not know concretely what he was doing. His son's friends, who were entering engineering school, themselves had a reductive vision. After the baccalaureate, young people enter training courses because they have an intuitive brain, but know nothing about the professions their brains can lead them to, leading to a real gap and a subject of the need for rapprochement with the education system.

Specifically on higher education, there must be a mixed campus. If schools and businesses don't coexist, it can't work. Internships alone are not enough, they must live together continuously and allow employees to train at the university. This is the case in Germany, where some large groups and even SMEs sometimes have integrated with local schools.

“

We need strong support from the large groups that support industry vis-à-vis the SMEs and mid-caps with which they work. Today, we do not know how to work in packs. In Germany, when a large group takes over an export market, it takes its SMEs and mid-caps. In France this is not the case where major contractors still look at them as subcontractors.

”

Key Success Factors

INNOVATION: before it did not allow itself. They were content to carry out as well as they possibly could, which led to an unstable system. Innovation at its heart is management through innovation. There is a complete change when they started saying "we have the right to make mistakes", which is very progressive for very technical professions. The idea is to differentiate and look for pressure points. They were 100% compliant and therefore well seen, but it's trust versus compliance. So, we must engage with customers, be with them, account for how they express their needs, which may not be complete and that they may need accompaniment as well.

The management of change is a long process, but for him, it is vital.

Lab innovation was one of the first things he put in place as part of the accelerator to accompany this change in management. These are physical spaces that embody innovation, allowing for the testing of new VR techno, 3D and other technologies. The aim

is to not just talk about a new product, but to also provide design-thinking spaces to come together with the customer and co-innovate and accommodate schools, customers, and startups.

They additionally allow testing of solutions in dynamic and fast-paced environments. It is not R&D, but frugal innovation. There are four labs because there are four sites, not just for young entrepreneurs, but open to everyone. They are spaces that make you want to inspire, change processes, ventilate, join, and share. All this must be animated, there is an innovation approach with managers who carry it. It's not "they made a discovery", so they are all set for the next 10 years, it is a permanent reinventing machine to bring balance between exploitation (the company that transforms A into B) and exploration. For Rodolphe Roy, everyone must have the ability to be an explorer, at all levels in the group.

“ *Lab innovation was one of the first things he put in place as part of the accelerator to accompany this change in management. These are physical spaces that embody innovation, allowing for the testing of new VR techno, 3D and other technologies.* ”

Business leader importance

The responsibility was to control the culture of innovation.

First collaboration:

He had worked for 10 years as an external licensed worker in business and project management and has maintained those link. When he took over the company, he built links with connected universities and with laboratories, especially within the innovation lab. They have joint projects and cosponsor village learning programs, so they go much further to accompany the initiators. They participate in the construction of materials and curricula, involving its collaborators to create interfaces. In HR, there is a person who deals with the relations with schools, but BU principals are also responsible for being in touch with schools to interact. We can see that it is not yet very well organized on both sides, but they need it. For Rodolphe, the initiatives are still too weak and has too far to go to be functional.

“

They have joint projects and cosponsor village learning programs, so they go much further to accompany the initiators. They participate in the construction of materials and curricula, involving its collaborators to create interfaces.

”

Victor Loiseau

Founder
BenHr



France

27.04.2021

Zoom interview

45 minutes

Adeline Leroy

Ben HR is a young company offering companies an SaaS to help them support their employees in their digital practice, both in respect of the right to disconnect, as well as fatigue specifically related to the use of digital tools and efficiency.

Victor Loiseau and his co-founder Cesar originally launched two entrepreneurial projects a few years ago, both linked to academia and research from birth. The first, "Let Me Think" is a connected totem that you only need to touch with your laptop to put it into working mode. It was born from a student project of Caesar in his design school and rewarded by his school. A crowdfunding campaign was launched in the aftermath, and it was as part of this project that the two founders began collaborating with researchers from an eastern School of Management. The aim was to prove scientifically that using this totem pole had an impact on productivity at work. In this context, a project was launched to show the effectiveness of this object with two researchers. Then Ben HR was launched in the summer of 2020. In the same way as at the beginning, the founders were interested in the subject of digital solicitation through a researcher with whom they worked, who published on this subject and allowed them to understand the issues behind it. Initially, they carried out audits on digital practices for 6 months. From January 2020, they focused on the risks of digital overload in collaboration with a south east university and western France University to design diagnostics on digital practices in business in a scientific way. In the third part of the collaboration, the tool collected data through the SaaS platform and in this context, Ben HR launched a research project

with HEC researchers and co-defined the research themes. They provided the data that will form the basis of this research.

On the business side, the team works closely with HR departments to meet their needs and co-build with their customers a solution that meets their needs.

Cooperation for Growth

For the founders of Ben HR, research allows them to develop more powerful models in order to have a lever to convince companies to collaborate with them.

Positive aspects:

Collaboration on the totem pole, first point: every time they have sought to collaborate with researchers as a company, there has always been an excellent reception from researchers who have always been very enthusiastic and willing to collaborate on very concrete themes. But it is also true that they were really targeting the researchers contacted in an extremely proactive approach.

Their first step at the beginning of their entrepreneurial adventure was to carry out a literature review in their school setting. It was in this context that they discovered that a researcher from their own school was working on the same subjects as them and in fact they contacted him. The other researchers they collaborated with were contacted through networking. This is especially with western France University, a school specialized in HR analytics. Regarding their third collaborative experiment, they contacted Christophe Pérignon, the director of research at HEC, via the HEC incubator that accompanies them, and that's how they were put in touch with the most relevant researchers. They had also read the research articles of one of the HEC researchers and contacted him directly on this basis.

Initially, the first totem project was based on extensive research done in design and related to interaction design. So, they had already been able to understand through this exercise the interest and modalities of the scientific approach; it was also on this occasion that they realized that it was also a very strong business argument of legitimacy. What they also liked about working with researchers was their accessibility, which was much more than they had thought. And because the researchers are very specialized, the founders of Ben HR realized that this type of collaboration could be a competitive advantage which was not so difficult to acquire and that could be a very important lever at the business level.

As young graduates, it was a very important lever and that's what allowed them to get through the doors and sign a first client. This client was convinced because the analyses were conducted on the basis of scientific research.

The image conveyed by research has always opened doors for them, especially that of incubators. It's always been a lever to grow and grow.

Even today, to approach large accounts, there is a very interesting gateway. Victor and Caesar note that if this approach makes sense, the long term must be taken into account. The search time is long, but that is precisely what will create a sustainable competitive advantage. The image of research, on the other hand, is a short-term lever.

Negative aspects:

The temporality is different. On the scale of a startup 3 months is long, at the university level, it's a fraction of a second. For a long-term study for example, it takes a very long time. For the totem, for example, studies have been going on for a very long time. Studies are pushed back, which is not a problem for researchers, but this slow side can be complicated for a company and even more so for a startup.

For Ben HR, collaborations have always been organized in a quiet and natural way. But what could be complicated for example is when they wanted to create a scientific board and provide a bit of a framework for meeting regularly. It did not suit one of the researchers who had a real fear of embarking on a commercial adventure.

In the end, the two worlds communicate little; there is a lack of communication and understanding between the two worlds. Victor Loiseau believes that if these two worlds understood each other better, collaborations would go much faster.

Whenever they wanted to formalize too much, the complex and slow administrative processes caught up with them. Whereas when they just stayed focused on the concrete and on action, everything was going well. It is really contracting that causes concern and complicates relationships.

An example from the collaboration with a first university is: on the totem part, they wanted to set up a scientific board to formalize collaboration with researchers and guide the project. It was mainly a matter of formalization because the banking and support partners wanted this board with a charter to embody it. The collaboration was effective, but there was nothing written.

They thought that the time to sign the documents and their review would last two weeks but in reality, the process lasted so long that in the end the research project is still ongoing, a researcher did not sign, and in the meantime they pivoted and began to collaborate with western France University and HEC.

So in the end, a researcher signed but they broke loose and focused on something else. The project at the commercial level is on standby, so everything is suspended for now. Formalization put a brake on it because there was no framework and they found other researchers with whom it had become more relevant.

Another example, with a western France University: two researchers were in HR analytics. They co-constructed questionnaires with scientific methodologies to be able to assess digital stress and mindfulness IT and make digital profiles for collaborators. So they did a scientific review, questioned, did a profiling job that's coming to an end. This time it was the researchers who wanted to formalize by launching a chair on HR analytics with two companies. There were difficulties in defining who was going to fund this chair. Another company agreed to start financial assistance, but the process is quite long. The last meeting took place a while ago and there has been little news since.

The time is not that of "deal, ok, we sign and we go". There is no framework to work with researchers and it is felt. Or despite their many experiences of working with universities, they don't know the framework.

With HEC, the founders of Ben HR find that it's a little more structured. From the beginning, a researcher explained how she works with companies. The researchers seem to be more used to collaboration, are perhaps also a little younger, and relationships are more structured.

In general, they found the researchers through networks via a link with the topic that interests them. The contacts really come from the networks in which they belong to already. On the subject of people analytics, it was the founders who made the effort to understand the methodology of research papers, understand the methodologies of research etc., thanks to the website of Caesar's original school through which he has access to the various scientific publications. They were searching research publications, attending popular webinars, but in fact this has more led to contacts and connections.

At one point when they tried to build a scientific model themselves, they went on Google Scholar to do their literature review, but it was really their personal curiosity. No one uses the resources available in business schools. In fact, in school, Victor was a junior company and sold consulting services. He had noticed that when he put a researcher's name next to his own and sold his

methodology, it worked better. Where there is knowledge, it works better.

Opportunities for Growth

In terms of innovation and the arrival of innovation on the market, being able to have a collaboration that is closer with researchers could go further faster by bringing out real leaders on the research side. Because when you look at it, there are a lot of considerations. It's exciting, and the roles complement each other to build commercial discourse from real knowledge. There is a complementarity to be found that is great and that could help at a global level.



Support for Growth

At the beginning of their entrepreneurial adventure, they were in an incubator of the School of Management. Then, as the company is based/registered in another region, they were somewhat followed by the innovation center of a new university which is a public structure and which precisely tried to manage relations with researchers. And today they are at HEC and it is also through the startup program, specialized in analytics, that they have been put in touch with the research of HEC.

With a first university, the process was very slow. In the second Incubator, it is through the specific innovation center that they were put in contact with the researchers and for HEC. There is a researcher they followed for a long time, but the HEC incubator put them in touch.

For them, the role of an incubator-like support structure is more about connecting and not necessarily accompanying in the relationship. When they tried to help, too much involvement didn't help. It's great to start the

relationship, but then the presence of the structure may no longer be necessary, if not to communicate. In direct collaboration it was good, however.

They have now integrated the Microsoft for startups program, which allows them access to credits and collaboration at the commercial level with Microsoft.

In terms of innovation and the arrival of innovation on the market, being able to have a collaboration that is closer with researchers could go further faster by bringing out real leaders on the research side. Because when you look at it, there are a lot of considerations. It's exciting, and the roles complement each other to build commercial discourse from real knowledge. There is a complementarity to be found that is great and that could help at a global level.



Kerkloh Inge

Rector

HEC Idea Center

The logo for HEC Paris, featuring the letters 'HEC' in a large, blue, serif font, with 'PARIS' in a smaller, blue, sans-serif font below it.

France

07.05.2021

Zoom interview

45 minutes

Adeline Leroy

Understanding of Growth

In terms of innovation and the arrival of innovation on the market, being able to have a collaboration that is closer with researchers could go further faster by bringing out real leaders on the research side. Because when you look at it, there are a lot of considerations. It's exciting, and the roles complement each other to build commercial discourse from real knowledge. There is a complementarity to be found that is great and that could help at a global level.

Key Success Factors

Academic and research excellence. This is a very important element because it differs from many others. It's the raw material of everything HEC Idea Center do.

Quality of teachers recruited etc. This is the second key to the quality of students for reason it is the students who will make a relevant impact on society in the future.

Quality of students: it attracts the best teachers. No chance to compete in terms of pay, so quality attracts because students have outstanding qualities.

Community: there is a DNA of solidarity that is very special. Solidarity in the network that also allows the school to grow the investment funds of alumni for startups etc. Networking out in pairs is an asset for sure. HEC is famous for its proximity with business, and entrepreneurial DNA since 1881.

Cooperation for Growth

HEC cooperates through 3 different angles:

1. **Classic recruitment** - engaging more with the chair management, a corporate initiative. The school is a member of a center so there are different levels of contracts. Also, around 45 companies are involved in research, teaching or a particular subject. Historically, strong links via history with the ICC so it's a kind of historical DNA.
2. **Developing all that is corporate innovation** to link the corporate part to the innovative startup part and try to transform them from the integrator.
3. **Creation of case studies** from concrete strategic use cases written from real companies. A department has just been created with Anne Michaud associate dean for the pedagogical track.

Understanding how a company is structured, having concrete links with companies, these aren't things that are seen as purely theoretical. Having links with research, introducing guests into the courses, sending students home ahead of recruitment etc.... Also important is bringing companies to the campus, case studies etc. It's putting the client at the heart of the discussion and the relationship or putting the partner company at the center of the system, which is rare in academic institutions. It often starts with an idea that we will give to the company. There is little reverse input, even at HEC it hasn't changed much. The partner needs to be put at the center of the ecosystem and not in a system that puts everyone on the outside.

The founder, who may have been a speed bump at times because it is a public institution, has allowed a strong understanding for over a century. Even though the academic part of the school took off, it was a matter of ranking too.

While it is a parallel world, this is not even a problem for research in relation to the impact it potentially has. But it's not that complicated. Inge comes from the pharmaceutical industry where she spent 12 years.

What makes the difference with conventional silos is that it is a living raw material, and it takes a basic understanding and respect to work there because it is the heart of the reactor. They are rather different cultures, and they need to understand each other. When you look at institutions beyond HEC (those she knows are INSEAD, Bocconi, Yale etc....), we realize that the more the research manages to work with others, the less disconnected the

better. And you must be careful because the more that the interaction is cut, the less attractive it becomes to the students, especially in an area of knowledge democratization. So, proximity is a key element of development.

On the reflexivity of research, it is necessary precisely for this. And precisely what makes the particularity in any case what we try to do with the incubator is to explain that the training has an importance. Each of the three centers has three missions: think, teach, act. We played with the "act, think, teach" motto a bit. There are many actions in entrepreneurship that allow someone to nourish the reflection to transmit new knowledge about entrepreneurship.

A research backwards for entrepreneurship is a virtue. This can be a lesson, a reflexivity, a transposition into models and allow for a little more perspective.

In HEC, the entrepreneurship pass follow the following steps: start launch then scale, and at a young age. There is the teaching part and then we build and scale, now we're creating something. Where it becomes crucial today is that the world tomorrow needs to reinvent itself on a lot of issues and it's going to be done a lot through entrepreneurship and partially by technology. If tomorrow is partly growing entrepreneurs, if we are not careful, tomorrow's economy is going to be ugly. The diversity part is essential. We are creating an economy of tomorrow that is worse than what we have been fighting about as women for years.

For a few years on the part of students there is a real pressure expressed and demanded on diversity and sustainability, which is turning them into a bit of an activist, though.

Training Needs

There are two ways in which training is used. Companies come and ask for trainings, which is quite common, and we think with the teachers and propose content. There are heavy trends that we know and propose, and often we co-build with them.

We provide more than 70 bespoke programs a year, and about 100 programs are made available to businesses. More and more we are managing to co-build, but the executive part that does a lot of that.

There are silos, so we make efforts to work on cross-cutting these, we fight against it and it's part of the strategic roadmap. The creation of Inge's position is linked to this promotion of cross-cutting. The SNO center of entrepreneurship works with data to break silos a little, with key accounts and tools.

Crucial today is that the world tomorrow needs to reinvent itself on a lot of issues and it's going to be done a lot through entrepreneurship and partially by technology. If tomorrow is partly growing entrepreneurs, if we are not careful, tomorrow's economy is going to be ugly. The diversity part is essential. We are creating an economy of tomorrow that is worse than what we have been fighting about as women for years.



Knellwolf Philadelphie

Programme Manager
HEC Incubator



France

04.06.2021

Zoom interview

45 minutes

Adeline Leroy

The project began in the year 2010, then the project struggled until the arrival of Antoine in 2015. There were not many resources and, after the failure of Antoine's entrepreneurial adventures, he decided to take up the project as his challenge. So first at the ICC and then in 2017, they were one of the first to answer Roxane Varza's call and when they arrived, there was a big promotion of nearly 60 startups in 2017 and it started to accelerate and structure.

Understanding of Growth

Growth is from the point of view of a company, an increase in certain indicators towards the future, today I do better than yesterday and tomorrow I will do better than today. Eco performance can be an indicator or not.

Transformation

The organization needed organization, and management. When a company is starting to grow it needs to coordinate more people, and therefore it needs internal communication to keep efficiency. Often growth is correlated with a sexy attitude, they have more problems, but they have more resources, resources which they can raise more easily as well.

Motivation for Growth

Persevere is what we do, which will help you know that it's not just an idea and make sure that what you do initially can last over time and become profitable. At some point, it's the search for profitability, a part of ego among entrepreneurs who want to grow for the social status that represents a growing company. And a lot of ambition regardless of the viability of the thing. The very definition of capitalism is that one seeks to grow to earn more and get richer. I can see entrepreneurs looking for a balance point that might just satisfy a stage of development. People have a personal assumption that it will be more highlighted, better etc., when we believe.

Key Success Factors

A team that is qualified and has good methods of communication and confidence is a key success factor because you believe, you can't control everything, and you must be able to delegate. Another success factor is having a deep and healthy market with a real need. You can have ephemeral growth if you hype, but for real growth you need a deep market. A good internal organization with efficient management, clear rules, and rituals. To have among the company's leaders the appetite, the desire to continue to this growth and to confront this growth.

Main Needs

Entrepreneurs need operational examples and representatives to understand the complexity of the organization. Funding needs to be able to recruit the right people. In terms of HR, there is a need for the management of a team that grows up with all that this job entails and on which the entrepreneurs are trained very little or not at all. Determining how to keep the right people is important too. There is also a need for skills, tips to attract the right people, and growing companies have a problem sourcing people with good profiles.

Business Leader Importance

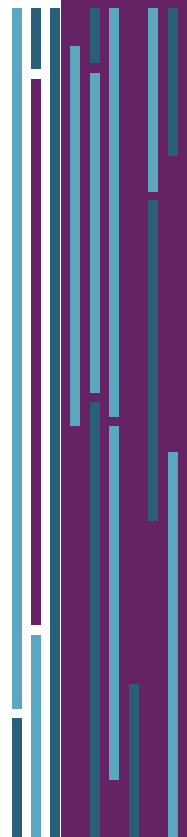
Networks are overrated. People insist too much on the need to surround themselves because overall they are very well surrounded already. There is no shortage in the ecosystem anyway, today the accompanying ecosystem has developed very much, and there the means and needs are rather addressed.

On the need to get supported, today they need to choose and keep people to be accompanied not to multiply to really have a quality accompaniment. Because the accompaniment is not just technique and mechanics, it's relational. Reflection takes time.

Cooperation for Growth

University ecosystem: they rely on the students and teachers of HEC who come to put into practice what they teach about startups. So, they're going to make them work on startups in finance, in digital for example, in data science with the École Polytechnique, related to the masters. So, with Polytechnique, the startup is a pedagogical field of application that creates value.

The incubator was accompanied by a researcher at HEC who worked on success factors at HEC and who set up the success factors to rationalize the way startups are selected.



Christian Laplaud

Founding leader
Altereo

The logo for Altereo, featuring the word "altereo" in a blue, lowercase, sans-serif font. The letter "t" is stylized with a green leaf-like shape extending from its top.

France

04.03.2021

Zoom interview

45 minutes

Adeline Leroy

Christian Laplaud worked in the town hall in Corrèze, and after three years there, he created a company that aligned with what he knew how to do. In thirty years, it has grown and counts a little more than 200 employees, doing business in engineering and urban planning. Customers include local authorities in France, which make up about 90% of their business, and governments abroad. They are very involved in the territorial mesh, working with various agencies in France. Meanwhile, Christian chairs the French water sector.

Their first growth opportunity was with a private client who returned the initial capital of the company after two years, providing immediate financial capacity. This has meant that the company has never really had any financial concern. Further growth was made with built opportunities, including a call for tenders in Toulouse by an agency in Toulouse, and in Bordeaux the same, allowing for the construction of a continuous territorial network. Their recruitment process is not stringent, meant to help ensure this continuous growth, but it's hard in their field to recruit. Perhaps it is the lack of attractiveness for the water sector, which is noble, but public customers do not pay much so the salaries are a little less attractive. It is also a relatively new profession, water engineering did not exist 50 years ago, so many young employees want to come for a first experience before changing it, increasing employee turnover. There is concern for loyalty, so they're setting up HR projects that work.

Understanding of Growth

Altereo added value combines command catches, business activity and HR capabilities. Now, the constraint is less the business market than the job market.

Growth Strategies

After internal growth, they attempted to turn to external growth, but it has not been a big success. They bought a company in water treatment, but not in line with their trades or with their customers. This meant that the company did not line up well with their goals, so they refunded that company to one of their foreign clients. Because they attempted growth in the field of CSR by acquiring a company that had some financial difficulty, it was not successful and people left little by little. They began a small external growth project more focused on the trades they specialize in with a geographical complementarity: they had little presence in Ile-de-France to help them to acquire their market.

Their marketing strategy emphasizes the products, services, and software they develop; they also highlight their sustainable development activities. We often think that if it works, it will convince the crowds, but in reality, demand is more complicated, so they work on it upstream by analyzing the market for a pull approach. This plays into one of the characteristics of innovation, which is to respond to a customer frustration.

Transformation

He had built an analytical management framework of the company from what he knew how to do, not what he had to learn to do like he had done in his previous company. The rational working method had suited him well, especially when they were a little oversized, but the framework has been a steady guide that has allowed him to avoid mistakes.

The MPA, Association des Progrès du Management, created by Pierre Belon 30 years ago (Sodexo), helped him a lot. When his business grew, he needed to talk and created a club and brought in experts, among other things. This brought together more than one hundred clubs of 20-25 people, consisting of non-competing business leaders from various fields. This generated him a number of clicks, in particular on the SHS and behavioral sciences, allowing the company grow at the same time as society.

Challenges for Growth

Recruiting and attracting potential employees both initially and to stay onboard. On the loyalty part, there are several elements: there are more than 30 employee-shareholders of the company with a voluntary approach on their part. On the other hand, for the past year, they have used a system called E3P, which is a journey of progress. Their tri-partite commitment corresponds to a need for visibility of potential careers within the company with success stories, for example from trainee to agency director. Technical jobs, project management and technical sales are all positions with several levels of skills. Management engages in dialogue with each individual to agree with the position that the employee has today and the one that they would like to occupy in two years.

The Altereo Academy: employees will follow internal training regiments to reach their targeted function. This is achieved by interacting with the intermediate manager who is the agency director. If all the required conditions are met, the promise made will be kept. On the part of the employee, he undertakes the responsibility of getting involved, on the part of the manager, he undertakes the responsibility to provide the means to follow this training course. 9a works quite well. But now there

Motivations for Growth

Convince customers and partners of his interest in what he does because he is an "awakener of environmental intelligence", so it's satisfying to see the ideas he has translated into regulatory provisions. For example, he has created and distributed a fairly revolutionary artificial intelligence system both in France and abroad that helps improve reducing water waste. It was especially well received abroad because. In France, it works relatively well.

is another type of competition: public engineering, which recruits a lot directly from them and three-quarters leave for a community.

Business Leader Importance

Christian is 65 years old. Now company holds 65% and employees 10% fund, 15% and managing director 10%.

He recruited a CEO who was a business executive in his APM club who arrived 3 years ago and a commercial director who did not exist because growth fed by tenders and seemed sufficient.

He tries to make a decision on an important value for him: the reason being his bike and how to move from ideas to behaviors. They, but especially the customer (town hall committees of agglomerate etc....), are in a straitjacket of public order whose lines he tries to move, which is not impossible but long.

Cooperation for Growth

Cooperation partners

Accompaniment of the BPI: Via the accelerator, he has learned methods and experiences that have made him think. He always comes back with new ideas to develop. What helped him a lot was BPI France University, which held different sorts of MOOCs on business management, strategic marketing, and sales, among others. He makes his employees follow the MOOCs to lay the basics in a simple way and which are transversal to the company.

The BPI seminars also have an excellence network. In both cases, this has led them to make significant progress, but not on game-changing strategic marketing for engineers. The second one that impacted him is the opening of investment funds with EM Lyon. He sympathized with the founder, who then accompanied him in a process of the gradual transformation of the company.

Cooperation with universities

They have just recruited two young doctors for their RD which is very important, in particular, for the question of innovation with through SSH specialties that they do not have in engineering. One of the doctors is a semiotics and behavioral economics specialist, the other a specialist in something similar to that of the company, but that they do not make that touch in their territories to build new trades.

The driver in the environment is regulation, not common sense, and Altereo tries to influence the French water sector to influence regulations. The regulations will lead customers to position themselves on these new business environments.

He does not complain as an entrepreneur, instead he tries more to influence his destiny.

Opportunities for university-business cooperation

They try to work with them to identify trainees and alternatives in schools and universities. The concern is that schools are monetizing their intermediation now. Also, with schools specializing in the environment, we try to ensure that they do not train engineers who only understand technology. It is essential that the training of young employees recognizes the commercial and regulatory marketing dimensions. Regulation in the field of the environment is a double error: 1- deregulation is what advances the market and 2- it intervenes in the purchase processes with the customer. In the areas of competition, he meets many researchers and he campaigns on this within the French water sector and meets with several few school directors so that the message is heard by the teams around him.

Training Needs

Christian thinks that someone who starts a business, even if they agree that the startup nation is the panacea, should absolutely be accompanied and follow MOOCs. A profession that requires technical competence requires a self-training effort on the part of each entrepreneur.

Engineers are not familiar with the academic world.



Didier Barbaud

CEO

Saferail



France

04.03.2021

Zoom interview

45 minutes

Adeline Leroy

The company was founded in 2003.

It was a TPE and started all alone, now it has 11 million of turnover and 116 people employed. Former railway worker, Didier Barbaud joined the SNCF at the age of 22 where he stayed for 10 years before being dismissed. He then joined Alstom transport to do the same thing, but within a large group, and then he went to England to modernize the line between London and Glasgow. In 2003, after finishing his contract in England, he returned to Nantes and founded his company in his garage.

Why did you create a company? He worked 4 years on a major project in England at the time of the privatization of the railways by Thatcher. He ended up working with lots of independent companies that had just been created as consultants. There were up to 200 engineers on the project and around half were from Alstom who carried the contract. The other colleagues worked on their own behalf or for small structures. At one point he found himself manager of a team. He was very involved as an employee as the consultants left much earlier and worked for different companies. Thanks to being surrounded by a much more liberal practice in England, he has always been an entrepreneur at heart even though he has no entrepreneurs in his direct family.

The SNCF was the opposite of what he expected from the world of work: hyper rigid. He prefers the world of innovation and entrepreneurial initiatives. Alstom taught him more engineering work and at the end of his contract, naturally the opportunity was there.

He started as a consultant in 2003 with a contract from a Marseille company before becoming a portage company for Thales on the Bordeaux tramway. Then he recruited his first employee in 2004. Now he had to sign over 200 to 300 euros, having unfortunately made little turn over in 18 years. He was very nervous at the time, and he knew he was potentially recruiting for life. At the same time, he signed a commercial contract, almost on the same day as his new employee.

In 2003, he carried out a strategic plan in the very first months. He had to do this because he was asking for a loan from the Nantes Initiative Association that promoted entrepreneurship in Nantes. He wanted to borrow 7500 euros without interest over 3 years. After presenting his strategic plan to entrepreneurs, accountants and bankers, he got the loan. While doing the Business Plan, he realized that he had to soon recruit a salesperson, which he planned for 2005. In three years, his business had developed on its own to 3 employees.

In 2006 he recruited the salesman, which allowed him to grow stronger than he would have done on his own and that brought him until 2010.

Second phase of growth was made possible by a SNCF qualification, allowing the business to go from several hundred thousand euros to several million euros in turnover.

In 2010, he signed a contract with the Rail Networks of France (RFF) for the engineering of the Nantes Château tram/train line. They had the contract "against" the SNCF, since competition had been opened on certain studies and works. Between 2010 and 2014 they performed all the engineering of this line which was a great success.

This has made them move into a dimension of large company in terms of know-how like Alstom or Thales.

2014, they won a big contract that carries them until 2017, the LGV Le Mans-Rennes allowing them to increase staff, profitability and turnover; they ended up with a turnover of 14 million euros.

Since 2020, they have been in a rather hollow period. Turnover has fallen, as have staffing levels and profitability. Nothing was going on anymore. Even if they didn't make a starting plan, the big construction

sites were finished, there were no more orders and then COVID, leading to a dry three-year period. Now, they are experiencing a new phase of growth on all items and are recruiting massively.

The turnover of 2017 was dangerous because if there is strong growth, the company must be able to manage it.

They are at 30% revenue growth for this year due to many small orders and one large order on the Paris-Lyon LGV modernization and capacity increase project. It is an Itashi-led project in collaboration with Eiffage, Alstom and Saferail. This is the biggest order in the history of Saferail and will bring them through 2023. They now have a five-year development plan ending in 2024, right in line with the Olympic Games, with a target of 25 million euros in turnover, which will transform them into a mid-caps and into a large SME status.

Growth Strategies

They have had several five-year plans. The new one is very reliable, especially with the growing awareness of states, individuals, and civil society to the importance of ecology and the railway as a mode of green transport. We can clearly see from the marketing studies that railways have a bright future ahead of them and thus the growth of the company for decades is going to be very prosperous. The current plan will be dismantled in 2021 with a turnover of 11 million euros. Growth therefore is expected to be very fast, with expectations of tripling turnover, after an exceptionally low year in 2020 due to Covid.

many interests, but when he started in railway work at the age of twenty, it became a passion. He finds it a noble cause. He has a political vision "the rail is our future", a vision which has also been established by all of the other stakeholders. The company sponsored a racing boat "La Solitaire du Figaro" to carry this message. Their mission is to make mobility available to as many people as possible at a fair cost, in a transparent manner, while preserving the planet and preventing deaths on the roads.

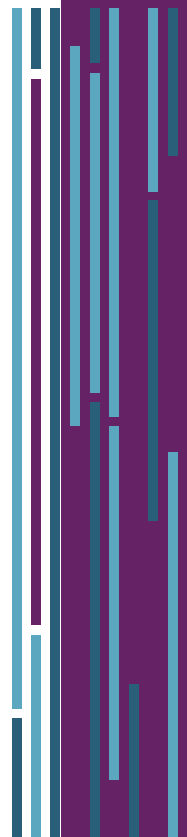
The job of business manager is also bit of a hard drug, meaning the business would have a hard time doing things without it, the manager would like to stop and lift their foot, but when it stops, employees cannot stay and do nothing. This is a motivation that can be dangerous, and the manager must try to heal himself.

Growth is linked to natural ambition. The corollary of this adventure is to enjoy the higher life at a salaried level.

Transformation

They raised funds in 2014 to finance the different phases of growth.

Between 2010 and 2014, a big project had a significant impact on the WCR and created a lift of the BPI. Since the added value was grey matter, it was necessary to recruit and pay salaries before collecting any payments, so financing growth raised questions. The BPI is now a marginal shareholder since the convertible bonds have been repaid. They are now preparing a second fundraiser. Christian loves his industry, though he could have gone into other sectors because he has



Challenges from Growth

On a personal level: health. He has not been ill in 18 years, but he even wonders how it was possible considering all the blows that one takes when they are the head of an enterprise, particularly of an SMEs. You have to be very resilient, physically and morally, and mentally you have to be strong, especially with the addition of COVID. When you already have that on your shoulders, you have to maintain a good lifestyle to ensure continued success.

Family life also acts to preserve, not to aggravate his case.

On a functional level: legislation is a challenge in HR and the management of people can be complex.

Another challenge is the State. Working with public companies and the difference between users and customers can have an impact. Sometimes this means a less efficient process and a revolution would be interesting.

New competitors are coming who have also benefited from political developments in the market. The SNCF understood that it was necessary to evolve its methods and more work is being entrusted to private companies with better conditions, and this has created a call for new companies to enter the market.

Business Leader Importance

They have a rather participatory model. The role of the leader here is not necessarily intense in the sense that if he is not there, nothing happens. He has always said that for him, it is the art of delegating, trusting, pulling employees up, and making himself dispensable. He is a historical leader, but more of an image that people respect for values. For him, the importance of the leader is above all there, to embody the values of the business. This makes leadership natural.

Key Success Factors

Profitability, growth for growth's sake is a problem.

Branding, making a lot of money but being incorrect as an employer or with customers, or politics is impossible. Branding is a way to measure its success.

Employee and customer satisfaction. They have been very interested in the quality of life at work for many years.

Corporate values are very strong and human and behaviorally oriented. In particular the team spirit. In the three sites in France, no one has ever talked badly about their neighbor. Customers also feel that there is this quality of life at work at Saiferail which is represented in the high quality of the deliverables. This leads to satisfaction and employees being proud of their work.

Comfort on a daily basis for everyone in a pleasant working environment.

Cooperation for Growth

No, despite his desire and the opportunities and relevance they would have both for universities and Saiferail.

The business is not focused enough on the academic world. Because they have never put in place a vision with an action plan, this stage has remained in its infancy. They have not been able to build a plan as the vision has not been pushed. There should have been someone responsible for this plan, because it's not that they don't see their interest, especially for R&D. This is a pity because despite the research tax credits, they have not been able to cooperate sufficiently with universities.

They should have hired consultants on the subject to be accompanied by experts. They could commission a consultant to be accompanied.

They were not solicited by the universities either. He himself graduated from OSEO, and though he did make contact a few years ago, there was no follow-up. For him, not engaging more has been a mistake thus far in his career.



Emmanuel Ramfel

Rector
Syntec Engineering



France

Zoom interview

45 minutes

Adeline Leroy

Syntec is a professional organization that emanates from the great French trades of intellectual service, often assimilated into design offices and engineering SMEs. Companies in this sector are often consolidated groups with a slightly larger size.

Their role is to be able to federate collectively and share common issues, such as payrolls, for example, engineering company payrolls account for 80/90% of the costs. In this sense, what brings them together are social issues, such as collective agreements.

Engineering is by nature present in all French sectors. As soon as there is a need to have added value on a project, an engineering company is called upon to be able to make the project real, both technically and economically.

The professional federation lives only by and for the members. 400 member companies, private businesses that have more than three years of existence and wish to be informed, are represented in the context of their activity.

They provide tools for lobbying public and private partners. They don't speak for specific companies, but have a collective message that must be defended and represented, and ensure that messages are carried and validated by all.

The role of trade promotion: Because these professions are by nature diverse, and big recruitment is needed to ensure the growth of companies, recruitment is often done for designated offices and young people will often go to work for large groups.

There is collective support on all the issues of the profession, and this requires an offer of accompaniment decided following the requests from stakeholders.

Cooperation for Growth

Having a dedicated recruitment person is a historic and essential subject for the industry because talent is the key and the basis of everything, and you have to be able to recruit them. There is a sense of facilitating recruitment on behalf of members through schools and universities and the periodic organization of recruitment forums. The schools relay the information about these meetings so that young people can come to this show, which is 100% engineering, and therefore the young people who come are the target group. Between 150 and 200 universities or organization are invited to relay this event.

Another channel is engineering skills. This is the other way to try to involve companies in schools, by trying to better promote engineering companies to make them known in schools.

How we identify skills for the future, i.e., the integration of climate in projects, new technologies, integration of BIM, all come from a professional request. To be able to train in these tools, we rely on the

universities to explain the needs and develop the training.

Emmanuel himself was one of the first students to work in the energy and renewable energy sectors because professionals identified this issue as essential for the coming years.

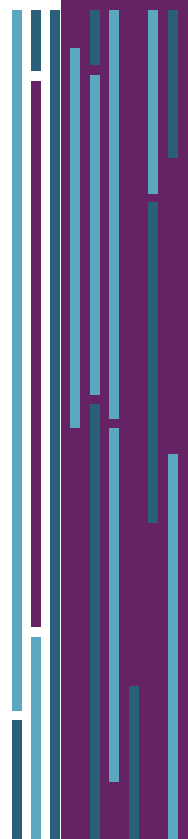
Intervention also occurs when young professionals between 1 and 4/5 years of experience intervene in the framework of sessions within schools to present to the engineering professions via on-campus or virtual presences.

For links with research, from his personal point of view, engineering companies are not sufficiently associated, despite some R&D recruitments and very close relations, with junior enterprises. In the context of periodic relations, in particular the pitches of engineers in startup mode with young startup leaders and young PhD students, have to be able to make solutions know or R&D programs that have just been created.

Training Needs

Link with Clément Hias to seek value in universities. It can be connected with the opco atlas approaches for the development of skills for SMEs etc which has a training program in place as well . At Syntec, they have a role of prescriber to create training.

The promotion of the accelerator comes out of the BPI accelerator at the end of December.



Estelle Assaf

Head of school development
IMTBS



Institut Mines-Télécom Business School

There are three main functions in the school: training (schooling, program), research (teacher researchers and the management that manages all this) and everything related to the development of the school (the international is yet another entity). This includes everything that will make up the strategy, the supervision, and the impulse of all the sources of resources of the school and then there is the international which is not within its perimeter since it manages the development and maintenance of partnerships with foreign universities.

It oversees developing all the resources of the school and today schematically they are around what we can generate as turnover, even if we are public, they are the same. So, all the programs that are developed, whether it is access to students, funding of chairs and then what will also come on the graduate side (contribution of graduates excluding fundraising), evaluated in financial equivalent and then all the turnover that can come from alternating courses (a little different from tuition fees since it is an ecosystem linked to third-party paying agencies). On the contract research and financing, we help to identify companies and financiers other than what they could find, and we are more helping than driving. In order to go and get European or other funding, there needs to be someone to take charge of this type of opportunity to make the transmission belt to the faculty who could seize it. For state or institutional financing, we are not equipped to develop ourselves, so this is clearly a short thing.

The challenge of diversifying students to curb the rise in the rate of scholarship holders (who are

France

31.05.2021

Zoom interview

45 minutes

Adeline Leroy

totally exempt from tuition fees), now between 40 and 60% of fellows depending on the year. So, the challenge is diversifying recruitment for the grande école program, without questioning but by adding diversity.

Another source of growth is executive education, vocational training, which has had an ad hoc direction for a few months, but it remains linked to the implementation of strategic plan. There are strong ambitions on this part. It remains in the development of schooling resources, even if it is a vocational education, and the funding in France concerning this is very structured. Financing engineering is very special. Alternance programmes and a financial ecosystem which has just been recast. So, they need to be present on these routes and on these sources of funding and to develop the apprenticeship sector.

The fourth source of notable growth is the resumption of international student recruitment. The university needs to be in the game of international student mobility, especially after the health crisis. There is a stake on the grande école program, a stake to go and get more engineering students from scientific fields.

The school is still very new, only established in 1979 compared to HEC which was founded in 1803, and small so this makes a difference.

Background of the growth leader

There is no alumni association for IMT. Most of the students have lived a bi-school experience because of the associations Télécom Sud Paris has with other universities. They have been in the reflection phase for a long time and financial concerns have further postponed the project, but there is ambition to create a tool. There is an executive club, but the program is struggling to establish itself and has not been helped by COVID.

Specific challenges

Challenges for IMT-bs are in the relationships with these: **1)** the network as a database, **2)** network management, and then **3)** to formalize what there is to offer.

The school is now mapping its faculty to be more strategic regarding contact with companies in the context of their own needs. So 1st- how to contact them, how to identify their stakes and we don't have the resources to do it. This is an important topic actually, to find SMEs we can collaborate with, in addition to work on the actual network. You need the right databases, customer analysis, have the time to undertake your own interviews and do fieldwork to meet them in a fairly traditional way, physically speaking, but also for inbound marketing campaigns. To be able to engage with them, to listen to them, their challenges and how we can respond to them and upstream, a university has to be able to have a good vision of the expertise that it can offer. And then, we can be proactive.

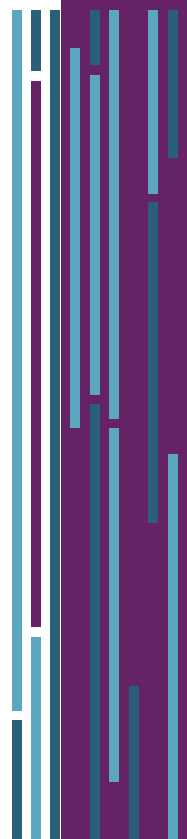
Collaboration with HEI

What about collaboration with research? It is a gray subject because the researchers are the teachers. There is the issue there on the turnover vis-à-vis companies through the executive education which can also be used to develop contract research.

On the researcher side: the collaboration is complicated because what it has identified is that a teacher-researcher has so much anticipation in his work that his semantics do not take him back to the present time and he does not express his expertise using the vocabulary of today's companies; Estelle arrived 4 years ago. Today, when she talks to the research-teachers coming from companies, she has the impression that they are telling things a little dated. In the researcher's mind it is very anticipated and not very explicit, or it is old from 5 years ago. This can lead to difficulty translating into a useful tool that will resonate with the needs of companies. We would have to go to see them one by one to fully understand and translate with the

semantics of the company. And then the teacher-researcher has this ability to teach on a lot of things while having an extremely sharp field of research.

The link is complicated to build especially because of the obligation of publication which gives you less time to teach and also assigns less importance to the commercial interest; the interest is more to have the feedback of peers.



Sebastien Cauvet

IMT Starter Director
IMTBS

IMT Starter



France

04.03.2021

Zoom interview

45 minutes

Adeline Leroy

The IMT Starter was created 21 years ago, within what was at the time the National Telecom Institute. It was created at the time as a project challenge to undertake a second-year pedagogical event with a goal of encouraging entrepreneurship in the school both to accompany start-ups being created and create a transfer of knowledge to the students. It is a piece of critical DNA today to both IMTBS and TSP School and its partner ENSIIE school. Another part of this DNA is the engineer-manager profile that allows IMTBS to have digital projects 100% of the time, sometimes with a lot of technology and sometimes almost none, rather with service innovation.

IMTStarter oversees two activities. The first accompanies students through company creation projects in their 1st, 2nd, and 3rd years at one of the schools. The mission is to listen to them and accompany them in their journey and to integrate entrepreneurship into their education in different forms: replacing internships by working on their project in the incubator; a summer school every year for about sixty students; the challenge undertaken. In the 3rd year of the EMI major, all year the students come with ideas, though not all necessarily lead to the founding of a company. If it leads them to start a business, that's great, but the main goal is to train students and develop in entrepreneurial skills.

As 70% of the startups are not from the schools, the Starter hosts the meetings on several occasions throughout a year. There, the goal is to help develop their business by helping develop their strategy and set up tools to help projects. IMT has an honorary loan fund set up, allowing the

school to lend around 5000 euros at a zero % rate for five years to twenty startups per year, though this tends to be 10 on average. This is a priming fund from donors who are former students the schools and amounts of 250-300 euros from the Graduates Association investments.

The Starter has assisted 230 companies, of which 90% created a business and 50 to 75% of the businesses having a five-year survival rate. If their company is successful, alumni may return to coach at IMT five to six years after their creation.

The incubator serves the com stratum of schools too. It serves all the layers and is an element of attractiveness by positioning technology, innovation, and management within the same structure. Within this structure is a link with education to allow students not to do an internship with an outside company, but to do so within the incubator if the project is validated by the incubator.

The link with schools mostly attracts people who are not educators to intervene in the incubator. These educators will generally intervene upstream to give tools for the prototype.

Understanding of growth

From an e-investment perspective, growth often occurs when companies leave the incubator because they address the market re-entry phase of development. Further considerations that stunt growth within the Starter are the prototype in the demonstrator having no customers yet, the company having not been created yet, or the team having not been created. Once a team is finalised, they will complement each other during the incubation year. If all goes well, the company is created, and the product is finalized at least in V1 and there is an entry to the market with a start-up, aided by turnover and very often public fundraising or financing. The growth phase is rather in years 2 or 3. Growth: CA, start having a product that can be repeated.

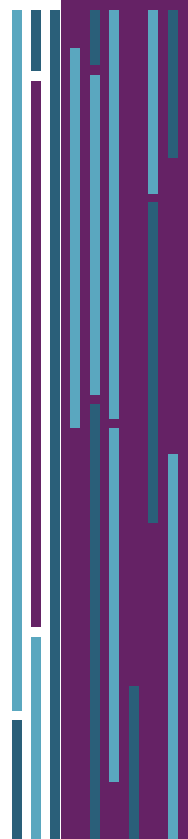
Staying in touch with those they are most friendly acquainted, which is the advantage of age. There are those in which they have invested or lent money, and for many as they continue to develop, they recruit trainees and sometimes ask even more of these contacts during the launch phase.

Motivations for growth

First, growth is life, at first you either must believe in your project or it will not succeed.

Secondly, the personal satisfaction of having managed to do something, whether it is accomplishing one of the CA markers or achieving a certain team size; people are often proud to have their tenth employee. The moment a manager could start thinking that they did what they wanted to do, not just the creation of a company but really launch it with satisfied customers. There are some who want to resell to earn money, though most put themselves in this trajectory without officially announcing.

Most of the time, growth is a personal challenge because the manager is in a field they are passionate about and because they have an idea, or a project with a close friend. Others are motivated by the potential social impact from their projects. Lots of people will say, when you talk to them five to ten years after they start their company, that the jobs they have created through their business is something that they are very proud of; this introduces the question of how to interpret what it means to have employees.



Cooperation for growth

Collaboration with schools: IMTbs has a chance to have Olivier Pinet as director of training at IMTBS, because he told him that entrepreneurship is too important that the school do not care about. Being business centric is a great asset. Being connected to three schools allows for independence since the Starter enjoys collaborating with each school and maintains good relations with the three heads. One negative point is that things can be a little hectic at times because the three schools have different strategies and the developmental axes are not always the same. The incubator has its place in the education system, we leave courses to the teachers so that the incubator's focus is on coaching and accommodation of the students' projects. Therefore, the positioning vis-à-vis schooling is only on internships, where a student can turn an internship into a business creation using the schools' intelligence without being in competition. As we set objectives with schools in accordance with the creative statistics requested by the ministry, innovation part becomes part of their missions.

Collaboration with doctoral schools: While there's real wealth, we've tried a lot of times to no avail. Often, as at Telecom SudParis, we've had a lot of doctors working on projects for 20 years but still every time the collaboration is quite small. At one point they had voluntarily integrated doctoral students into the IMT

Starter challenge, even though it is not their concern. PhD students are almost exclusively foreigners, especially in Evry, and often do not have a significant income, meaning their immediate concern is finding a job and becoming naturalized French citizens. It doesn't make it any easier to have to start a business at the end of their thesis and then have two years unpaid work. Quite a few business creations come from research.

IMT Starter has collaborated with IMT Atlantic and Telecom SudParis a little, but their profiles are a little different. And then there is the question of the size of the schools. Schools tend to be small, while research happens at Telecom SudParis, so the number of people likely to be involved is not huge.

There have been discussions of rebooting a project conducted three years ago with the three schools and, in some universities, there are initiatives like workshops to raise awareness of entrepreneurship. Though the initiatives worked well, they were taken to the labs but had difficulties catching on. So, the Starter focuses where it works: startup and students.

Growth is life, at first you either have to believe or you won't exist. Then, the personal satisfaction of having managed to do something.



Philippe Sauveplance

Head of accelerator for Engineering SMEs

BPI France



France

31.05.2021

Zoom interview

45 minutes

Adeline Leroy

In 2015, Nicola Dufour of the BPI wanted to be able to develop a new offer based on the observation that as part of their growth, companies need financing and also need to be strong on other points, so he created the accelerators. The principles were to support companies on three pillars. The first pillar is consulting, to help companies benefit from advisory missions (it is not in the French culture, especially SMEs, to be advised). It is necessary to speak the language of the consultant and have time to be able to follow the consulting missions as well as possible. In parallel the objective is also to allow the manager to enter a co-training program built with a large school and the idea of training seminars is to raise the competence of the manager on all growth levels that are at his disposal (BM, brand, international etc.). Therefore, he is able to give sufficient knowledge to the managers so that, once back in his company, he can act accordingly. The last pillar is the networking part, connecting. The idea is to be able to allow the manager to get out of his loneliness, insert him into an ecosystem, make him meet customers, partners and this is done through the promotion in which the company will work for one or two years, but also the BPI ecosystem. To recap, the three pillars are: advice, training, and networking. The first BPI accelerator was born in 2015, it is multi-sectoral and rather oriented ETI. It was a VIP service offered to their biggest customers who had very strong growth. It worked very well and from then on, they started to develop other accelerators. All were multi-sectoral. Gradually, they realized that there was a large need in France but that in addition, companies could have various entry keys to want to engage in an accelerator. Some were territorial, others were less about territory than size. For small businesses, mid-caps, medium-sized businesses, and others, it

was more sectoral. Entrepreneurs wanted to be with companies that had the same sectoral issues. So now, there are 2000 companies that have gone into acceleration programs and at BPI, Philippe takes care of the sector accelerators. The accelerator was born from an exchange with Syntec Engineering (a professional association), which, knowing the experience of accelerators, found it interesting to be able to offer a program entirely dedicated to engineering SMEs. They worked with Syntec to work on a roadmap to better understand the issues of the sector, targeting those whom the program would be addressed and then they worked with Atlas, an OPCO (opérateur de compétence), on the part of co-financing. In 2019, the program was launched, and it's been two years. It is a program that has brought together 21 French engineering companies. These companies have entered this journey with regular meetings in the form of seminars, events to create a link between them, individual support with consulting missions to which they can have access. The mission consists of three blocks: 1) 360° diagnosis 2) Possibility of setting up complementary advice on subjects that they consider essential in the context of their growth (strategy, governance, international, etc ...), with the idea to accompany, not to guide 3) Regular meetings on a variety of subjects (design thinking, international, etc...), with the idea of being able to punctuate the journey with moments of exchange and sharing. Philippe leads co-development sessions for promotion.

There are 21 companies and 90% participate in Syntec Engineering, but it was the first time they had addressed this type of subject, when they had known each other for a long time.

Understanding of Growth

All these companies are at the heart of strong growth because BPI selects companies with good financial health. However, the leaders run into roadblocks afterwards because not everything follows automatically (the organization, the governance). The essence of the accelerator is to allow these companies to return to the fundamentals of growth. Is my structure able to go abroad etc....? The idea is to help them break through the roadblocks they are talking about. Seminars on governance can help company leaders, however very few have executives or executive committees. At the last seminar for example, a Polytechnique teacher on the entrepreneurial side said, according to the evolution of the company, the profile of the manager must be totally different between the managers and the Farmers (entrepreneurs who are successfully leading long lasting businesses). Developing is not the same as stabilizing. Sharing and questioning make it possible to implement change.

Another problem is de facto recruitment. They lose business because they are struggling to hire competent people, because the profession is no longer sufficiently known by young people. No engineering company is a dream. Unlike startups or investment banks, they have not been able to make themselves known as a major player, and therefore are unable to recruit. And then it starts to unfold that there are problems with brain drain with relocation of engineering departments that will segment their needs: the front office that catches the eye will be the French, the middle, in Central Europe, and the back subcontracted in India with very strong salary gains and companies weren't used to that. This is a new concern for them.

For collaboration, what is complicated is when it is not based on factual elements such as research and innovation, for example.

Cooperation for Growth

Cooperation partners

BPI remains a bank and suddenly, they are more there for the awakening of consciousness. With engineering, it's complicated and more complex because there's a real difficulty. In other accelerators, the topics covered are much more disruptive, quite avant-garde on new business models for example, which are often difficult for managers to understand but which sow a seed and make the managers think. For example, Rodolphe Roy is really in the framework of an open mind and has nourished his foresight and has generated a de facto evolution of his company. Where it has become more complicated, in some seminars, when it is too avant-garde and too far from the sector, they freeze and refuse. Entrepreneurs usually don't take the time to benchmark and have a hard time extrapolating markets.

There is a Cartesian side too: I understand the principle, the logic, on the other hand the small step that allows one to change dimensions, they do not do it. During the first seminars, he tried to push them to think differently, and they remained clinging to their rock.

Cooperation with universities

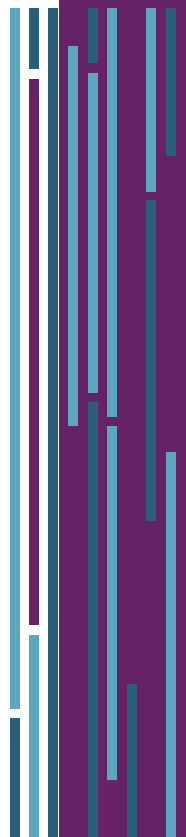
The link with the universities on the training part is made during the co-construction of the seminar programs. They identify a school that wishes to work with them in a particular sector of activity, for example Polytechnique with engineering. Then BPI gives axes: what seems essential to them, the precise levers to work according to them and the public (HR, organizational performance, commercial and marketing dev, data management and valorization, internal governance, springboard with the challenges of the ETI of tomorrow) to achieve the goal of being upscaled during the 2 years and become an ETI. BPI gives the markers and on this basis, the school proposes a pedagogical content. 6/7 schools responded to this proposal and made an oral presentation of this proposal.

They chose a school on this basis and then adapt as best they can according to the group of students. They will work with the executive education of the school and then everything is open depending on the school, students ect. For example, on the employers' brand, Polytechnique students intervened, but no students wanted to participate because they didn't want to join an engineering company.

According to the themes of the seminars, the bases are treated and then there is the possibility of opening to the school. They have involved startups on topics that are of interest to engineering companies. For a time, Philippe had hoped to have a challenge with entrepreneurs on internship proposals, but there has been no link with school research. It may also be the fact that they are not working with the right authorities in the schools. Schools are hyper segmented, and the people who are in research are quite far from the executive. But that does not mean that he despairs because when he launches next June, he will launch the second cohort on energy transition with Audencia, who will work on the case studies based on the cases of entrepreneurs.



For collaboration, what is complicated is when it is not based on factual elements, research and innovation, for example. The very complicated innovation on mythology and very fixed ideas.



Amélie Tiscornia

Head of operations
Scoping

SCOPING
concepteur-novateur de la ville de demain.

Scoping Company has been in co-op status since its creation in 1982. The story of its creation: the founder was in a company of 150 people with solid operations, however the boss died suddenly, putting ownership in the hands of their children who did not want to take care of it. This led to the company closing, which was disappointing since it was working well, leading the employees to create Scop. It was a very strong operation from the start, with a company sharing building engineering with state bodies. It was founded in Paris, but then moved away to Massy. Now, the company has 85 people, with the central offices of activity in Ile-de-France with other locations in Dijon, Lyon, Aix-en-Provence, Toulouse, Nantes and a new location in Tours. Their strategy is to establish the same customer service but improve their proximity. By being closer, they can design and supervise buildings while providing follow-up operation maintenance, following AMO advice upstream of buildings.

Phase 1: they started with only one person and grew very quickly to four or six employees in the 1980s. With their two pillars of activity being public facilities and social housing, the company's culture is quite close to the public interest. They have stable and quiet growth. Jean Marc MORANDI arrived in 1986 on an internship and quickly became the manager's right-hand man and the company developed on French territory with these two big sectors. Morandi he is the current CEO.

Amélia arrived in 2000 on an internship and remained ever since, convinced by the governance model. Now, there are 12 or 13 employees, plus Morandi. It was a time where just by doing your job meant growth, even if the job itself was not mastered. So, it was consistently difficult to meet the deadlines and produce quality products. It is not

France

04.03.2021

Zoom interview

45 minutes

Adeline Leroy

structured but is rather chaotic with risk areas. Now, there are two ongoing projects: (1) it is forming a structure and (2) restructuring to undergo growth.

The first element, the ISO 9001 system for management, has been very stabilizing for the company and they continue to develop but the growth had not been controlled yet. Three to four years later, it has become very complicated, and they have done their first strategic plan with consultants through market research and an internal diagnostic. These allowed them to write their terms of reference and chose a strategic development plan.

As it relates to these trades and the company's organization, they begin to increase these skills internally to differentiate employees; Amélia became the director of production and Morandi became CEO. They numbered 15 employees at that time, with a little over a million euros of turnover. The first development plan worked well and further development plans were initiated within a cooperative, meaning that there are a lot of collaborations, everyone is aware of everything and of the orientation, and everyone participates in building the next strategy. Strategic development projects are approved at the general meetings, which gets everyone involved and means the plans are always legitimate.

In 2015, with the second strategic development plan, they attacked the BIM (specific software) first digitization sector before drawing in technical information in a notice. With the digital model, we have a virtual building with the technical and economic information attached.

Thus, it is much easier to collaborate because there are many people gathered in one space. The tool is integrated and allows for this collaboration thanks to a lot of investment, especially on training.

Thanks to this new technology, all of the projects were completed in less than two years while the profession dragged a little. The second axis was development on the private residential market. This tool has made it possible to open the doors for promotion in a rather unexpected way for promoters. In just a few years, the learning curve for this new market was challenged from failure, and then quickly turned to arrive at 20% of turnover in this new segment with growth in the other segments.

Design change.

For the third development plan of 2019, the stakes were territorial linking. Each agency requires three years to reach maturity, but we see that the model offers "baby coping" while keeping the notion of groups and culture integrated at the national level. This maintained homogeneous and shared expertise, but locally offered all the trades available in the shopping spirit. For example, thermal and energy in rapid development was not only hierarchical at the regional level, but also continues diversification at the tertiary and industry level.

At each meeting, the expectations for each segment are very different and the

learning curve is very difficult to manage. You have to be very attentive to what is not obvious in engineering.

Now, housing is well integrated and, as a part of Scop, they are part of the ESS and therefore a part of projects within the public authority and have adopted the values of circular economy and local employment giving them a strong added value.

National development, market diversity and new skills make their transition and relationship with the customer easier.

The key for in construction is focus and therefore they want a solid and sustainable development. They have known companies that rise very quickly and are strong in the short term, but do not have solid medium to long term plans. This is their anti-model. There is a concentration of actors and a broadening of professions. All the trades in companies at the margin explode, for example when they open the real estate development in areas where there are fewer boundaries to trade.

After about five or ten years, companies are able to think about expanding internationally, an area where France is very solid.

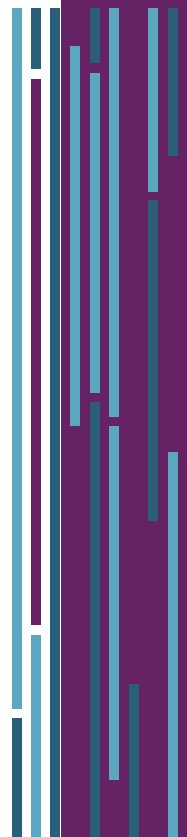
Morandi is the president of the regional union of the Scop Ile-de-France.

Understanding of Growth

Personally, what motivates her and the reason of being of the company is the team, their direction and having the ability to combine a collective development with individual development. The main pillar is ensuring sustainability to ensure the business's growth. If a business stagnates, it dies, while if you can adapt, you are in contact with the external market in order to maintain stability and also have fun.

A great collective and individual adventure are driven by people; in this case there are 80 families that participate in the ecosystem. When an employee arrives, they grow together with and evolve within the company. The company is an ecosystem that allows people to thrive. It also has the responsibility of ensuring its own development to offer something to the employees, which naturally suggests growth. For almost 15 years, Amélia has been responsible for this activity, supervising people ensures the

development of this activity on Scop's board of directors. Growth is a means at the service of people's evolution, sustainability, and the base of earning a living. It is an economic model with a lot of added and deserved value.



Challenges from Growth

Whenever a subject or an opportunity is new, it requires vigilance and a very important energy, and it must be integrated the risk of error from the outset. When it's new, it's long, it's laborious, you risk getting it wrong, and you have to think about it in the long term. The challenge is the international, except that with no experience, the internal profile is hugely important. Above all, it is felt that the level of risk is not usual because of regulation. The risk of corruption in some countries is a major issue and the accelerator did a strategic study on how they, Scoping, with their DNA are going to enter the international markets based on Scop's connections to determine how they will do so. The second risk area for growth is digital transformation. What needs to be understood is both the necessary transformation of processes, which is well

associated with a seated and formalized organization, a slight redefinition of roles and other subjects like data with the possibilities of AI and data exploitation. The membership of the team and information systems today are a little-known area that everyone thinks they know but are completely off the mark. In digitalization, everyone is an expert but in fact no one knows. For their sector of activity, one of the major risks is a large software publisher on which they become dependent decides to take their markets to replace the engineers. This risk of disrupting the building market can completely upset the trades, so we have to make their mutation while being as independent as possible of the software since a changing the culture and software would be a hassle since housed in the building are thousands of data, which are not easy to gather.

Key Success Factors

1. Membership
2. Engineering, it depends on men anyway, the one at the heart of the reactor is the expert, the project manager, the human dimension remains fundamental.
3. Humility is very important. The team must be pragmatic and realistic and take everything as it happens, even if it does not go as planned and needs adjustment.
4. We succeed when we have a course, the whole team is in it, and we remain humble and attentive. From there, the team can make an investment in their trades. Two thirds of the costs are wages, which do not contribute to the investment issues of the industry with long ROI. On the other hand, what can cause a business to sink is not being reasonable about the levels of sales and underestimating the risks. This project triggers delays, penalties and hours worked and can destabilize a company.
5. One of the keys is the diversification into areas of activity, project size.

Cooperation with Universities

A policy of welcoming young people to be proactive and attracted all profiles, from observation to college to BTS / DUT, Bac plus 3/4 in structural and environmental management. Currently, they have 14 apprentices and eight trainees. The closest way to collaborate is to integrate young people with well-supervised professionals through an integration process that shows them the job. These are professions in tension that relatively unfeminized.

They had done a thesis with reindeer in Sociology. A youngster who has a year of experience and has explored a variety of topics at the university is a reindeer. They had needs that could evolve with the team, and the University of Rennes wanted to measure the impacts. Unfortunately, he could not go all the way because we had to catch up with all the sociology which was a little too much to get to the CEFIRE minimum. It's a very nice experience that brought a lot, but the level needed for the third year was too much.

To transform Scoping for a learning society, they need to integrate elements of research and make transformations internally. For Amélia, this is inaccessible. She doesn't even know the names of the current trades or how to properly express her needs.



Cecile Perrault

CEO

Eden Tech



France

09.03.2021

Zoom interview

45 minutes

Adeline Leroy

Eden Tech was founded by Emmanuel Roy and Cecile, an idea that they had been thinking about it for a long time. All along they were researchers. She did a post doc at McGill and was researcher at NRC, where they identified a problem in micro fluidic prototyping material that was not compatible with industrialization. She became a teacher at Sheffield, but after Brexit, they were both looking to return to Europe. They had a product for sale from the start, having already identified and begun developing a micro-fluidic water treatment system. They were TRL1/2 (in the development of a product, product development produced from 1 to 9), but had the polymer for each other. For the moment, they had the calculations, and a patent was filed. They are now developing micro-fluidic water treatment, having been contacted for micro plastic development. Following this first phase and set up, they were already three years old. For a year, there were only three of them. It was challenging for them to establish their production path as they had few industrial contacts, having never worked in technology in France, so they had to redo their ecosystem. For a year they added a marketing layer and now have 12 employees to help make sales to their 100 to 200 customers. These customers are divided between researchers and academics and one to two thirds industrial customers. Academics require little volume; they are quite resourceful and rarely expect to have technical support, which takes a lot of time. Hence they only report back if they have a publication or big concern.

Understanding of Growth

Eden Tech sees growth solely organically, specifically through revenue and employee growth. They originally grew through academic networks, which has led to their larger micro-fluidic network, and slowly others who weren't identified as colleagues started buying the products.

Their research and growth has led to scientific credibility, therefore the academics and professional industrials who have been involved in the R&D are now involved in marketing and targeted contact for the business.

In terms of turnover, the company is expecting to see their revenue quintuple from their first year to the third year, from 80 thousand euros to an expected 400 thousand euros. They mainly distribute their products to China, the US and near South Korea.

Transformation

HR increases everything. The challenge, every time they grow, is to distribute tasks that are manageable for everyone. Because human psychology says that bigger leads to more opportunity, the company faces the challenge of thinking that because it has some seniority, that it will be more effective. Therefore, the bigger the company becomes, the larger it is to manage. When they started selling the 1/10 market flex on water treatment on the processing of plastics, the market became even bigger in terms of potential. To exploit this market, they held a lot of team meetings to encourage team-wide communication to make sure that team leaders know everyone on the team and encourage cross-team communication. Even the engineers who started marketing come to help with the research and development from time to time. This is a temporary measure, however as they don't like it and find it destabilizing to move from one team and one position to another, but the company is not yet big enough to assign permanently.

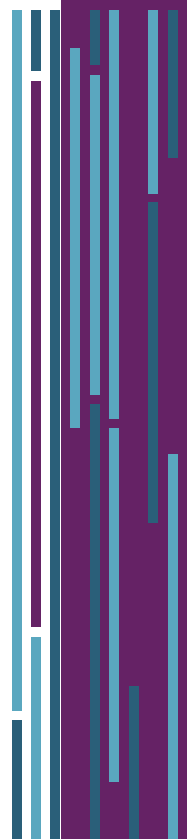
If there are capabilities in the business and is not needed where it is right now, we can re-enact it rather than recruit.

They also occasionally participate in actions under the program and have PhDs, European Europe pays entirely.

Motivations for Growth

She believes in the technology put in place and the impacts it can have on the industrial scheme: the miniaturization of the fluidity found in all chemical processes. They can miniaturize computers, but only in the factories. Instead of having large tubs of stainless steel, they can bring it on smaller scales for faster, less polluting processes, but she needs more funding to reach all the players to make this possible. Her personal motivation is her biomedical engineer background. She is always motivated to bring research and concrete things to market. She was frustrated by the academics and never saw the way to bring it to the market and wanted to see it through. She wants to show that no knowledge economy exists in Europe, and that we must turn knowledge into economic impact and pure knowledge. HR, recruitment, management. COVID has made it far more complicated, especially in

high technology where recruitment is international. Before, they were very well internationally, having chosen Paris to facilitate international recruitment. On the management side, it was discovered because as they are a small company, it is difficult to choose a senior HR representative, but its more interesting than putting the funds into R&D. As a result, there is not a lot of turnover, as so far out of 12 people, only two have left and have been replaced.



Key Success Factors

- Important **technological credibility** since she relies on 10/15 years of experience.
- Speaking the **same language** as academics.
- **Knowing the processes for European submissions**, because researchers and academics have European budgets.
- Very **early conversations** they have talked with startups in the innovation who have given great advice to structure the company.

Main Needs

Won in 2019 the top 10 Elab of the BPI. Strong support from the BPI. Their infrastructure needs space, but they're in Paris. They're in a corporate building in the city of Paris to limit costs but they have to increase and therefore the rent will increase they have to go elsewhere. In micro-manufacturing, they are international because no partners are in Europe. Investment backgrounds are not sought because they happen to hold on to themselves, but as there is a lot of development on technology.

Business Leader Importance

Former academic partners from structuring and growth who cannot help at all, on the other hand, could be included in European projects. She has a lot of former students who set up businesses and now they make up a large part of her professional network. In the personal network, she always had a lot of entrepreneurs, as her father had always discussed her business within his own family.

Being small helps to catch opportunities, as they are easily flexible, for example when Eden Tech had to redirect the research and development teams from polluting microplastics to the plastic microphone.

Management is not a subject. She knows she would have to be trained in management and had the opportunity via the BPI, whose co-founder goes to HEC, but doesn't have the time.

It made the one of EM Lyon thanks to its price elab

Cooperation for Growth

Cooperation partners

Universities, the BPI and H2020.

Polytechnique, Normal Supélec, Besançon's Engineering School that helps with micro-manufacturing, McGill in Canada.

Cooperation with universities

Mc Gill: Working with a teacher on the optimization of their design

Polytech: med tech domain (a study if there are opportunities for artificial organs) PhD.

"Normal supelec", via Mc Gill's teacher.

Lyon: INRAE de Villeurbanne proposes to do the first test for water treatment.

Paris Est Eiffel: professor developed a water treatment technology and therefore obtained a maturation contract with a post doc.

Professors right to left who have developed water treatment technology and want to compare efficiency (Besançon, Lille).

Ex return: as long as the relationship is informal, it goes well, but as soon as you want to start formalizing a relationship, you immediately enter into collaboration contracts which take time and become complex issues.

Otherwise, the teachers are usually happy to chat.

Support for SME Growth

Having a university of origin abroad means that they have no support. Here, the SAT helped through a maturation contract for one of the technology. The INRAE contract collaboration to propose itself as the first test site, and then the European project deputies were also very interesting. They don't have access to an incubator, meaning we discover everything ourselves. It involves doing things in a somewhat complicated manner, particularly in our administrative efforts.

Opportunities for UBC

Everything that R&D and development and new growth relay is very good, including super technology, more flexibility and availability. On the other hand, SMEs are not looking for relays but to mature their activities, which universities do not know since they make the beginnings of development. Universities, however, do not bring things to the market, so to confront the market at a large scale is difficult. Often researchers say yes, they are capable of doing it but struggle to transition to the necessary scale.



Training Needs

Entrepreneurial mindset, no longer have any more needs, the mutation is done.

Access to the capital via VC would be nice, if outside working hours, 10 hours worked over 6 months, but the proposals to be stuck in the masters that already exist not the time.

BM: would be curious to meet BM innovation. Not yet met these communities there.

Good internationalization practices: Have already changed distributors in China twice. Fortunately accompanied by lawyers in dealing with the last firm, but it was very expensive. They followed the distribution very closely and realized that their product was being handled by other people without a distribution contract. Already in three years, they had to contact people to stop the leaks, and do a reverse engineering to investigate. They haven't looked into other countries such as India as international patents are very expensive. Fortunately, in China, their distributor is a great partner and has an exclusive contract that holds them to time constraints and goals, so it manages well since it is in its best interests to manage itself properly.

HR increases everything. The challenge, every time they grow, is to distribute tasks that are manageable for everyone. Because human psychology says that bigger leads to more opportunity, the company faces the challenge of thinking that because it has some seniority, that it will be more effective.