

**OPEN INNOVATION: OPENNESS ON AN EXTERNAL
ECOSYSTEM TO INNOVATE STRONGER AND FURTHER.
FOCUS ON THE RELATIONS BETWEEN STARTUPS AND
LARGE COMPANIES**

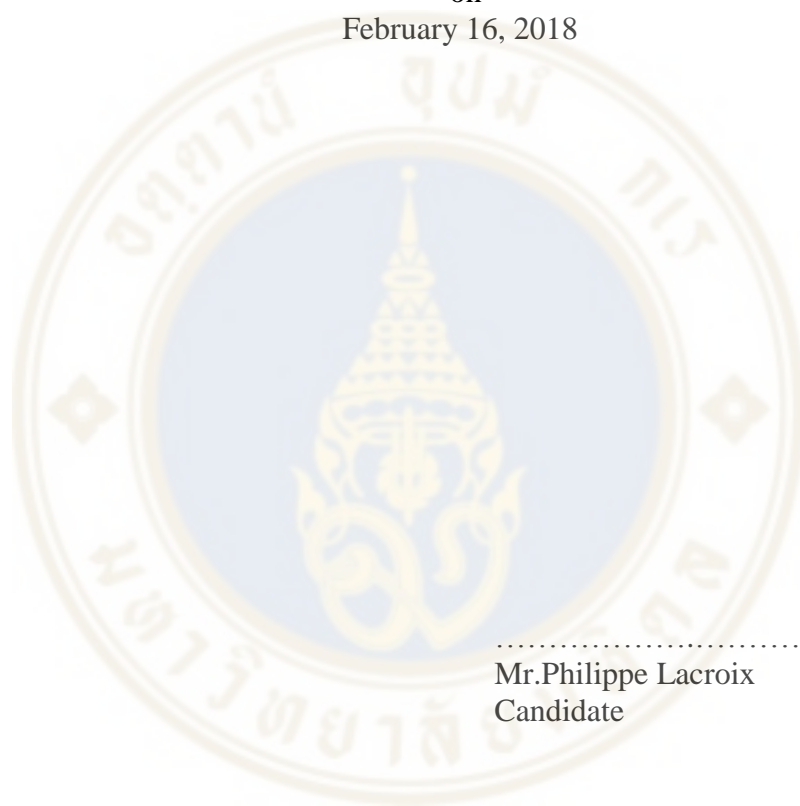


**A THEMATIC PAPER SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF MANAGEMENT
COLLEGE OF MANAGEMENT
MAHIDOL UNIVERSITY
2018**

COPYRIGHT OF MAHIDOL UNIVERSITY

Thematic paper
entitled
**OPEN INNOVATION: OPENNESS ON AN EXTERNAL
ECOSYSTEM TO INNOVATE STRONGER AND FURTHER.
FOCUS ON THE RELATIONS BETWEEN STARTUPS AND
LARGE COMPANIES**

was submitted to the College of Management, Mahidol University
for the degree of Master of Management
on
February 16, 2018



.....
Mr.Philippe Lacroix
Candidate

.....
Assoc. Prof. Nathasit Gerd Sri,
Ph.D.
Advisor

.....
Asst. Prof. Astrid Kainzbauer,
Ph.D.
Chairperson

.....
Duangporn Arbhasil,
Ph.D.
Dean
College of Management
Mahidol University

.....
Bookiart Iewwongcharoen,
Ph.D.
Committee member

ACKNOWLEDGEMENTS

First of all, I would like to express my appreciation and gratitude to the IAE Toulouse and the College of Management - Mahidol University (CMMU), for accepting me in the degree of Master of Management. Additionally, I would like to thank the teaching and administrative staff of the IAE and CMMU, for giving invaluable knowledge and sharing experiences.

Also, I would like to thank Spring Lab and its team for the incredible internship I am doing. Thanks to them, I am discovering a new sector, new trades and new working methods. I would like to thank particularly Laura Sautereau, my internship supervisor, who was always available and attentive during my internship. I thank her for her confidence and her support in all the projects we carried out together.

It is also important to thank the people who supported me when I was writing this thematic paper. In the first place, my parents, Jean-Jacques and Marie Claude Lacroix, who have always been present for me. Also, I thank all my friends who always encouraged me.

Finally, I would like to thank all the people who supported me throughout my experience in Thailand and who have made this year, an exceptional year.

Philippe Lacroix

OPEN INNOVATION: OPENNESS ON AN EXTERNAL ECOSYSTEM TO INNOVATE STRONGER AND FURTHER. FOCUS ON THE RELATIONS BETWEEN STARTUPS AND LARGE COMPANIES

PHILIPPE LACROIX 5949117

M.M. (GENERAL MANAGEMENT)

THEMATIC ADVISORY COMMITTEE: ASSOC. PROF. NATHASIT GERDSRI, Ph.D., ASST. PROF. ASTRID KAINZBAUER, Ph.D., BOONKIART IEWWONGCHAROEN, Ph.D.

ABSTRACT

This thematic paper aims to define and to explore a new and strategic way to innovate for a company: the Open-Innovation approach. This concept of innovation consists to an openness of a company on its external ecosystem to grow. By involving external actors in company processes, it allows a company to evolve and to adapt itself to a market, a situation or a target.

Then, I will focus on a specific case of open-innovation, and one of the most common in our world: relationship between a large company and a startup. These kinds of structure are, by definition, completely different in terms of organisation, process and objectives, but they succeed to work together on projects. They take advantage of specific strengths of each structure that become complementary.

I will first try to define the concept of innovation, the concept of startup and large company based on my literature review. It will help me to explain what I was doing when I was writing this paper (an internship in a consulting agency in innovation) and why it is useful to speak about open-innovation. In a third part, I will speak about the relation between startups and large companies (the reasons of this collaboration, the different modes of collaboration, the methods and the limits).

KEY WORDS: Innovation / Open-innovation / Startup / Large company


51 pages

CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
LIST OF FIGURES	vi
INTRODUCTION	1
CHAPTER I SUBJECT FRAMING: INNOVATION, OPEN- INNOVATION, STARTUPS AND LARGE COMPANIES	3
1.1 CONCEPT OF INNOVATION	3
1.2 STARTUPS AND LARGE COMPANIES	9
1.2.1 STARTUP CONCEPT	9
1.2.2 LARGE COMPANY CONCEPT	11
CHAPTER II MY INTERNSHIP WITHIN SPRING LAB	14
2.1 SPRING LAB COMPANY	14
2.2 MY WORK AT SPRING LAB	16
CHAPTER III OPEN-INNOVATION	20
3.1 DEFINITION	20
3.1.1 CLOSED INNOVATION	20
3.1.2 OPEN INNOVATION	22
3.2 THE MODES OF OPEN-INNOVATION	24
3.3 WHY OPEN INNOVATION?	26
3.4 THE IMPLEMENTATION OF OPEN INNOVATION	28
CHAPTER IV FOCUS ON THE RELATION BETWEEN STARTUPS AND LARGE COMPANY	32
4.1 THE REASONS FOR COLLABORATION	32
4.1.1 MOTIVATIONS / REASONS OF LARGE COMPANIES	33

CONTENTS (cont.)

	Page
4.1.2 MOTIVATIONS / REASONS FOR STARTUPS	35
4.2. COLLABORATION MODES BETWEEN STARTUPS AND CORPORATIONS	36
4.3. COLLABORATION METHODS – PROJECT MANAGEMENT	40
4.4. THE OBSTACLES OF THE COLLABORATION BETWEEN LARGE COMPANIES AND STARTUPS	42
CONCLUSION	47
REFERENCES	49
BIOGRAPHY	51



LIST OF FIGURES

Figure	Page
1.1 Different type of innovation	4
1.2 Continuous Improvement	5
1.3 Incremental Innovation	6
1.4 Breakthrough Innovation	7
1.5 The Disruptive Innovation Model	8
2.1 Spring Lab Situation	15
3.1 The Closed Innovation Paradigm	21
3.2 The ecosystem concept	23
3.3 The Open Innovation Paradigm	24
3.4 Open Innovation: The outside in mode	25
3.5 Open Innovation: The inside out mode	25
3.6 The Bluenove 7 principles - 14 levers - framework to implement an open-innovation strategy	28
4.1 Results of Accenture's Survey - Benefits of collaboration for Corporations	33
4.2 Results of Accenture's Survey - Benefits of collaboration for Entrepreneurs	33
4.3 Collaboration framework, indicating how common types of startup programs tend to deliver against key objectives to work with startups.	39
4.4 Results of Startup Europe Partnership's Survey - Barriers/obstacles to collaboration reported by startups	43

INTRODUCTION

After finishing my Master 2 "International Management in Asian Context", between Toulouse and Bangkok, my task was to find an internship in order to validate my degree.

After having worked in several Startups and SMEs, such as FittingBox (virtual try-on of glasses both online and in-store for the optics industry) or BrainJuice Studio (consulting and design of experience and customer journeys for shared places like shopping centers, hotels, etc.), I decided to continue in this way by pushing my research towards this kind of company.

In addition, after discovering the consulting activity at BrainJuice Studio, I was able to refine my research for this kind of activity. After having unsuccessfully applied to many companies in Bangkok, I decided to expand my research in France, especially in Toulouse, my hometown.

After one month of research, a company, which matches with all my criteria, contacted me and has recruited me for a 6-months internship. Spring Lab, a French startups in innovation, enables me to discover new professional tasks: project management, innovation consulting, acceleration and project facilitation. Also, I have discovered a sector that was only an unclear word for me: innovation.

Spring Lab is an innovation and digital transformation consulting agency. The company helps major international firms to stimulate their innovation, taking inspiration from the agility and methods of the entrepreneurial world and startups. Its missions are therefore to co-innovate with these major companies to find solutions to a given innovation problem. This approach corresponds more precisely to the concept of open-innovation. This notion of open-innovation consists in connecting companies to their environment / eco-system to gather ideas, inventions, processes, teams and also market validations.

Innovation is a necessity, a need for all businesses. It allows them to stand out by acquiring certain competitive advantages, but also to survive by remaining competitive in a global, connected and rapidly changing world. It is also a challenge because innovation is at the heart of the business and it is a process often complicated to implement, especially in large, highly structured and procedural companies, where every change becomes a real upheaval.

This position within this new company allowed me to enrich a reflection I already started a few years ago, during my various experiences in startups. Why do large companies, with substantial resources (financial and human) and a sharp knowledge of their core subjects, need to use small agencies/companies/startups to innovate, develop projects and grow while they could do it by themselves and protect their valuable knowledge, the source of their success.

This is why I have chosen this thematic paper subject: “Open innovation: Openness on an external ecosystem to innovate stronger and further. Focus on the relations between startups and large companies.”

To deal with this subject, it is essential to frame this subject, to define each term in order to understand the analysis that I would carry out later. In a second part, it is important to clarify the context in which I am to write this paper: Spring Lab company, its business, its missions and my current job into this agency. Then, I will answer the subject by relying on existing theories and on my own ground analysis, illustrated by some examples that I lived.

After that, I will outline the best practices for a good and long-term collaboration, which I have been able to notice during my study, my analysis and my experience, and I will express my point of view on open innovation and the future challenges of this concept.

CHAPTER I

SUBJECT FRAMING: INNOVATION, OPEN-INNOVATION, STARTUPS AND BIG COMPANIES

"Open innovation: Openness on an external ecosystem to innovate stronger and further. Focus on the relations between startups and large companies."

Before to present my current situation and my job within Spring Lab, and to go further in the analyze, it is important to explain the different concepts I will approach during all this paper. I will introduce the concepts of "Innovation" and what I call a startup and a large company. Moreover, I will frame my subject to understand what I will study in the next.

1.1 Concept of innovation

Innovation is an endless topic, which deserves a thematic paper on its own. However, I will give a short definition of the innovation concept.

Schumpeter (1883 - 1950) was one of the first economists to introduce the concept of innovation. His theory of "creative destruction" explains why an organization has a temporary monopoly power until a more innovative product or service, often provided by a new entrant, transforms the whole system/market, and overcomes the existing organization. So, this new entrant has a monopoly power, also temporary, and so forth.

Companies must use this creative destruction to acquire competitive advantages and to survive on a market.

To illustrate this theory of creative destruction, it is possible to take the example of the replacement of the video cassette by the DVD, or the example of Wikipedia, an online collaborative encyclopedia, which wipes the market of the paper encyclopedias out.

However, this theory is not enough to define the concept of innovation. Among all the existing definitions of innovation, I chose the definition from the Oslo Manual, a paper written by and for the OECD (2005), which is, in my opinion, the best and the most complete definition of the principle of innovation in our society.

«An innovation is the implementation of a new or significantly improved product (good or service), or process (of production), a new marketing method, or a new organizational method in business practices, workplace organization or external relations».

So, innovation is the introduction of a novelty into the economy through a company, an association or a similar structure. Innovation is very different from the term of invention, which does not imply this diffusion in the society, in the global economy.

As the OECD definition explains, there are several types of innovation:

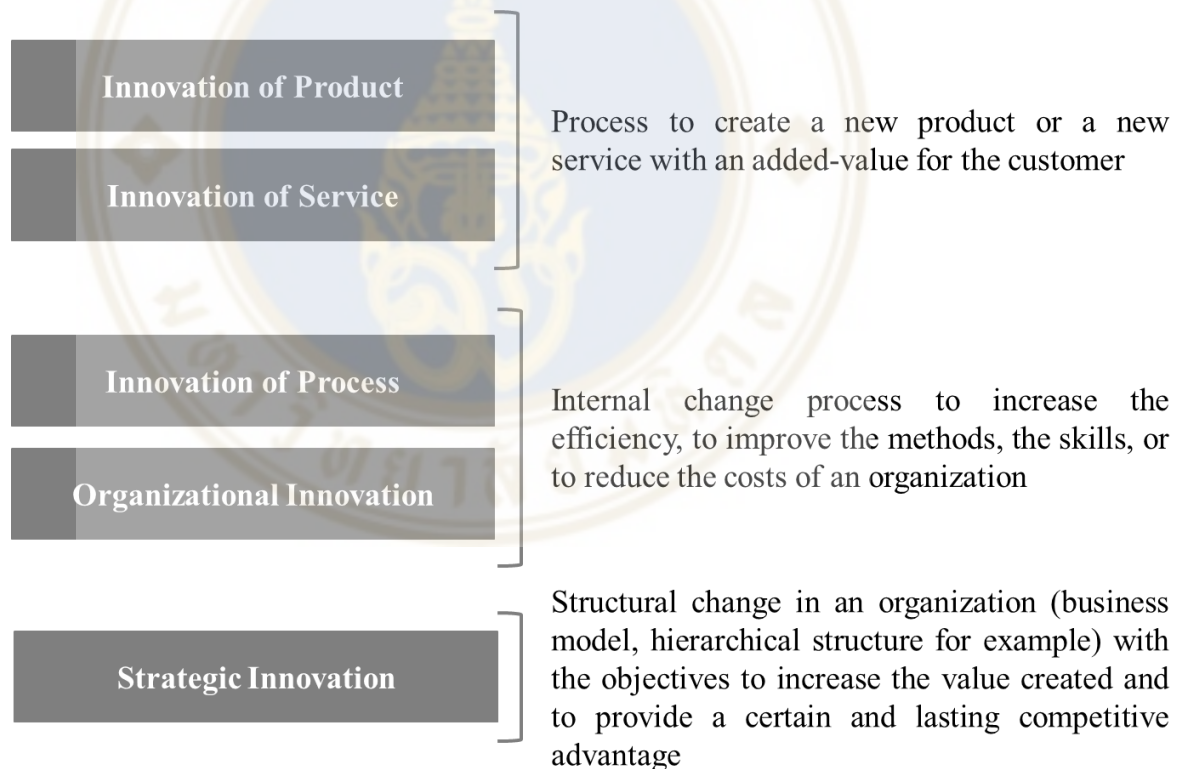


Figure 1.1 Different type of innovation

These different types of innovation make it possible to give a first ranking of the innovation, according to the purpose, the objectives of this innovation, the affected structure but also the target(s) of the innovation.

There are many different ways/typologies to explain and understand the innovation. For example, we can also classify the innovation, according to its importance, its impact on the organization, the society or the world and the level of evolution of the product, process, etc.

- **Continuous improvement:** It is complicated to assimilate continuous improvement to the pure innovation. Indeed, it is the constant improvement of a product, a process or other. This improvement happens gradually throughout the life of a company, or the life of a product, without the target being necessarily aware of it. The perfect example to illustrate the continuous improvement would be the evolution of the storage space of the memory sticks, since the years 2000.

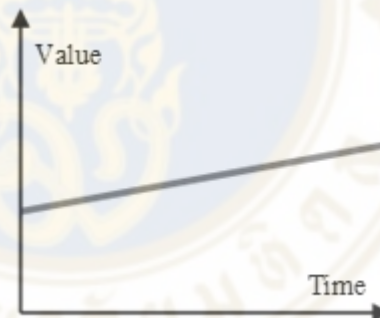


Figure 1.2 Continuous Improvement

- **Incremental Innovation:** This is the regular appearance of notable improvements, without challenging the basic principle. This innovation can be easily identified, communicated and enable the organization to grab the attention of the users/consumers and to have a small and temporary competitive advantage. This approach gets close to the notion of versioning. One of the most significant examples of incremental innovation is the iPhone: the basic principle remains the smartphone,

which is enriched over the years with different features and other overall improvements.

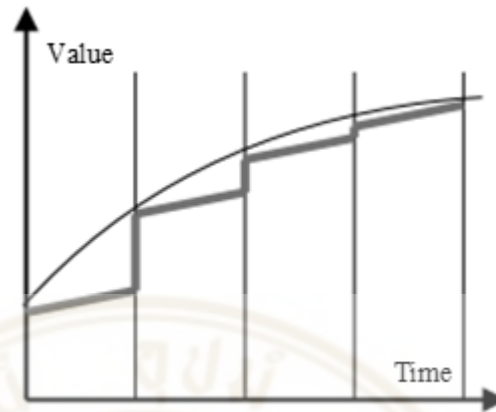


Figure 1.3 Incremental Innovation

- **Breakthrough / disruptive Innovation:** It is about rethinking a product in a radical way, thanks to technological or scientific innovation. It provides a significant, but temporary, competitive advantage for the innovative organization. The market/industry players must adapt themselves to survive, by taking possession of this novelty and applying it to their structure. The players, who have failed to adapt, or to rebound, are doomed to disappear (theory of “survival of the fittest” by Nelson and Winter). For example, the emergence of the digital has been a radical change in the photography market, almost completely replacing the conventional photography (silver halide photography). Kodak, a former world leader in reel industry, has not managed to adapt itself, to take the digital shift. From this moment, this company has had many difficulties.
- **Transformational Innovation:** This is the introduction of a new significant technology that transforms deeply the way we live and work. Transformational innovation is extremely rare. The creation of Internet is the perfect example to illustrate this concept.

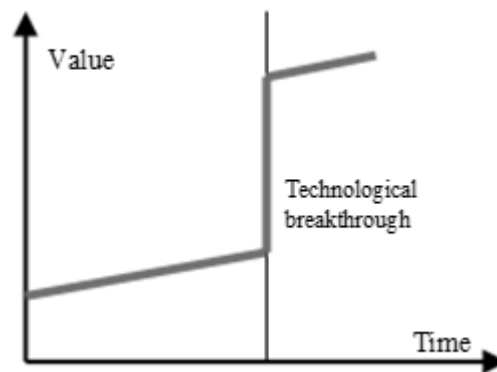


Figure 1.4 Breakthrough Innovation

Clayton Christensen, a Harvard Business School Professor and Disruptive Innovation Expert, in his books “The Innovator's Dilemma” (1997) and “The Innovator's Solution” (2003), introduces a different typology for defining innovation. He classifies the innovation in three types:

- The sustaining innovation: it allows the product to perpetuate itself, prolong its life on the market by providing an improvement that allows it to differentiate itself from its competitors. It is the most common type of innovation.
- The efficiency innovation: This type of innovation consists of lowering costs, setting up a more efficient cost structure that allows an organization to provide lower prices than those of its competitors and / or to obtain higher margins.
- The empowering innovation: It is an innovation that gives power to its users, by making them more autonomous and allowing them to emancipate themselves more and more. This innovation simplifies an existing solution to make it accessible to a greater number of people.

In his publications, Christensen also provides the theory of “The Disruptive Innovation Model”, an interesting explication of the innovation cycle, taking into account the user side.

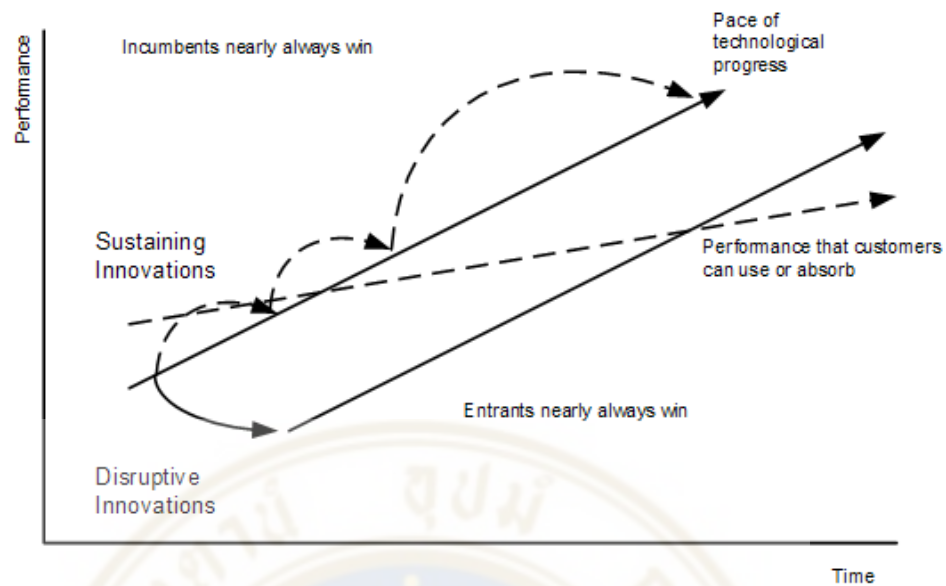


Figure 1.5 The Disruptive Innovation Model

This chart is a simplified version of “The Disruptive Innovation Model”. It is simplified because the performance that customers can utilize or support represents an average. On the real one, there is a distribution between the “Low end of the market”, the “Mainstream” and the “High end of the market”.

This chart explains that the pace of a technological progress increases more than the performance that a customer can use or support. On one side, there are the sustaining innovations which try to catch up continuously the technological pace, even if it is beyond the performance that a user can absorb. On another side, there are the disruptive innovations which are totally in advance on the technological pace and appeal to new or less-demanding customers (niche market). This situation persists until this disruptive innovation reaches the performance that the average of customers can absorb to become to reference product on the market. This cycle is repeated continuously.

These different explications, typologies and models give a short and clear introduction of the innovation concept. It is important for the next to understand what defines and characterizes an innovation. I will go further in my third part to define one innovation method: the Open-innovation.

1.2 Startups and Large Companies

To understand the analysis I will do in the next about the collaboration between startups and big companies, it is important to define these two terms.

1.2.1 Startup Concept

1.2.1.1 Startup Definition

To define the terms of startup, it is possible to take some insights, some definitions from some personalities of the investment/entrepreneurship world. For example, Steve Blank, a serial-entrepreneur and academician of the Silicon-Valley, gives the following definition in his book *“Four Steps to the Epiphany”*:

“A startup is a temporary organization designed to search for a repeatable and scalable business model”.

The definition of Dave McClure, a famous American investor and owner of 500startups, is also interesting:

“A startup is a company that is confused about:

- 1) What its product is,*
- 2) Who its customers are, and*
- 3) How to make money.*

As soon as it figures out all 3 things, it ceases to be a startup and then becomes a real business. Except most times, that doesn't happen.”

We also can take the definition of Paul Graham, the founder of a huge startup accelerator, Y Combinator, he gives during a conference for Harvard Computer Society about *How to Start a Startup*:

“Startups are designed to grow fast.”

To finish the quotations, I would like to share the vision of Eric Ries, he gives in his book *The Lean Startup*:

“A startup is a human institution designed to deliver a new product or service under conditions of extreme uncertainty”.

According to these quotations, there are two ways to define the term “startup”. For the first one, a startup is a temporary organization, looking for a

repeatable business model, with a huge uncertainty for the future. The second one emphasizes on the fact a startup is a fast growing company.

In general terms, the "startup" term defines a stage of the company cycle, the first stage, its creation, where she will grow and become a stable company. This temporary phase is an exploration, an experimentation phase, where the company is looking for a way to create value for a customer, a way to deliver this value and a way to make profits by doing it.

In the next, we will define a startup as a young company, with a limited workforce and providing specific solutions in terms of product or service.

1.2.1.2 Startup Specificities

It is not just the size and the influence that differentiates startups from big companies. The startup has its own specificities and values, which correspond to the "startup spirit". But what are the elements of this startup spirit?

- Strong adaptability, flexibility and reactivity:

Because of its size and organization (a hierarchy limited to 2 or 3 levels - horizontal or organic organization), the structure of a startup is much less procedural than a large company. Exchanges and relationships are facilitated and decision-making can be much faster. The reactivity of the company is therefore a fundamental strength.

In addition, the profile of startups and their need to find a viable business model means that the company must be constantly flexible with the expectations of the market or a customer and must be able to adapt its organization and its job. For example, it is not uncommon for a startup to be assigned to different missions. We can take the example of Sismo Design: one day, the company designs an innovating packaging for a dishwashing liquid, another day, it organizes a cultural exhibition for large companies and another one, it has a strategic consulting activity.

- Financing needs:

A startup is a very young company, which has no business model and which needs to invest a lot to grow and makes its business sustainable. That's why the startup is very dependent on its investors. The company never stops to look for fundraisings. Also, each customer she has is essential for the company. Often, at its beginning, when the company loses one customer, the company collapses.

- Importance of new technologies and new working methods:

Startups, which are often limited in terms of human resources, have to find new concepts, new methods to overcome these lacks and make the best use of their employees, to maximize their effectiveness. That is why they are often precursors of new working methods (such as agile project management) or new working applications/new technologies.

- Strong corporate culture:

Startups often have a very strong corporate culture. First, the creator(s) / the owner(s) are essential, they are the emblem, the image of the company. They carry the whole company/project and bring their vision to the workforce. All this culture leans on them. In addition, with limited financial resources, the recruitment is limited in terms of quantity. Each employee must be intelligently chosen, by their skills, on one hand, and their motivation, on another hand. The result is the dedication and the passion of each employee for the company. They want to see the startup succeed and grow, they want to be an active player of it. Finally, the working atmosphere is often more friendly, less strict, less regulated by fixed rules than a large company.

1.2.2 Large company Concept

1.2.2.1 Large company Definition

It is quite complicated to define what a large company is. There is no particular definition and there are many different criteria, all different depending on the organizations, the governments or the associations.

For example, in France, according to the law, a company is considered as a large company if the organization has at least 5,000 employees,

generates an annual turnover of 1.5 billion euros (or more), or has a balance sheet of at least 2 billion euros. This kind of company is often listed on a stock exchange.

According to the European Commission, a big company is a company with more than 250 employees, a turnover exceeding 50 million euros per year and a balance sheet total equal to 43 million euros or more.

For the rest, I will give a very subjective definition of a large company, in order to frame the subject. It is therefore a company that has significant turnover and financial resources (more than 100 million euros of turnover per year and a balance sheet exceeding 50 million euros), a substantial workforce (more than 1000 employees), a strong influence on their market and/or on the society, often the leader of its market and often on the stock market.

1.2.2.2 Large company specificities

We have just seen what the criteria are that make a company, a large company. However, all companies in the world are different, with their own specificities, strengths and weaknesses. It is therefore difficult to give a general description and common characteristics. This is why I will take a subjective point of view, and give a summary of my research to establish the similarities of the majority of large companies. Of course, many companies do not enter in the following description and have managed to differentiate themselves from the others by solving some of these problems.

A large company implies, by definition, a large workforce. This workforce is often organized into very distinct departments, often very independent of one another. This organization leads to a significant lack of communication between these departments, even within a same department. The result is a general lack of information from the departments, about projects and activities of the others, and the employees can have difficulties to have a global vision of the business and the different trades.

To solve these problems, companies have implemented many processes, which make interactions easier and more structured within a huge organization but, also, longer. So, all actions and initiatives are considerably slowed down, with a loss of flexibility and adaptability. As a result, the time to market for a product or a service is often very long.

This organization, this independence of each service and this lack of communication also imply a lack of openness on the different stakeholders of a project. Large companies are often product-centric and do not necessarily take the time to consult the other departments, the consumers, etc.

This organization also implies a vertical management, very hierarchical, divided into 7 levels, or even more.

This organization does not facilitate innovation either. Even if the majority of large companies has realized the importance of this element and has created a dedicated service, the different processes, that have made them successful, are obstacles to innovation.

Nevertheless, this type of company has significant financial (and human) resources, enabling them to invest in ambitious projects, and to call on several service providers (partners) with different core business to help them in the achievement of these projects and to try to overcome internal difficulties.

To conclude the fundamental difference between startups and large company is that a large company is organized to run and optimize a business model that works, while a startup is organized to find one.

CHAPTER II

MY INTERNSHIP WITHIN SPRING LAB

2.1 Spring Lab Company

SPRING LAB is a small startup of consulting in innovation and digital transformation.

In a rapidly changing global environment, the agency guides large companies (such as Airbus, Veolia, Total, Biocodex, Expanscience, etc.) to accelerate their projects, their transformation and their innovation by:

- Inventing their business of tomorrow
- Bringing agility into their organization
- Accelerating their innovative projects
- Making a success of their digital projects.

For this purpose, the company offers to its customers different packaged or customized offers such as collective intelligence workshops, creativity workshops, learning expeditions, Innovathons, prototyping workshops, trainings, etc.

In addition to accelerate the innovation of these large groups, Spring Lab facilitates their projects by bringing to them the methods and the practices applied by startups. It helps them to reinvent themselves, to innovate, to go beyond their scopes of practice, often very structured and based on old methods.

Its strengths are therefore a complementary experience in startups & leading groups' cultures, an expert knowledge of the digital ecosystem and an expert know-how in rolling out digital transformation and open-innovation.

To achieve these objectives, Spring Lab works with many partners, from the entrepreneurial ecosystem (owner of start-ups, digital agency, designers, etc.) and from large companies.

To summarize, Spring Lab is the link between startups, large company and the innovation world.

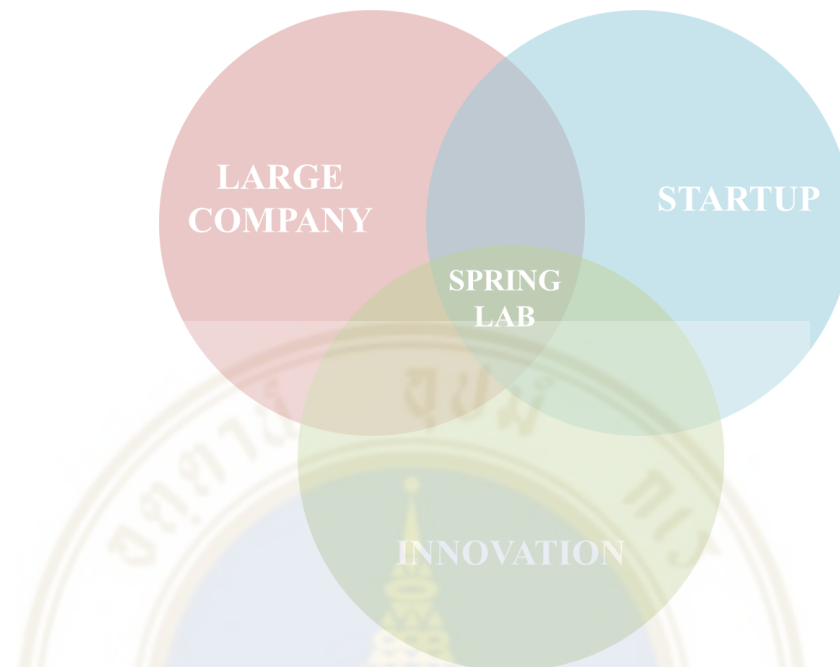


Figure 2.1 Spring Lab Situation

From a more descriptive point of view, Spring Lab is a young company founded 6 years ago, by Vanessa Vierling (former Marketing Director of International Sell Out at Dior Perfumes - LVMH Group). With a team of 14 employees, with varied profiles and experiences, distributed between Paris and Toulouse, the company has taken up the different challenges came up by its customers and grow exponentially.

In 2016, the company's turnover exceeded 1.2 million euros (1 million euros in 2015)

The activity of the company is divided into 4 different poles:

- **Open Innovation**

Introduce the open-innovation concept to employees and/or managers of large company thanks to Innovathon program (2 days to imagine disruptive ideas on the basis of alternative scenarios with internal and external participants) or by making them discovering inspiring places (accelerators, incubators, etc.) on the theme of the innovation and the collaboration (Learning Expeditions).

- **Territorial innovation**

Study the territory's problems and help companies to find innovative solutions to answer to these issues and implement these solutions on the territory (e.g. we help Veolia to answer to a public call for tenders linked to the water distribution and sanitation on the Toulouse Metropole).

- **Digital transformation and new services**

Help a company to integrate the digital at the heart of its internal processes, to reinvent itself through digital and to offer innovative services to its employees or customers (e.g. Digital collaborative platform development to improve internal communication of the pharmaceutical laboratory Biocodex, Conception of new customer service offer for Veolia, etc.).

- **Acceleration program**

Assist companies to build their own project accelerators, customized and adapted to their needs (e.g. creation of an accelerator for Group Up).

Accelerate company's projects by giving them some project management methods, through workshops or trainings, and by carrying out a careful monitoring (e.g. training about prototyping, CANVAS business model, design thinking and problem solving for Expanscience laboratory, etc.)

Boost the intrapreneurship of a company by teaching them how to co-construct innovative solutions, responding to a business problem, based on startup methods.

2.2 My work at Spring Lab

My position into Spring Lab is Project Manager Assistant. It consists to assist the mission directors in the project management, the interactions with the customers and to provide the deliverables requested by the clients (workshops, digital platforms, etc.).

During this internship, in addition to some occasional interventions on some missions to provide an assistance or an expertise (inspirational studies, animation materials, customer journey, etc.), I had the opportunity to work on 3 significant projects:

- **Veolia**

Veolia is a French company that supports towns and industries in the management, the optimization and the exploitation of their water, energy and materials resources (including waste). The company is present on all the continents.

Currently, Veolia is applying to a public call for tenders, for Toulouse Metropole, about the local water distribution and the water sanitation.

It is in this context that this large company calls on Spring Lab. We have several missions on this project. First, Veolia wanted that Spring Lab help them in the construction of a strategic positioning, the basis of their response to the call for tenders.

In a second step, we have supported Veolia to write a synthesis of the offer they will send to the local authority. This report is a summary of what Veolia will bring on the territory. It is one of the most important documents of the call for tenders (this is the one that will be presented and read by the elected representatives and the final decision-makers). So we organized many workshops to build this synthesis together (plan, content, graphic design, etc.). Spring Lab provides to them a neutral eye, an expert vision and a structure to organize their ideas to deliver a clear and concise document.

Finally, we help Veolia to create a new service offer for the customers and the consumers. The diagnosis, regarding the current services, is catastrophic for Veolia. The need to reinvent the customer experience is therefore very important. To achieve this objective, we decided to organize and to animate several creativity workshops with diverse stakeholders (Customer experts, Technical experts, Veolia project managers, consumers, etc.). This kind of workshop is useful to acquire different feedback, ideas and to co-construct, together, an adapted customer journey and an innovative service offer based on the needs and expectations of the consumers/customers.

- **Navblue**

Navblue is a services company, wholly owned by Airbus, dedicated to Flight Operations & Air Traffic Management Solutions.

Our relation with Navblue started when the company became aware of its problems with the customers: its products did not match the customer needs and expectations. They have many technical problems and no dialogue was engaged with customer to understand the pain points and to solve these problems. The company was not enough user-centric.

At first, Navblue managers wanted Spring Lab helps them to make the company more user-centric. For this mission, we only had the time to produce and provide an inspirational study of the best user-centricity practices (Lego, Philips, WeWork) before Navblue had aborted the mission due to a lack of time and availability on their sides. One month later, the company gets back in contact with Spring Lab to organize a part of the User Forum, a 2-day event with end-users, managers from customer companies. The final objective is to improve the products, the company processes, etc.

Throughout the 2-day event, participants will attend inspiring keynotes on the theme of user-centricity and co-innovation and they will participate to 3 different workshops:

- PRODUCTS REVIEW WORKSHOP: How to optimize an existing Navblue product?
How to remove a roadblock?
- ACCELERATION WORKSHOP: How to finalize the products under development and collect customer feedback for an “early approval”?
- CO-INNOVATION WORKSHOP: How to create tomorrow's products that meet customer needs?

On this project, the tasks of Spring Lab were:

- Coach the keynote speakers
- Create and design the animation protocols for the 3 workshops,
- Train the Navblue facilitators for the Product Review and Acceleration Workshops
- Facilitate the co-innovation workshop on the D-day
- Create the scenography of the place

My tasks on these missions are to co-create the animation protocols for the co-innovation workshop, to manage the scenography aspect and to take care about the logistic of the event before and during the event.

- **Spring Lab's internal missions - Creation of a new website**

The Spring Lab website, online when I arrived in the company, was an aging website, no longer respecting the latest web trends and not consistent with the messages and the vision that the company wants to convey. Spring Lab decided to invest to change

it. The objective is to create a new one in partnership with a web agency in Toulouse. So, I had the responsibility, with one colleague, to manage this project.

During this internship, I was in constant contact with innovation. I became a player of this world, a facilitator who takes actions at the heart of large companies to animate and facilitate their innovation. I acted as an intermediary between large corporation and startups. The approach I am practicing in Spring Lab, matches perfectly the open innovation process.



CHAPTER III

OPEN-INNOVATION

3.1 Definition

After defining innovation in a general way, I now can enter in the core of my subject: the open-innovation. First of all, it is important to define this concept and all the elements associated with it.

3.1.1 Closed Innovation

Chesbrough, in his book "Open Innovation: The New Imperative for Creating and Profiting from Technology" (2003), is the first person introducing and democratizing the term "Open-Innovation". This innovation professor started from an old paradigm, the "closed innovation". He gives the following definition for this concept:

"I call the old paradigm Closed Innovation. It is a view that says successful innovation requires control. Companies must generate their own ideas and then develop them, build them, market them, distribute them, service them, finance them and support them on their own. This paradigm counsels firms to be strongly self-reliant, because one cannot be sure of the quality, availability, and capability of others' ideas: "If you want something done right, you've got to do it yourself" [...] For most of the twentieth century, this paradigm worked, and worked well"

This definition induces several elements. Closed innovation is based on the principle that it is necessary to control the entire innovation process internally. Innovation is one of the most relevant ways to acquire a sustainable competitive advantage and therefore, according to this point of view, it would be too dangerous to share it, to open up to other stakeholders who could take advantage of the situation and the company. Collaborate, share and outsource are actions to avoid. The culture of protection and secrecy is privileged by this mode of innovation.

This definition expresses another fact: the different stakeholders do not trust each other. They cannot ensure that the product, the technology or the service of another company are good, reliable and safe. Using them would be a risk for the company and its brand image.

Chesbrough has illustrated this mode of innovation by a funnel-shaped diagram.

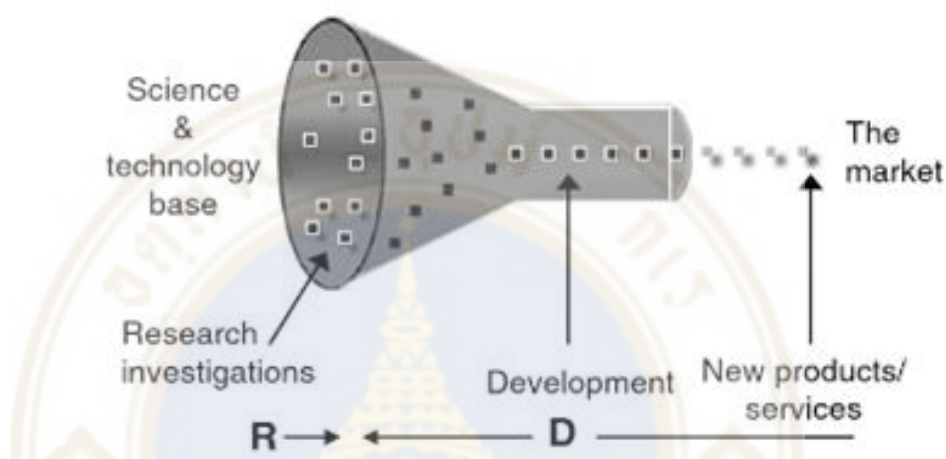


Figure 3.1 The Closed Innovation Paradigm

This diagram provides a good representation of the innovation cycle. At first, in the ideation step, the company has many ideas that it will subsequently filter. The company will develop just a part of all these ideas and will turn this small part into a product or a service on the market, or in a process set up in the company. On the diagram of closed innovation, the company develops all by itself, from the ideation, to the marketing of the product. There is no interaction with the outside environment.

As Chesbrough said in its definition, this paradigm operated very well in the 20th century, and enabled many companies to succeed. However, we are currently living in a world that is constantly changing, evolving and growing really fast, with an ever-increasing number of companies trying their luck on the market. As a result, new ideas are constantly emerging and there will always be someone, or a company, to develop these new ideas. It is essential to be aware of this fact. A company cannot compete with a whole society. It is not possible for a company to have the power to create everything. This is why it is important to work with external stakeholders, to gather knowledge and know-how to be more efficient and competitive.

Moreover, by carrying out the entire innovation process, the company must perform well throughout the entire cycle. She must be expert on all the trades (from research to marketing). This control has an important cost (human and financial) and the company has to focus on several trades to the detriment of the core activity. There is no specialization anymore and, consequently, there will always be someone to do better.

"No matter who you are, most of the smartest people work for someone else" - Bill Joy, co-owner of Sun Microsystems company

To solve these issues, Chesbrough develops the concept of Open Innovation.

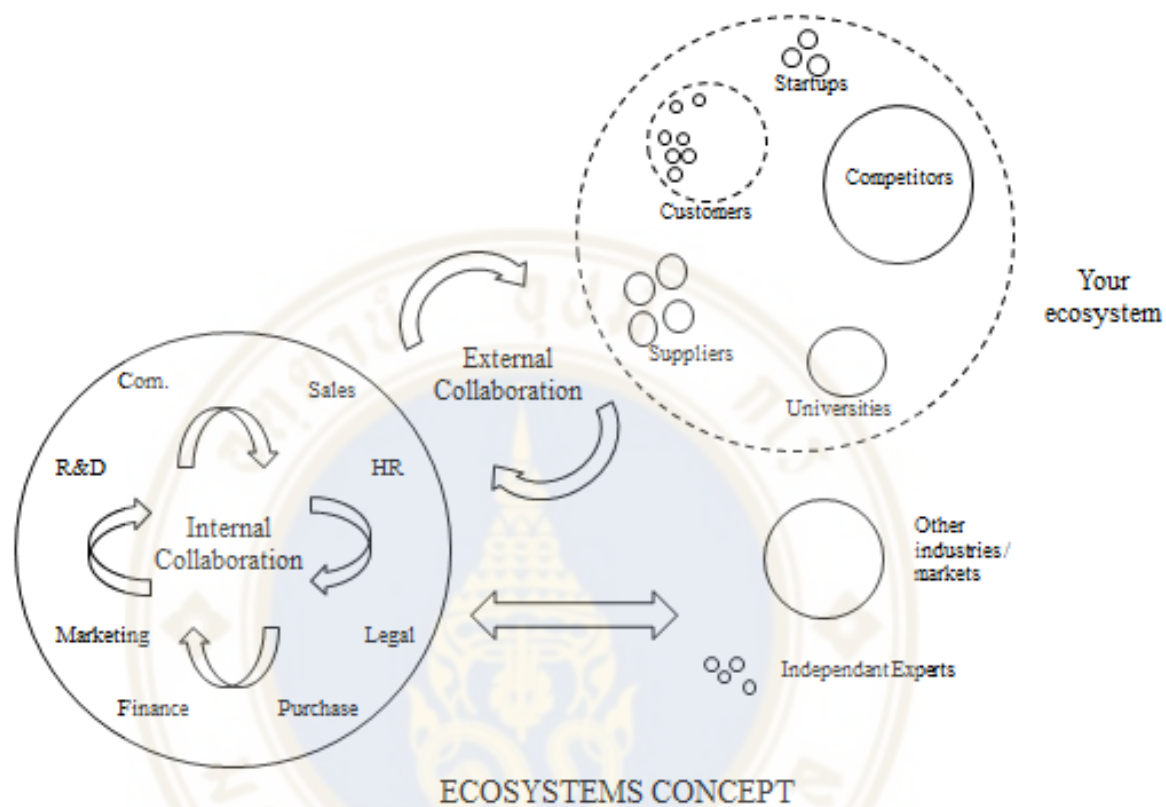
3.1.2 Open Innovation

It is under these conditions that Chesbrough introduces the concept of open innovation. He defines this notion in his book, *Open Innovation: Researching a New Paradigm* (2006), as follows:

"The Open Innovation paradigm can be understood as the antithesis of the traditional vertical integration model where internal research and development activities lead to internally developed products that are then distributed by the firm [...] Open Innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. Open Innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology"

According to Chesbrough, open-innovation is the extreme opposite of closed innovation. There is no question anymore about the maintain of a total control over innovation. On the contrary, Open Innovation encourages the participation of external stakeholders in the innovation process, in order to create collective intelligence and to get the best of them. It is important to take into account the ecosystem of the company and working with its stakeholders, to develop projects, always more successful, performant and meeting the market expectations. From the moment of a company does not control the entire innovation process, it is possible to use the term "Open Innovation".

The ecosystem of a company includes all the organisations or people who have a certain interaction with that same company. It is its customers, its suppliers, its competitors, the startups & SMEs working with it, etc.



Source : bluenove – Licence Creative Commons BY-NC-ND

Figure 3.2 The ecosystem concept

Open innovation reinforces the links with stakeholders of a defined and natural ecosystem of a company. New links are also created by extending this ecosystem to new horizons, in terms of markets, geography, etc.

Like the closed-innovation, Chesbrough illustrated open-innovation by a diagram.

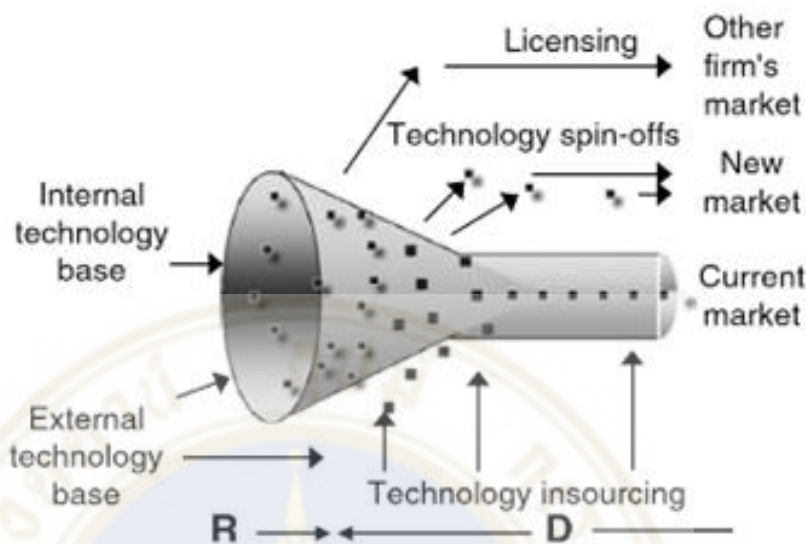


Figure 3.3 The Open Innovation Paradigm

This diagram shows perfectly the interaction with external structures. The company's borders become porous and allow the participation of other players in the company development. The objectives are not only the product improvement thanks external knowledges but also the creation of economic value by using external way to enter in some market.

3.2 The modes of open-innovation

Chesbrough has identified two modes for the open innovation process:

- **Outside in:** This method consists in obtaining ideas, concepts and/or technologies from outside the company, by an organization which is not directly a part of the company. This approach can be applied at any level of the company or stages of its development (from product design, to marketing).

To illustrate this, the case of Spring Lab is very clear. Companies use Spring Lab's methods and expertise to co-develop and co-design processes, services or products. The Spring Lab customers open their structure, and give

information (often sensitive) because Spring Lab can advise and help them to optimize their organization or their projects (Spring Lab provides to them a frame, a project management, workshops, etc.). It is a collaboration.

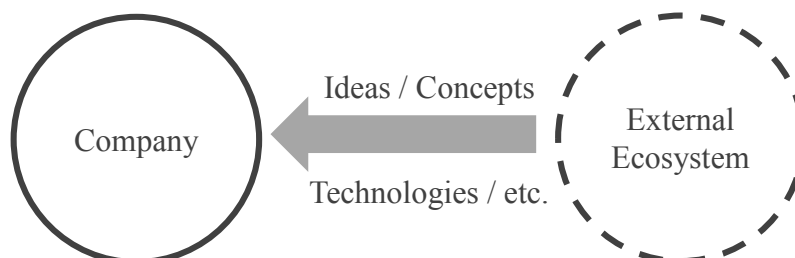


Figure 3.4 Open Innovation: The outside in mode

- Inside out:** This mode is the opposite of the mode outside in. It consists in offering to an ecosystem (or the general public) knowledge and technologies developed internally, by a company. One of the most relevant examples to illustrate this modality is the concept of open - source where a company makes available a set of documents/technologies/methods. In this way, any person or any company can use this information freely to develop or to improve something in relation with the set. Elon Musk, for example, didn't patent anything for its concept of Hyperloop (a futuristic and ultra-fast means of transport based on capsules propelled by magnetic fields) in order to promote collaborative development.

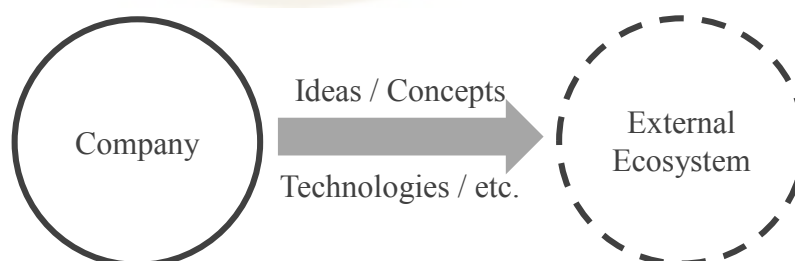


Figure 3.5 Open Innovation: The inside out mode

3.3 Why Open Innovation?

Why should a company set up an open innovation approach, which can be complex, time-consuming and costly to implement ?

By analyzing the concept of open innovation, I have been able to deduce 6 direct benefits for companies:

- Necessity to change the innovation methods in an evolving environment

In recent years, our environment, our world has totally changed. We are facing up to new ways of consuming, of working. We, consumers and workers, are more and more demanding and we always want more. A company that has decided to practice a closed innovation will have many difficulties to take into account these societal changes because this company is rooted in a strong culture, in some working habits and way of thinking that are difficult to renew, to change. Open innovation will help companies to change, to realize their environment is changing and to open up to the world.

- A sharing of know-how and workforce

We have seen that we are evolving in a very moving society where very different concepts and technologies are constantly emerging thanks to increasingly innovative companies. Each company has its own activity, expertise, culture, methods and workforce. All these elements define the company and its identity.

Moreover, it is clear that the number of competent people outside a company is always bigger than the number of employees of this same company.

Open innovation promotes an exchange, a collaboration between several entities with a common objective. Each stakeholder brings its own ideas, its own expertise, its own specificities and its own assets on a project, as well as its competent workforce (the strength of the number). The project will therefore be the result of the best of all the project stakeholders.

- Solutions more adapted to a market, to the customer needs:

By implementing open-innovation process, a company is no longer alone against a market. It creates solutions in partnership with several stakeholders of this market (customers, competitors, SMEs providing services, etc.). Consequently, the product, the service or the process resulting from this approach will be the result of an exchange of visions and different points of view. This plurality, this diversity of insights

enables the production of a solution that is suitable for the different stakeholders and that meets their needs and expectations.

One of the most relevant example is the user centricity aspect of a company. This approach puts the customer at the heart of the company's processes (product design, marketing, communication, etc.). By consulting its clients, by involving them in the development of a project, the company can identify their real needs and therefore design adapted solutions. I had the occasion to work on the LEGO case and to write a study about the different processes that LEGO set up to listen and to involve its customers. An example of a process implemented by LEGO is the LEGO Ideas website. It has become a real production line where LEGO Fans from around the world can create their own models, write projects descriptions and plans, and support (vote) for LEGO sets created by others. If a submission has 10 000 votes, the project is reviewed by designers and marketing team from LEGO, and turned into real LEGO products.

- Avoid the simple relation contracting authority / project manager:

In an open-innovation process, the different stakeholders are often considered to be on an equal footing. Power and responsibilities are distributed between the different stakeholders because each one has complementary skills, which are necessary for the progress of the joint project. Each stakeholder is legitimate and can give an opinion, a feedback, etc. It is a collaboration and not a relationship between a contracting authority who has all the power and a project manager who must obey to the different demands of its client. The challenge is to go beyond the classic commercial relationship and involving directly the different stakeholders.

- Risk sharing:

When we talk about collaboration, there is a very important notion of sharing. Profits are shared but, in return, the risks are also shared. The innovation process is an experimental cycle, based on a trial-failure cycle until a conclusive result is obtained. Some entities may be more disposed to innovate, to start ambitious projects if the risks are less important and distributed among several stakeholders.

- Transfer of solutions:

Open innovation brings a vision on a larger scale, allowing the meeting of different company or different sectors of activity. This is in this way that open innovation stimulate the transfer of solution. An innovative process, which is successful

in a company or in a sector of activity, can work very well in another company or in another sector.

3.4 The implementation of Open Innovation

Open innovation must come from a willingness and a commitment from the different stakeholders. They must accept to open up to the others, share information and work hand in hand. This is why it is important for companies to prepare ahead their organization, their staff, to change certain mentalities and working methods. It is about modifying in depth the organization and the structure of a company.

There are a lot framework trying to give a method or an implementation process for open innovation. To simplify this paper, I decided to analyze one framework provided by Bluenove, a major player in consulting and Open Innovation services and collective intelligence.

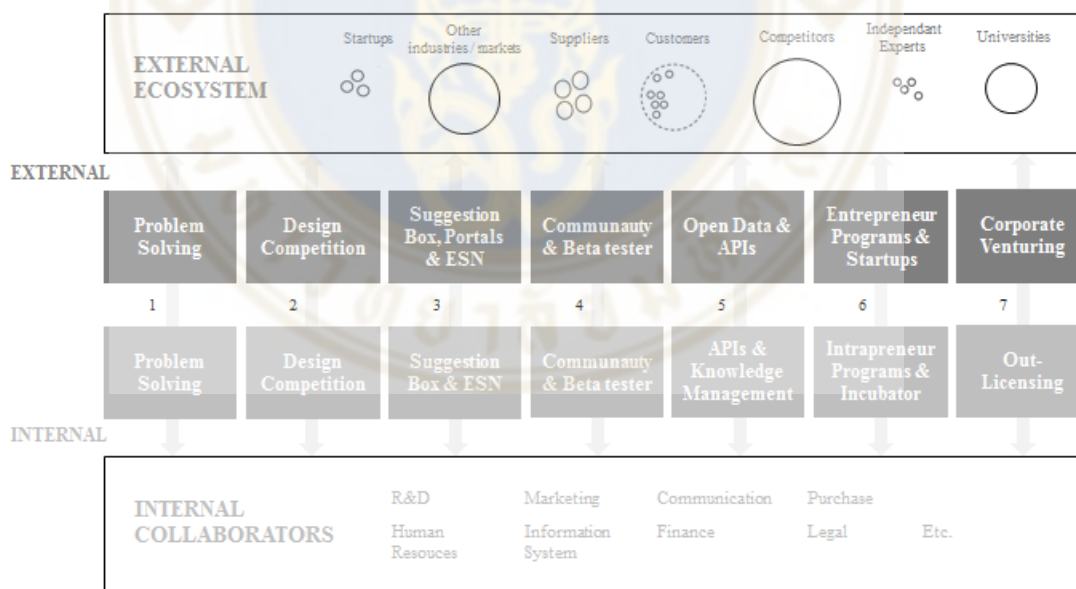


Figure 3.6 Open Innovation Framework: How to implement an open innovation process into a company

This framework expresses 7 principles, and 14 levers, to start to implement a collaborative and sustainable open innovation culture in a company. It aims for the creation of interactions between the internal and external ecosystem.

- 1st principle: Problem Solving

It is about finding solutions to a technical and/or technological problem, by calling on internal and external experts, working together. This approach can take the form of temporary workshops. Spring Lab, for example, organises workshops (during 1 or 2 days) to solve a problem given by a customer. The agency involves managers and employees of the company, as well as experts from other companies. At the end of the workshop, several solutions are imagined, a selection is made and an action plan is planned.

The start-up Whyers also tries to meet this principle by involving CEOs from the startup world into large companies. They provide an external view, expertise to effectively solve problems, using start-up methods.

- 2nd principle: Design Competition

There is a strong link between this principle and the first one. The only difference is that design competition is designed to create ideas that do not necessarily answer to a identified problem. They come ahead to optimize a process, a product or a department. In order to facilitate this competition design, similar methods to the previous principle are applied: workshops about broad themes concerning the company (for example, Spring Lab recently organised a workshop for Total about "How to reduce the price of a oil barrel by 30%").

- 3rd principle: Suggestion Box, Portals & CSR

It is about the implementation of tools to inspire new and disruptive ideas to optimize certain elements of a company. The suggestion box, for example, allows enables employees, customers or suppliers to suggest improvements. These tools are more and more often digitized via portals or Enterprise Social Network (ESN). For example, Dell, a worldwide informatical company, set up an ESN in 2007, Dell Idea Storm. This platform is accessible to the general public. This initiative has been a real success and the company acquired a large community. Dell enlivens this community thanks to events, challenges, surveys, etc. Thanks to it, Dell has acquired a lot of feedback and datas useful to optimize its products and please the users. For example,

Dell has taken into account the different demands by adapting some products to a popular user interface (3 products released under the Ubuntu interface).

- 4th principle: Community & Beta test

This principle follows on from the previous one. The objective is to create and to federate a loyal community in order to identify some beta testers. They will test in advance a new products or services and give their opinion and feelings. According to these feedback, the company will optimize the product/service. This practice is very common in the world of video games where some editors propose an early access of a game in order to collect feedback and to improve the game before its official release.

- 5th principle: Open Data, APIs and Knowledge Management

By sharing some internal datas with the the ecosystem (or the world), a company encourages people to create new solutions, potentially useful for the company (software, etc.). This openness can be risky because, on one hand, it is costly, and on another hand, a company opens up its knowledge to the whole world and therefore to its competitors. All the management of this knowledge, of these datas concerns the Knowledge Management. Open data is a very recent topic, in the heart of several discussions. However, these practices are gradually becoming common and popular.

- 6th principle: Entrepreneur & Intrapreneur Program, Startups and Incubator

This principle is, in my opinion, one of the most important. I will explain this principle in details in the next.

The first step is to promote entrepreneurship by using external startups. They can bring new values, new methods or simply new products or services to the company. These startups can positively alter the culture of the customer company by providing flexibility and agility. The challenge is to provide to them a favorable playground where they can fully develop themselves.

In a second step, it is essential to set up internal initiatives to promote intrapreneurship. To achieve these goals, it is necessary to create specific platforms, environments and structures (e.g. business incubators), to facilitate the development of selected projects. It will motivate employees and encourage them to develop new ideas that can disrupt certain processes of the company.

To illustrate this principle, Orange, a French telecommunication company, launched idClic, a suggestion box (cf. 3rd principle) in order to give employees the opportunity to submit projects and improvements. When an idea is selected, it goes through a long process (many validation steps). The idea's owner takes care of its idea until the last step where he will have the possibility to materialize and develop its idea thanks to an internal incubator (next to Paris) and resources (financial and human).

- 7th principle : Corporate Venturing & Out-Licensing :

By investing in some external company or by creating partnerships, a large company can create synergies and develop totally new products or services in order to improve its situation. I will go into details in the next.



CHAPTER IV

FOCUS ON THE RELATION BETWEEN STARTUPS AND LARGE COMPANY

We have seen that open-innovation concerns the entire ecosystem of a company. The company must adapt its speech and actions to each stakeholder. Each of them has its own specificities, with different needs, expectations and roles.

In the rest of this paper, I decided to focus on the relationship between a large company and a startup in an innovation project.

We also defined in my 1st part what is called a startup and a large group. These two entities are fundamentally different, in terms of their size but also their culture, influence and objectives.

This section will talk about the reasons which conduct startups and large companies to work together and what are the different modes of collaboration (from the simple service delivery to the full integration). Finally, I would describe the different steps and methods needed for a good relationship, as well as the limits of this relationship.

4.1 The reasons for collaboration

The question is to know why large groups call on startups in the innovation process. To develop or to integrate a specific and new technology, to optimize internal processes, to acquire new working methods or to help in the commercialization of a company's products/ services, the motivations of large companies and startups differ.

Accenture, the worldwide largest consulting company, made a survey about this kind of collaboration in 2015, by doing interviews with 1,020 executives from large companies and 1,002 entrepreneurs (generally, smaller startups).

This survey shows clearly startups and corporations have different reasons to work together but these motivations are completely compatible.

Large companies see a range of benefits to collaborating with entrepreneurs	
What are the top benefits to collaborating with startups/entrepreneurs on innovation? (Ranked within top three)	
Accessing specific skills and talent	53%
Entering new markets	50%
Improving return on in-house R&D investment	48%
Accelerating disruptive innovation in your company	42%
Designing new products and services	40%
Enhancing company's brand/image	39%
Enhancing the entrepreneurial culture of your company	17%

Source : Accenture Research

Figure 4.1 Results of Accenture's Survey - Benefits of collaboration for Corporations

Entrepreneurs expect a large range of benefits to collaborating with large companies on innovation	
What are the top benefits to collaborating with large companies on innovation? (Ranked within top three)	
Getting access to a large company's distribution network and customer base	49%
Being a supplier for large companies	45%
Securing investment from corporate venture funds	43%
Getting access to a large company's market knowledge	42%
Working together on joint innovation to develop new products and services	39%
Getting access to experts with specialized skills	34%
Benefiting from mentorship under accelerator/incubation programs	31%
Benefits from brand legitimization	17%

Source : Accenture Research

Figure 4.2 Results of Accenture's Survey - Benefits of collaboration for Entrepreneurs

4.1.1 Motivations / Reasons of Large Companies

Major companies call on startups to solve issues that cannot be solved internally, through a lack of knowledge/skills, or a lack of flexibility due to the complexity of the company structure. This is why it is possible to introduce these following reasons:

- Some startups have succeeded in developing very specific and very innovative advanced technologies. As the Accenture's survey shows,

the acquisition of these specific technologies is the major motivation for large companies to call on startup (53% of the interviewed large companies). For example, I had the opportunity to work with FittingBox, which produces virtual try-ons of eyewear in augmented reality through the end-user webcam. This technology is very complex and costly to develop. This is why many large companies in the world of optics (such as RayBan, LVMH, etc.) use FittingBox to integrate this technology. In addition to the concept of technological product, this type of relationship may apply to a service.

- Still in the field of technology, the relationship can go beyond the simple commercial relationship. Indeed, it is possible to see technological partnerships between startups and large groups. The startups will have the knowledge, the know-how, the skills to develop a technology when the big group can bring the structure and the financial resources.
- The startup can also help the company to develop the activity on new markets/on new targets. The startup acts as a buffer/an intermediary between the large company and the end customer. So, startups can bring its knowledge of a market or a target to help and support the large company to adapt its products or its services to become a success. 50% of larges companies which were interviewed give this reason as a major benefit for the collaboration.
- The startup is fundamentally different from the big group in its working methods, in its culture. They are, by definition, more flexible, more adaptable and faster. Large companies seek out these qualities and call on young companies to inspire to them certain methods. The example of Spring Lab illustrates perfectly this reason. Large companies such as Total or Veolia use the agency to develop workshops in order to bring and accelerate innovation within the group. Spring Lab gives them working methods, framework and project management based on the best methods of current startups.

- It is vital for a company to keep an eye on the existing and future technologies. By giving up this action, the company may be lagging behind the average of a market and register very large decreases in market share (the Kodak case and the transition from original photography to digital photography is the perfect example). Startups can help companies in this surveillance and enable them to facilitate certain partnerships with startups/companies that are behind certain innovations.
- Large companies can communicate on the startup collaboration and give themselves a more dynamic and "young" image. The goal is to become more attractive for customers as well as for potential employees (creating a strong employer brand).

4.1.2 Motivations / Reasons for Startups

According to a study (with 100 asked startups), conducted by Fabernovel, one of the most important French innovation agencies, 95% of startups believe that collaboration with a large company is favorable, or even indispensable. So, one of the main goals for startups is to create a relationship with a large company. This relationship can bring many benefits, according to the Accenture's survey, that are not insignificant for a young company that wants to grow:

- Working with a large group can have huge impacts on the image of a startup and get it out of anonymity. The startup will gain legitimacy and credibility. This relationship will be an important element of communication, reassuring the partners and potential customers (to notice that, it is possible to see the list of the large customer company displayed on the homepage of all the startup websites). This reason is also the most important and the most sought by startups: according to the study carried out by Fabernovel, the credibility that a large company can bring is the first reason for collaboration (score of 8/10), before the facility to access to a market (6.5 / 10) and the gain of visibility (6/10).
- It is undeniable that the large group often has large financial resources. A partnership with a large group therefore means a certain turnover as a

result, that can help the startup's development. We are talking about a key customer, which can have a huge impact on the future growth.

- A large firm, by definition, has a strong influence on its market and has a large structure. A startup can hope to take advantage of the aura of a large company to facilitate its entry into a market and gain new contacts and contracts (the benefit from an important distribution network). It can also take advantage to technologies already acquired or developed internally, or datas collected over the years.

There are a multitude of reasons why relationships of this kind are born. Each partnership, each relationship is unique and is motivated by elements specific to a situation. I have just identified the main reasons, which are the most common.

4.2 Collaboration modes between startups and corporation

According to Startup Europe Partnership, an organization established by the European Commission in January 2014 to transform European startups into sustainable company by linking them with global corporations, in its publication “Winning Together - A guide to successful corporate–startup collaborations”, there are 6 different modes of collaboration between startups and corporations: One-off event, Sharing resources, Business support, partnership, Investment and Acquisition.

- **One-off events**

This mode consists to create a single event, over one or more days, often on the initiative of large companies, in order to boost internal innovation, open up to a new eco-system and find innovative solutions to internal problems with an external perspective.

This relationship is therefore temporary. The hackathon format is the most common example to illustrate this kind of one-off event.

There are many benefits for corporations. These events allow employees to acculturate themselves to the startup eco-system and its specific methods, as well as enable corporations to capitalize on these events to communicate and acquire a more innovative image.

On the startups side, it is an entry point to get noticed by corporations and potentially begin a more sustainable collaboration.

- **Sharing Resources**

This mode consists to share some internal resources (for free or with a significant discount) with the external ecosystem to attract companies with synergies (with the company sharing the resources) and talents. These resources can be of different natures: it can be tools (as Google is doing with startups), technologies, services, or physical resources (as working spaces for example).

This mode can facilitate the initial contact between a large company and startups, to identify companies with which it is possible to work on the long run and to know quickly their real capacities and skills.

By sharing resources with startups, a large company disposes of an important communication levers to rejuvenate its brand image.

However, it is a costly and risky strategy for the company providing the resources: the return on investment is often limited on the short run and this strategy involves sharing part of its know-how with external players.

- **Business Support**

Business Support means a company, mainly large companies, set up some programs to help and to support the development of smaller company, as startups for example. These programs allow startups to grow in good conditions thanks coaching, mentoring and resources access, and to prepare them to go on the next step by searching some investment way. The most frequent business support programs are Incubators and Accelerators.

An incubator is a program which helps startups to start and to develop itself. This means, for example, incubators offer at these startups a place to work, breaking their isolation by bringing them together with other project leaders, and in some cases providing them additional skills, coaching (legal, marketing, etc.) or visibility. The young company will be immersed in a fertile ecosystem that has been created around it by the incubator, giving it more chances (and more time) to develop its innovation, bring out uses and in the end, develop new ways of doing business.

An accelerator is quite different. It is a program, limited in the time (generally some months) of intense support, more business oriented, often in exchange

for equity. It targets mainly startups with already an experience on a market that want to work on a specific aspect / project. For example, in an accelerator, startups work on the definition of their value propositions and business models, the structure of their business processes, the preparation for the phases of rapid growth, the strategy to acquire new talents to complete the team of founders, etc. Everything is done to give a good basis to develop ambitious and innovative projects.

A lot of these incubators and accelerators are created by corporations to identify promising startups which can set up innovative solutions, products or methods into the corporations to acquire a competitive advantage. This is why the return on investment could be significant for corporations.

- **Partnership**

A partnership can define when a startup and a corporation decide to work together on a project. This mode of relation can have many different forms.

It could be the simple supplier / customer relationship. It is a simply commercial relationship and does not go further. It is a matter of issuing a service, a product or a technologies in exchange for remuneration, usually financial. The customer, the contracting authority takes the decision, while the supplier executes according to the customer's needs. The balance of power is completely unbalanced.

Co-innovation (or co-development of a solution) is also a form of partnership. Co-innovation allows two companies to develop a common project, which makes sense for both. The two companies keep their independence. Power, as well as decision-making, is shared. Both companies are on an equal footing where the expertise of each is recognized, legitimate and complementary.

The large group gains in agility, can integrate more dynamic and innovative methods, to create, in the end, a project often more disruptive. This is a more substantial investment for both companies (in term of finance, time and workforce).

However, this approach requires the implementation of processes that are common, regular exchanges and a framework where both parties can fully blossom. So, it is important that both companies are clear on common goals and learn how to work together.

While this type of collaboration promotes disruptive innovation and often a win-win relationship, co-innovation generates several problems. First, the clash of

cultures can be difficult to apprehend and to manage. It requires an effort by both parties that can go through training, a common acculturation or an effort of adaptability of people working on the project. Once the project / the solution developed, there is a question of intellectual property. Who owns the developed solution / the patents? Who gets the benefit? How to share this solution? All these questions must be framed from the beginning of the relationship.

- **Investment and/or Acquisition (and integration)**

We talk about this type of collaboration when a large group decides to buy shares of a startup, or buy it fully and integrate it into its internal ecosystem.

Startup gains a guarantee of sustainable financing, necessary for its growth, its innovation, its visibility and its distribution. However, it loses a lot in terms of independence and freedom of action. It must adapt to the framework of the large company, to certain processes even if it keeps a certain form of autonomy. It must respond to a stricter hierarchy.

The large group wins the guarantee that the process or the technology developed by the startup is acquired and it doesn't go to the competition. Because of this, it can gain a significant competitive advantage. In addition, it can be sure that the integration of the solution produced by the startup will be tailor-made on its products or its organization. For the large company, the risk is financial and there is always the risk that the purchased startup cannot produce or integrate the solution.

The following framework, from the report of the Startup Europe Partnership organization, enables to have a clear vision on the objectives and the benefits of each forms of collaboration, explained previously, on corporation. The darkness of the field indicates stronger suitability to satisfy key objectives.

		Objectives			
		Rejuvenate corporate culture to create an entrepreneurial mindset among employees	Innovate big brands to attract customers, partners and talents	Solve business problems quicker and at lower risk	Expand into future markets by accessing new capabilities or channels
Common programs to engage with startups	One-Off Event				
	Sharing Resources				
	Business Support				
	Partnership				
	Investment / Acquisition				

Figure 4.3 Collaboration framework, indicating how common types of startup programs tend to deliver against key objectives to work with startups

4.3 Collaboration Methods – Project Management

Step 1: Partner selection

In order to achieve a result that meets the needs, the expectations and the objectives of each stakeholder, it is essential to identify the right partner(s).

The expectations, of each stakeholder, have to go in the same way, in order to deliver a common project, suitable for everybody.

They always depend on the project, the situation but it is possible to highlight general ones, which are directly related to the project management

Large companies need:

- A vision of the project and its long-term consequences,
- Specific objectives and the implementation Source : Startup Europe Partnership
- A transparent and effective corporate governance
- A reasonable price, which matches the large companies' expectations and their financial resources

Startups need:

- Preliminary reflection on the partnership itself, the project and how to succeed it
- Preparation to understand and to frame the project and the method to achieve it (in terms of method, human resources, etc.) and to divide the roles and responsibilities
- Realistic and achievable expectations from the customer, within the scope of the startup expertise
- An ambitious and comprehensive project
- A remuneration equal to the required work

I was able to understand these different expectations of both parties during my internship at Spring Lab. By responding to calls for tenders and issuing business proposals, I have quickly understood the different expectations of all the parties.

In order to find the right partner for large companies, the easiest way is to recall on a company, which already worked with this company. Both parties know the partner structures, their expectations, their working methods, the teams, etc... The whole phase of framing is simplified.

If this first case is not possible, it is possible to issue a call for tenders and select the best startup to fulfill the mission's objectives.

Step 2: Project Framing

This stage corresponds to the initial phase of the project. It is essential for a good, sustainable and unambiguous relationship between the stakeholders.

First, it is important to define what type of collaboration is targeted. Secondly, it is necessary to set the objectives of the project, the final expectations, a timetable, and to distribute the roles, tasks and responsibilities between the start-up and the large company, etc.

This step is essential and enables a positive and balanced relationship. At the moment, this is one of the most important pain points for startups. According to a study conducted by "Bluenove" and "Village by CA" (with 117 startups and 51 representatives of large companies), 56% of startups perceive a situation of imbalance in the relationship. This balance is important to motivate the startup to give the best of itself.

It is also important to define success criteria in order to measure the progress of the project throughout the project management phase and to measure the final success (or the failure).

Step 3: The project management phase

This is the main step: the conception and the implementation of the project / the solution. During this step, it is essential to work with the utmost transparency and to communicate permanently with the teams of the partner company. This communication is essential to be able to measure the progress of the project and therefore adapt its own work.

To facilitate this communication and set up a dialogue, the advice is to appoint a single interlocutor on each side (the project managers), and to set up recurrent, effective and direct communication systems (e.g. weekly meetings). It is not a surveillance (trust is the key to succeed) but it enables to adapt its work to the progress of the other company and to know the different change of direction of the project (the "agile project management methods").

Step 4: Delivery of the project

This is the last step, where the project is delivered and where the relationship between the two companies ends. This stage, too often overlooked, will enable the two companies to understand why the project was successful (or why it failed).

First, it is about measuring the success, which is not always simple in an innovation project. The stakeholders have to check if the project matches the initial briefing, the needs and expectations. To measure it, the easiest way is to set up a quantitative parameter system, thanks to Key Performance Indicator (KPI), and check if each of these KPIs have been validated or not. If this quantitative approach cannot work (with the absence of quantitative parameters), the best is to rely on feedback from stakeholders and from end users.

This feedback is essential to understand the positive or negative elements of the project management. It enables both companies to understand where they succeeded and where they need to improve. This approach aims to improve the processes and the behaviors of companies, to avoid to repeat the same mistakes on another project.

It is also essential to identify the next steps. These next steps can be an extended support or an identification of future business opportunities. This step is essential for the startup to project its business on the long run.

4.4 Obstacles of the collaboration between Large Companies and Startups

Startups and large companies are very different structures. These differences can deteriorate the relationship between the two organizations and can often complicate the project execution, which can quickly become a failure if these obstacles are set aside.

Startup Europe Partnership ordered a survey in 2016 to know and to understand the different barriers / obstacles to collaboration between a corporation and a startup.

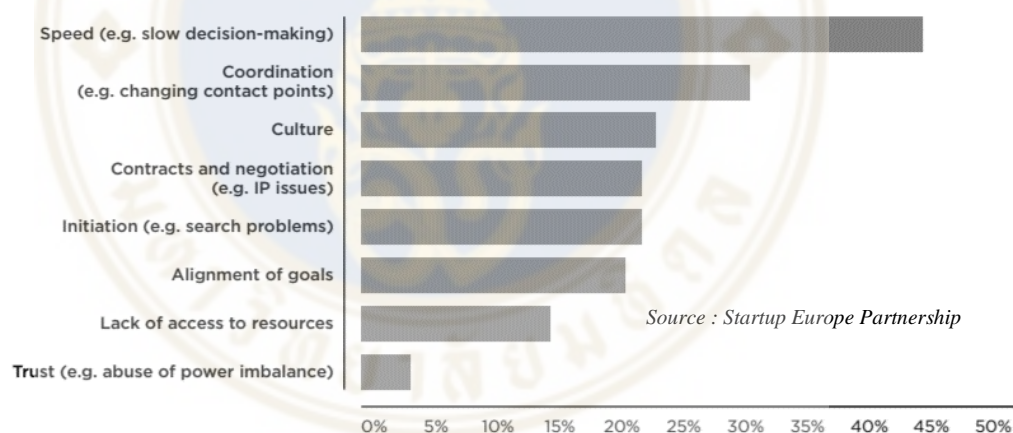


Figure 4.4 Results of Startup Europe Partnership's Survey - Barriers/obstacles to collaboration reported by startups

This survey shows the difference of speed between startups and corporations is the principal obstacle to the collaboration. It also shows that the difference of corporate cultures, the difference of goals and motivations, the processes of coordination and the legal issues are also major obstacles to the collaboration between these two kinds of organization. I could observe these obstacles during my experience and this is why I decide to explain them deeper.

- Two hierarchical systems - Two levels of speed

Startups and large companies operate at two different speeds, because of their respective size and management methods.

The large group has a large and highly hierarchical structure, which implies long and heavy decision-making and validation processes.

For startup, it is the opposite, and this is its main strength. The proximity between the manager and the worker, its simple structure and its reduced workforce enables agility and reactivity in the decision-making.

The question is to know how to match these two speeds and to facilitate the common processes.

- Very different corporate cultures

Corporate culture refers to all the elements that make the identity of a company. The culture of a startup and the culture of a large group are diametrically opposed (in the modes of operation, the tools used, the language, the processes ...). The startup is agile, more flexible and lives on a day-to-day basis, due to its lack of a defined business model. Large companies are much more structured, more hierarchical and more procedural. Its methods are often more "old school" because of its past. It has a vision on the long term, at 5 or 10 years, and more (which is impossible for a startup that lives on the moment and has many difficulties to project itself).

These differences in culture can lead to cultural shocks that are often misunderstood and interpreted by employees of these structures (difference in language used, in the project management, etc.). This can lead to misunderstandings and, consequently, has a direct effect on the project (a slowdown, or a shift of the project).

In addition, the startup may appear as an unreliable partner, due to its business model under construction. Concerning the large companies, they take a certain risk by adopting the method of startups (Test-Failure cycle). They can also develop a syndrome quite famous in the corporate world: the syndrome of "Not Invented Here". It refers to the pejorative attitude of a company that has to redevelop internally all or a part of software or a solution already developed somewhere else. This syndrome creates profound reluctance to collaborate with other companies.

So, there may be some fear from large companies to call on startups to work together.

Adjust its own culture to another is very difficult and can take some time. It should be understood and worked ahead, by everyone, in order to limit the fears of each and to facilitate the work in common.

- Totally different objectives and reasons for working together

Previously, we outlined the different reasons, expectations and ambitions of each party. They are fundamentally different. These divergences can create a huge imbalance between the two companies and transformed a Win-Win situation in a Win-Lose situation (often to the detriment of startups).

To limit this imbalance, it is important to communicate from the beginning on the expectations and objectives of the collaboration in order to limit the impacts that these differences can have and to avoid any disappointment.

- Processes that can slow down the collaboration

We have seen that large companies are often very procedural. This structure can have important implications for the collaboration.

For example, in some large companies, each external company has to go through a referencing process before becoming a partner. This process aims to evaluate the company, via its customer references, its financial health, etc. The problem is that startup, by definition, cannot meet these criteria and the relationship is therefore aborted. When the startup matches the requirements, the process can sometimes take several months (for example, this process of referencing takes about 6 months for the Veolia administration). In this way, the whole project is slowed down.

Another process limits this relationship. This is the payment process. Large companies often have very strict payment policies and cannot make any exception. The payment of a service may, for example, take place 2 or 3 months after the restitution / the end of the project. This delay is very disadvantageous for startups which have very limited financial resources.

On the contrary, the lack of process into startup functioning can scare large companies which do not understand how its approach works.

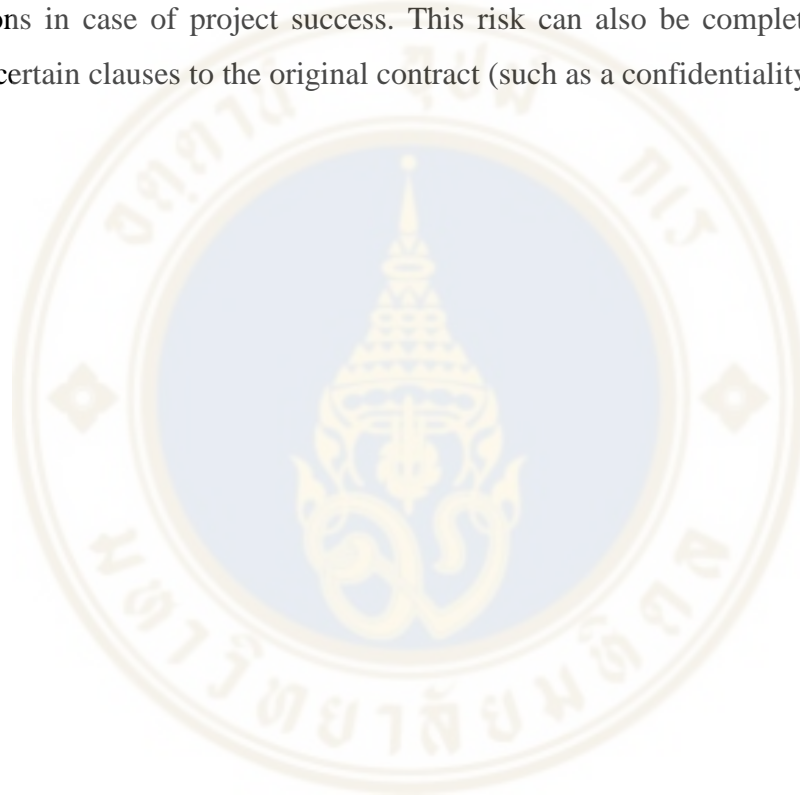
- Intellectual property: a legitimate issue

We have begun to highlight this problem in Section 4.2. Once a product, a technology, a patent created as a result of a collaboration, who owns it? Who exploits it and who gets the benefits?

In a Supplier / Customer relationship, a partnership or integration, there is no question. The result of the project belongs to the large companies, which funded the project.

However, in a co-innovation relationship, the question is relevant. Startups are afraid of being dispossessed of their ideas, of their work, that the large company, much more powerful, can steal and use their methods. This question is sensitive and represents a significant obstacle for the collaboration.

It is possible to limit this risk by being clear from the beginning, setting conditions in case of project success. This risk can also be completely canceled by adding certain clauses to the original contract (such as a confidentiality clause).



CONCLUSION

This paper presents an analysis, an assessment and an inventory of open-innovation. It results from an experience within a company, linked by nature to the innovation world, and an important research work. This paper can be challenged. There is no fixed reality, no unique and infallible method concerning innovation. Each case is different from another and requires adaptations. Open-innovation is just a way to achieve fast an objective and its implementation, to find more ambitious and disruptive solutions.

In recent years, this practice has enabled the emergence of innovations that shapes our day-to-day lives. Your car, your phone or your computer is surely the result of a collective effort between several companies. Nowadays, it has become impossible to imagine a company completely closed from its ecosystem, deciding to limit itself to its own structure / culture. Such a decision would be a huge handicap on a moving market, constantly evolving over the years. It becomes impossible to compete on equal terms with the competition, which will gradually gain market share until the end of the company that is not open.

It is therefore possible to say that open innovation is no longer an innovation in its current form. It has become the normality, the bedrock of innovation of the 21st century. Now that the practice is democratized, it is important to challenge, to expand its scope of action. It succeeded to meet the challenges of companies, markets. Now, it is essential to see bigger, to imagine new opportunities for open innovation. For example, it could help to solve societal problems if the approach is thought on a larger scale. Organizations (public or private) are already targeting this objective and are trying to put open-innovation methods into practice in order to answer to major problems in our today society (ecology, public health, etc.).

Relations with startups have also become a necessity for large companies, to evolve with their time, to change their model, to adapt their way of working with new methods. However, not only startups should develop and democratize these modes of

operation. It is also the role of large companies that have used these methods successfully.

Nowadays, it is possible to notice more and more large companies working together, on common projects, much more ambitious, with the startups methods. This is the co-innovation between corporates, and it is the future.



REFERENCES

- Accenture Research (2015). *Harnessing the Power of Entrepreneurs to Open Innovation*. Survey realised in cooperation with the G20 Young Entrepreneurs' Alliance
- Charlotte Leroy (2011). *Radical and Open Innovation: The Challenge for Established Firms*. The MIT Sloan School of Management.
- Christensen, Clayton M. (1997). *The innovator's dilemma: when new technologies cause great firms to fail*. USA: Harvard Business School Press.
- Christensen, Clayton M. (2003). *The Innovator's Solution: Creating and Sustaining Successful Growth*. USA: Harvard Business Review Press.
- Eric Ries (2011). *The Lean Startup: How Constant Innovation Creates Radically Successful Businesses*. Currency
- Eric Ries (2017). *The Startup Way: How Modern Companies Use Entrepreneurial Management to Transform Culture and Drive Long-Term Growth*. Currency
- Esteve Almirall and Ramon Casadesus-Masanell (2010). *Open versus closed innovation: A model of discovery and divergence*. Academy of Management Review
- Fabernovel (2014). *Quelles relations entre startups et grandes entreprises ?*. Neuilly Nouveaux Médias. Statistic study
- Henry Chesbrough (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. HBS Press.
- Henry Chesbrough (2006). *Open Innovation: Researching a New Paradigm*. Oxford.
- Henry Chesbrough (2010). *Open Services Innovation: Rethinking Your Business to Grow and Compete in a New Era*. Jossey-Bass.
- Henry Chesbrough (2014). *New Frontiers in Open Innovation*. Oxford.
- Joseph Schumpeter (1942). *Capitalism, Socialism and Democracy*. Harper & Brothers

- Konstantin Peter Oliver Von Bueren (2013). *Accelerators, Startup Performance, and Crises*. The MIT Sloan School of Management.
- Le Village by CA and Bluenove (2017). *Baromètre 2017 de la relation start-up / grand groupe*. Statistic Study available at:
https://www.entreprises.gouv.fr/files/files/directions_services/innovation-ouverte/barometre-relation-grans-groupes-startups-2017.pdf
- Martin Duval and Klaus Speidel (2014). *Open innovation: Développez une culture ouverte et collaborative pour mieux innover*. Dunod
- Orange Fab website (<https://www.orangefab.com/>)
- Organization for Economic Co-operation and Development (OCDE) (3rd Edition, 2005). *Oslo Manual, The Measurement of Scientific and Technological Activities, Proposed Guidelines for Collecting and Interpreting Technological Innovation Data*.
- Paul Graham (2005). *How to Start a Startup*. Conference for the Harvard Computer Society
- Richard R. Nelson and Sidney G. Winter (1982). *An Evolutionary Theory of Economic Change*. The belknap press of Harvard university press.
- Siddharth Bannerjee, Simona Bielli and Christopher Haley (2016). *Scaling together overcoming barriers in corporate-startup collaboration*. Nesta & Startup Europe Partnership & The Scale-up Institute
- Smith, D., Alshaikh, A., Bojan, R., Kak, A. and Manesh, M. M. G. (2014) *Overcoming Barriers to Collaboration in an Open Source Ecosystem*. Technology Innovation Management Review.
- Spring Lab Company website (<http://spring-lab.com/>)
- Steve Blank (2005). *The Four Steps to the Epiphany: Successful Strategies for Products That Win*. K & S Ranch
- Valerie Mocker, Simona Bielli and Christopher Haley (2015). *Winning Together - A guide to successful corporate-startup collaborations*. Nesta & Startup Europe Partnership & Founders Intelligence