The Lean Startup methodology used to promote innovation in existing companies

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Resumo

A metodologia de Lean Startup, primeiramente pensada para ser implementada por startups, tem vindo a ganhar impacto em empresas já estabelecidas. O principal objetivo desta dissertação é avaliar em que medida esta metodologia pode ser usada para promover inovação em empresas maduras.

Nesse sentido, foi preparado um inquérito e enviado a 50 organizações estabelecidas de 7 indústrias diferentes, das quais 23 empresas responderam (taxa de resposta: 46%). Foi preparada igualmente uma entrevista, que por sua vez foi respondida por 7 dos participantes, e uma análise de um caso real feito pelo Millennium BCP. Com base nas respostas, concluiu-se que 78% dos participantes acha que a inovação é muito importante. Em geral todas as empresas usam diferentes tipos de inovação, de uma forma ou de outra, e pensam em melhorar a forma como inovam. Um total de 14 participantes (61%) afirmaram nunca ter usado a metodologia de Lean Startup enquanto que outros 9 dos entrevistados relataram já tê-la aplicado (39%). Esta metodologia foi fortemente relacionada com a utilização da inovação radical e com o sucesso dos projetos. Os resultados também mostraram grande familiaridade com o ciclo fundamental da metodologia para aqueles que conheciam o método Lean Startup.

Os resultados demonstram que a metodologia Lean Startup pode trazer benefícios para as empresas que a usam, e especialmente, pode fornecer mais benefícios do que a metodologia tradicionalmente usada.

A discussão das hipóteses de trabalho feitas, limitações do inquérito, bem como as sugestões de outros eixos de análise e investigação são também fornecidas.

Abstract

The Lean Startup methodology, whose implementation was first thought for startups, has been progressively gaining impact in established companies. The aim of this thesis is to evaluate to what extent this methodology can be used to foster innovation in mature companies.

To this end, a survey was conducted and sent to 50 established corporations from 7 different industries, of which 23 companies answered (46% response rate). A follow-up interview was also prepared, which in turn was answered by 7 participants, and additionally, a real case study made by Millennium BCP was analyzed. Based on the answers, it was found that 78% of the participants think that innovation is very important. In general all companies use different types of innovation, one way or another, and think about getting better in the way they innovate. A total of 14 participants (61%) said they have never used the Lean Startup methodology while the other 9 respondents reported having already applied it (39%). This methodology was strongly related to the use of radical innovation and to the success of projects. The results also showed great familiarity with the methodology's fundamental cycle for those who knew the Lean Startup method.

The results demonstrate that the Lean Startup methodology can bring benefits to companies that use it and, more importantly, it can provide more benefits than the methodology traditionally employed.

The discussion of the working hypotheses made, limitations of the investigation as well as suggestions of other axes of analysis and research are also provided.

Contents

Chapter 1

1. Introduction

In this chapter the author discusses the definition of the term "startup". Then, a background around the topic will be made along with motivations to talk about that specific topic. At the end, the problem statement and the research questions are written and finally the summary about what will be addressed in each chapter will be reported.

1.1 Definition

The term startup is becoming very popular nowadays and its potential in the industry is growing fast. According to Thomas Eisenmann, Eric Ries and Sarah Dillard, startups are new organizations created by entrepreneurs to launch new products (Eisenmann, Ries & Dillard, 2012). Steve Blank and Bob Dorf complement this definition by saying that startups go from failure to failure in order to learn from it and find a business model that will suit their idea perfectly and will make it scalable (Blank & Dorf, 2012).

1.2 Background

Launching a new business, whether it is a startup, a large business or even a small one, is always considered a risky move. On the one hand, as showed by researcher Harvard Business School's Shikhar Ghosh, 75% of all startups fail. On the other hand though, a totally new and different approach recently emerged turning the process of starting a business, a less risky one. The name of this approach is "Lean Startup methodology". The essence behind it, as Steve Blanks suggests, favors pivoting (structure designed to test an idea's hypothesis) and early customer feedback over elaborate, planning and intuition (Blank, 2013).

As Steve Blank also reports, globalization and regulation consequences are frightening the economic stability of every country, driving many well established companies to close. Though startups might be a way to overcome such issues, including employment growth, a long-run solution will have to be more permanent and stable. The creation of innovation has never been more imperative. The Lean startup approach can help to foster innovation in an efficient way, by significantly reducing the mistakes in the process while launching the ideas far more quickly and cheaply than traditional methods (Blank, 2013).

1.3 Motivation

During my masters' degree I became interested in entrepreneurship and more specifically in the Lean Startup methodology. Being an aspiring entrepreneur, I felt that the Lean Startup methodology could teach me fundamental concepts on how to accomplish my aspirations in a near future. Having realized that after the conclusion of my thesis I will most likely start working for an established company, I wanted to address this topic from their perspective.

Moreover, after seeing the impact and the increasing of the public awareness about the Lean Startup method, I have found an extra motivation to tackle this topic.

Within the scope of entrepreneurship, I have decided to approach how the method of Lean Startup can contribute to the innovation on existing firms.

1.4 Problem statement and research questions

Problem statement: The aim of this thesis is to evaluate to what extent the Lean Startup method can be used to promote innovation in mature companies.

Q1: Why is innovation important for companies?
Q2:What are the different types of innovation?
Q3:How do companies innovate?
Q4:Can mature companies use Lean Entrepreneurship to foster innovation?

1.5 Chapters' summary

In "Chapter 2. Literature review" the research questions are firstly presented – Some relevant literature on the topic is then explored (such as the definition and types of innovation, how companies innovate and the Lean Startup approach) to give the reader a better understanding on the subject and its importance. Two real case study examples, "New Coke" failure and Webvan online grocery store, were detailed to better support some of the suggested literature. At the end of this chapter, the formulation of the hypotheses is clearly stated, to be later on discussed and validated throughout the thesis.

"Chapter 3. Methodology and data collection" is dedicated to the methodology itself, providing a description of what was made to assess to what extent the Lean Startup method could be used to promote innovation in mature companies. Surveys and follow-up interviews were part of the process to achieve meaningful conclusions. A real case study of Millennium BCP's initiative (Millennium Lab) was also described, where young participants were given the opportunity to apply the Lean Startup methodology.

The surveys, interviews and case study are presented and analyzed in “Chapter 4. Results’ analysis”.

“Chapter 5. Discussion and limitations” discusses to detail the hypotheses formulated in the end of the literature review chapter, while stating their limitations.

Finally, “Chapter 6. Conclusion and future research” summarizes the main conclusions of the work and presents some ideas for improvement and future research.

Chapter 2

2. Literature review

Different approaches can be used to assess whether the Lean Startup methodology can be used to promote innovation in established companies. We suggest tackling the topic through the analysis of four major axis:

Q1: Caused by the evolution that is occurring these years, the author will start by referring the importance of today's innovation;

Q2: The different types of innovation that exist will be categorized;

Q3: How companies innovate today, followed by the differences between how startups and established companies address innovation. To give better support on this part, the author will complement it with some examples of startups and companies that failed innovating with traditional methods;

Q4: Description of the Lean Startup methodology will be given.

At the end, summing all parts, as well as adding some other relevant literature for the aim of the work, the author will write the main hypotheses formulated.

2.1 Defining innovation

Referred to as incremental (ideas that are small upgrades of the current capabilities) or radical (ideas that can change customer experience or create a new market), people think of innovation as something new and valuable that is brought into the market to their own benefit (Degeryd & Graffner, 2013).

By saying new innovation we can consider a new service, product, process or even a new business model (economic innovation). More precisely, according to Joseph Schumpeter the idea per se is called invention and the idea applied in practice is called innovation (Schumpeter, 1934).

Furthermore Professors Adli Abouzeedan and Thomas Hedner define innovation on the individual level, which means an idea that is implemented to be at some point useful for something or someone (Abouzeedan & Hedner, 2010).

2.1.1 Q1: Why is innovation important for companies?

According to Steve Blank, in the last 20 years organizations have tried everything to increase their efficiency and simultaneously reduce their costs. However, nowadays, improving existing business models is not enough anymore. The employment growth in the 21st century, where established industries are rapidly shedding jobs, is making more obvious that innovation needs to stay side by side with the company to make sure it won't be out of track (Blank, 2013).

In 1997 Clayton Christensen put forward an explanation of why established companies fail so often to innovate, in what was named the *Innovator's Dilemma*: attending to current customer's needs and optimizing for current profits, prevents the company from developing products for future needs and future profits. The solution requires disruptive innovation: a new product or service that opens new markets, even at the risk of cannibalizing the companies' old products. Christensen explains through examples why this will leave well-positioned companies so susceptible and why innovation is a key driver for mature firms to stay competitive in the market (Christensen, 1997).

Twenty years ago, innovation was already thought as something very important. Abernathy suggested that a firms' ability to compete over time is related to its ability to be efficient (integrate and build upon its current competencies) and simultaneously innovative (developing fundamentally new capabilities) (Abernathy, 1978). In 1990, Michael Porter also considered that it is through innovation that firms achieve competitive advantage (Porter, 1990).

Many other authors have mentioned innovation and entrepreneurship as key drivers to change customers' life, therefore technological progress and productivity development worldwide is increasingly needed (Abouzeedan, Busler, & Hedner, 2009; Busenitz, Gomez, & Spencer, 2000).

Nowadays, under such a competitive environment, innovation is becoming even more related to the organization' success. According to Professors Adli Abouzeedan and Thomas Hedner, resulting from the dot.com bubble, where people are more connected, innovation is moving faster than ever (Abouzeedan & Hedner, 2010). For that reason, Steve Blank suggests that entrepreneurs' challenge is to ensure new organizational structures and skills to guarantee the company's survival and simultaneously securing long-term growth (Blank, 2013).

For large established firms this sense of need is becoming even more important than for any other organization. Mature companies work under a tremendous close and systematized way, much of them side by side with a static business model, mainly exploiting what is already known (Martin, 2009). This reality inhibits them to bring radical innovations to the market, exploring and searching for new knowledge, unfamiliar technologies and new customers. This in fact is a problem, in a world that is changing every day, CEOs need to be constantly creating, testing and modifying their business model, and this incapacity of balance of the two concepts (exploitation and exploration), serving only their current customers and not thinking on tomorrows' customers, is making their organizations be under huge threat (Magnusson, 2008; Bland, 2013).

Blockbuster, the video-rental chain, is a good example of a company that failed to adapt to the next big change. When they realized what was going on – Netflix starting to send videos through email and cable; phone companies starting to offer video-on-demand; etc. – Blockbuster seemed very outdated and, in fact, they were already out of track. The video-rental chain, still tried to catch up the competitors' move, however it was already late: one day they were leading the industry, the other day chasing to even have a spot in it. After trying the impossible, the company went to bankruptcy (Newman, 2010).

Wrapping up, mentioned by Adli Abouzeedan and Thomas Hedner, since innovation is seen as a major driver of the economy, it is under interest of everyone that innovation will be also spread around in the organization itself (e.g.: new ways and methodologies to improve performance, efficiency) and embedded in society and not just implemented to new products, services or to increase productivity (Abouzeedan & Hedner, 2010). However David Bland goes even further adding that in order to have competitive advantage through innovation, the company will have to implement the Lean Startup methodology (subchapter 2.4), which will help validate/invalidate the risky assumptions in the business model and to deliver value to your customer in a quick and scalable manner (Bland, 2013).

2.2 Q2: What are the different types of innovation?

It is not only the importance of innovation that is becoming increasingly significant for companies to succeed; the different types of innovation and the way companies innovate are too (Hedner, Maack, Abouzeedan, & Klofsten, 2010). Nowadays organizations that only use one type of innovation or don't know how to innovate in an efficient way may be substituted by new firms that do it more effectively.

According to the book *Ten Types of Innovation: The Discipline of Building Breakthroughs* by Larry Keeley and also to the Doblin Company, in a world that is changing from year to year, in the last 15 years one thing certainly hasn't changed much: the types of innovation that exist – Figure 1 and Figure 2. They believe the framework continues to be a great way to identify new opportunities and develop secure innovations (Keeley, 2013).

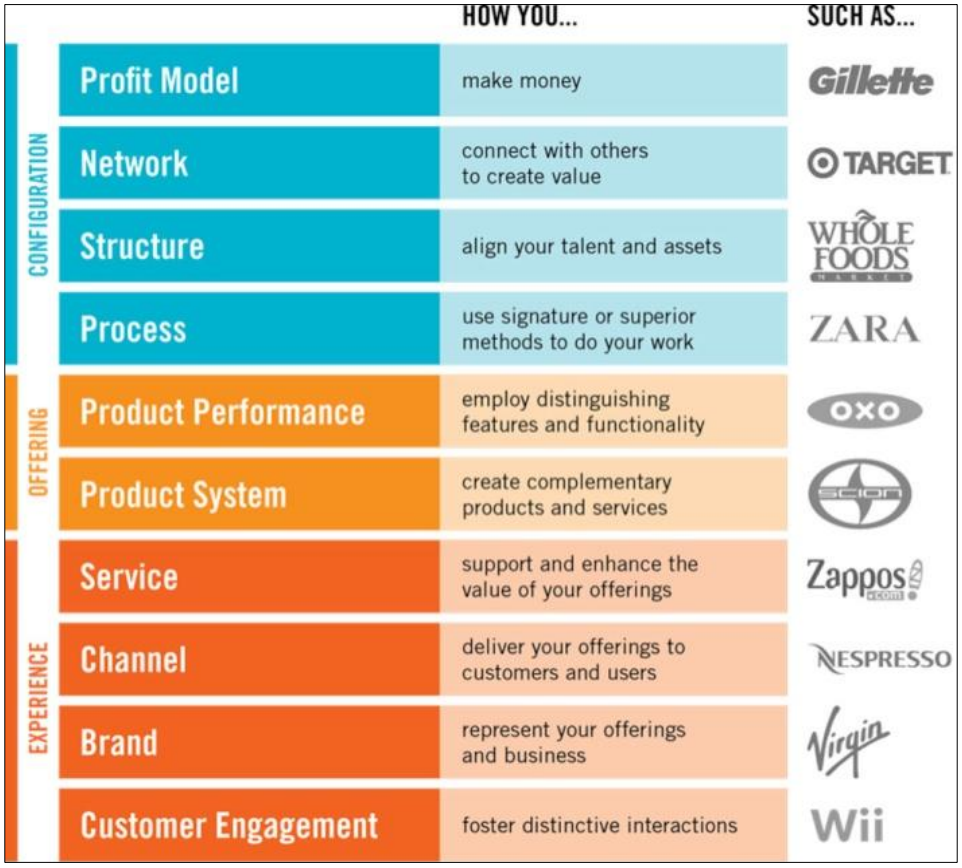

Figure 1: Ten types of innovation. Source: http://www.bloomberg.com/bw/articles/2013-05-07/the-science-of-innovation

Innovation type	Description
1. Business/Profit Model	Different ways that the enterprise can find to make money
2. Network	Ideas that will help the firm to connect with customers creating more value to them
3. Structure	How the firm is able to organize itself with what they have available (assets and talents), in order to create more value
4. Process	The process through which the company is doing things – ideas that can enable the company to use unique capabilities, function efficiently, adapt quickly, and build market–leading margins that are ideally not replicable
5. Product performance	How the company can create a product over the edge and different from all the others that will create more value to the customer
6. Product system	The capacity of the company to create new complementary products/services to that specific product
7. Service	New ways to deliver the service to the customer that amplify the value of the offering
8. Channel	The capacity that the company has in innovating through different types of channels that are available in the market to communicate with customers
9. Brand	The way that the company represents itself
10. Customer engagement	How the company can get, keep and grow customers in an innovative way

Figure 2: Description of the ten types of innovation. Source: *Ten Types of Innovation: The Discipline of Building Breakthroughs* by Larry Keeley (2013)

On the other hand – Figure 3 – Jake Nielson simplifies saying that all types of innovations existent fall into one of four buckets, making them easier to categorize (Nielson, 2013):

Innovation type	Description
1. Breakthrough innovation	Something new that no one have ever thought of
2. Sustaining innovation	Improving the current product's performance or with more generations – mainly used by established companies, because of their internal capacity and system to provide protection to fund future development efforts
3. New market	New way of applying a current product (e.g.: ipod, iphone)
4. Disruptive innovation	Intended to be a much simpler product and low cost solution for the customer that one day wasn't able to access the offer for financial or technological reasons. This solution opens the door to a new segment of customers

Figure 3: Four types of innovations. Source: Nielson, 2013

In this thesis the author will be using the ten different types of innovation by Larry Keeley as a reference.

2.3 Q3: How do companies innovate today? Differences between innovating in a startup venture and in an established corporation

"Startups aren't small versions of big businesses, and big companies are not larger versions of startups" (Blank, 2013).

For many years, executives related innovation with the development of new products – Figure 4. However, suggested in the book *Ten Types of Innovation: The Discipline of Building Breakthroughs* by Larry Keeley, with the constant change of the world, product performance innovation is just one way to get competitive advantage (Keeley, 2013).

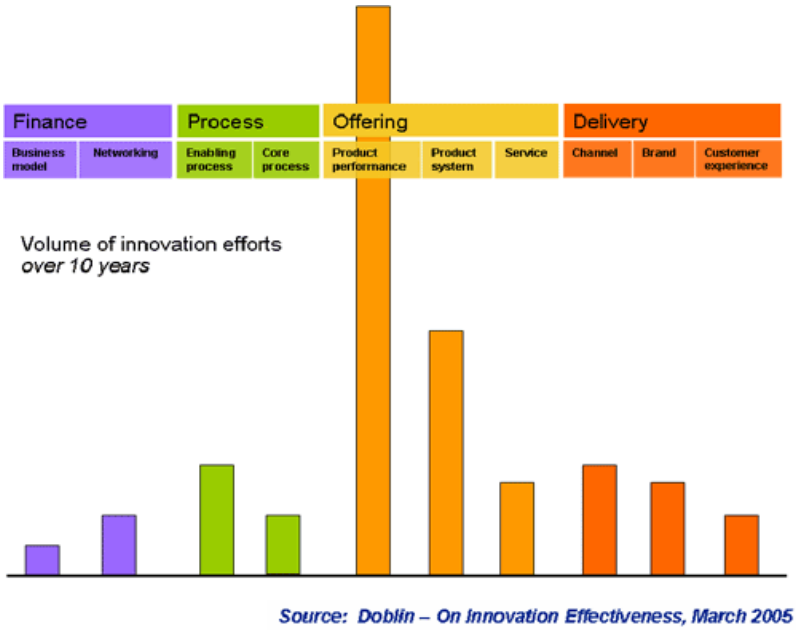

Figure 4: How companies used to innovate

According to Thomas Eisenmann, Eric Ries and Sarah Dillard large companies try to innovate for just one reason: to mitigate the profit impact of new product failure. They have the unique objective of delivering repeatable products to generate revenues and profits to the success of the business (Eisenmann, Ries & Dillard, 2012).

Furthermore, the authors add that employees of established companies work under large incentives motivated by their own future in the company, hence with small disposition to risk. Clayton Christensen reports that the uncertainty and low margins associated with disruptive innovation are contributors for that fact. Under these circumstances what happens in big businesses is that people tend to center their attention more on protecting their existing businesses than on breakthrough innovations that might cannibalize or destroy them (Blank, 2014). Therefore, the companies' focus is on improving upon existing technology (sustaining technology), for instance, by offering greater functionality and performance of their products. IBM, for example, spent a huge amount of money to develop innovations like thin-film heads that were better at reading and writing disks. This enhanced the overall performance of their disk drives, providing customers with a better version of their product. Sustaining technologies will contribute to established companies' position in the market, creating barriers for entrants to break their dominance, leading towards an industry growth (Christensen, 1997).

For that and more reasons, such as high profits that will lead to more market share, existing businesses favor stability and certainty over risky innovations and exploration of new knowledge (Porter, 1990).

In fact, Ron Ashkenas suggests that most of the companies still work under the traditional way with a static business plan – static document that describes what the problem is and the opportunity that the company is facing and the solution provided by the venture (Blank, 2013) – even though companies are reassured by financial security and structure, meaning that a failure, even caused by an innovative project, would not lead to a bankruptcy (Ashkenas, 2011).

In contrast, according to Steve Blank, startups are more agile and therefore inside a startup the way of thinking and manage uncertainty is completely different. In startups you have room to fail and to test innovative products over and over again before going to the market (Blank, 2013). Like that and contrarily of what is happening in big businesses, Ron Ashkenas mentions, employees that become part of a startup are so convinced that their idea is the best that they are risky and willing to make every effort to make the product fit the market (Ashkenas, 2011).

The main problem of traditional methods used by corporations is the assumption of being able to figure out the validity of the idea without testing or having some input of customers. Until the business plan is not concluded, nothing is experimented nor questioned. Only when business plan is completed and developers have invested thousands of hours to get it ready for launch, investors come and advance their money. At the end, they are funding the idea without knowing if it is valid, just assuming that the idea is good enough to invest in it (Blank, 2013).

For instance, a huge failure that happened because of the nonexistent customers' feedback, belongs to the Coca-Cola Corporation.

Example 1. Created in April 23rd, 1985, "New coke" – Figure 5 – was a huge world failure, which is now considered the best example companies could have to take into account before launching an idea (The real story of New Coke, 2012; why did they fail, 2011).

Figure 5: "New Coke". Source: http://en.wikipedia.org/wiki/New_Coke

Facing a massive decreasing in the market share and awareness, not only to Pepsi but also to some of the drinks produced by the company itself, such as Fanta and Sprite, Coca-Cola had a huge decision to make regarding their next big move. The thought was about creating a new formula, which they never had changed before. Their intention was to re-energize its brand and the cola category in its largest market, the United States. After positive taste tests to over 200 000 consumers that preferred that formula to the previous one, Coca-Cola had the product ready to be launched. However, since the company couldn't have two directly competing products on the shelves at the same time, Cola-Cola didn't have much option but to get the original Coke from the market.

Without any other customer feedback, the "New Coke" was released and immediately after, sales went down and the protests were huge, since people felt really upset about the all situation.

The failure of Coca-Cola wasn't in fact surprising. If deeply analyzed, the majority of the process was carried out without any customers' feedback and therefore taste was the only factor under assessment. People did show a preference towards the other taste, however the tests didn't show the bond that customers had to the original formula of Coca-Cola. At the end, the overall situation demonstrated the huge community and attachment Coca-Cola already had to the original Coke.

Months later, in July, 1985, Coca-Cola returned the original Coke to the market and along with that an enormous increase in the awareness and sales.

Besides the traditional method, other approaches are known, used mostly by startups (Eisenmann, Ries & Dillard, 2012):

1. Build it and they will come – where the entrepreneurs build their idea without any customer feedback;
2. The waterfall approach – entrepreneurs that work under a certain plan made by them, where there is not enough customer feedback. Used mainly by big corporations since they are used to work under a rigid plan;
3. Just do it approach – matches the customers' preferences and the capabilities that the company has to generate a new idea. Since you do not have a clear vision and objective, it can be a very risky approach.

There also huge failures related to these approaches. For example, a famous collapse that is recognized all over the world is associated to the online grocery idea and to the approach of "build it and they will come": the Webvan example (Nielson, 2015).

Example 2. The Webvan was built at the peak of the dot-com bubble and under the vision of "if we build, they will come". Their idea was very clear, order groceries online using their platform over the internet and the groceries will be delivered to the door of the customer later on that day. As well as their plan: execute the business model idea and after that the potential customers will come.

At that time, the idea sounded extremely appealing for the investors that put up over $800 million to build the business and "Get Big Fast" (the idea of getting scalable and profitable as fast as possible).

Webvan hired well-known CEO and US markets, built state-of-the-art warehouse fulfillment centers highly equipped, however the problem was that customers did not come as they thought they were. Webvan speeded up the business model and failed in answering the fundamental question: do people want to buy groceries online? Without experimenting, testing nor "getting out of the building" to talk with customers to get real feedback and to validate hypothesis, Webvan ran out of cash and went out of the business in 2001.

Since the failure of Webvan, an approach more oriented towards customer development with less risk involved has been adopted by startups: the Lean Startup methodology.

Wrapping up, if we step back we can see that neither one of these approaches that were referred are sufficient to deliver success to neither an established company nor startups.

Therefore, authors that contributed to the Lean Startup movement, such as Steve Blank, Eric Ries, Bob Dorf, Alexander Osterwalder, among others, agree that this methodology came as a way to avoid these pitfalls, contributing to fewer failures for startups. However, is this methodology as good for established companies as it is for startups?

According to Ron Ashkenas, as this method was thought to be implemented in a startup and as saw, established companies aren't equal to startup, the lean thinking is very difficult to be implemented in companies that are already mature. People that work in the firm do not have the necessary spirit to make it work. The author complements it by saying: "it is like going back in time" (Ashkenas, 2011). Clayton Christenson adds that the best way established firms have to deal with agile thinking and disruptive technologies is inside a smaller company, which will have enough agility to learn with possible failures. For instance, as IBM made. They had set up an independent firm in Florida, without compromising IBM (Christensen, 1997).

On the other hand, founders of the Lean Startup see it differently, as seen next.

2.4 Q4: The Lean startup method

"Startup success can be engineered by following the process, which means it can be learned, which means it can be taught." (Ries, 2013)

Over the years many failures occurred in the business world. More and more startups run out of cash and many established companies are getting out of track. Meaning that both startups' and established companies' approaches are failing.

Mainly startups, they begin with an idea for a product or service that they think people will want. After having the fund of an investor, they spend a lot of time and resources to do the product/service they thought of. Finally, when they think everything is set up, they launch it. However, in the entire process, entrepreneurs forget the ultimate piece to make it successful: even though the idea could be brilliant, do people want it?

The specific term "Lean Startup methodology" was introduced by Eric Ries and was based, among others, in the customer development approach – Figure 6 – addressed by Steve Blank in the book *The Four Steps to the Epiphany*. Also called hypothesis-driven entrepreneurship or Lean Entrepreneurship approach, this method favors the practice of getting out of the building to achieve real customer feedback (called customer development) on the most

important elements of the business model canvas (later on described). Contrasting with the traditional product development approach – Figure 6 – where the customer is not part of the process until the test phase (Blank, 2006). In this methodology, the customer development approach will be complemented with an agile thinking, which will dramatically reduce waste and unlock creativity in product development (Ries, 2008).

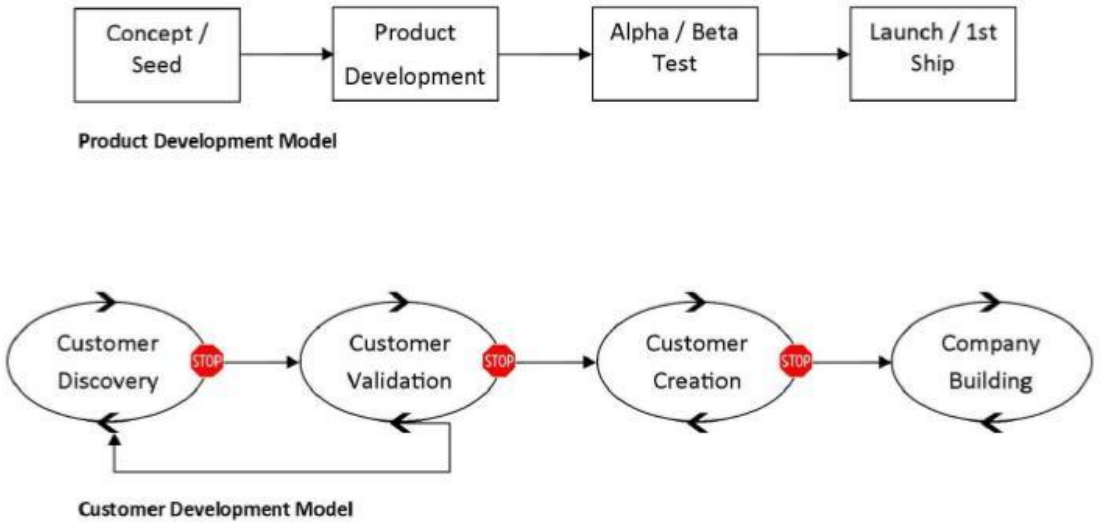

Figure 6: Product development approach vs. Customer development approach. Source: *The Four Steps to the Epiphany*, by Steve Blank (2006)

According to Eric Ries' book *The Lean Startup*, the approach is being used mainly by modern startups, although it can work in a company of any size, in any sector or industry. Based on what these authors have seen at hundreds of startups and at established companies that practice the Lean Startup approach, this will make the process of building a business less risky by reducing the chances of building something that no one wants. Also they claim that using this methodology will surely result in fewer failures than using traditional methods (Ries, 2011; Blank, 2013).

Derived from many perspectives that already exist, Lean Startup relies on five fundamental principles – Figure 7.

Principle	Description
Entrepreneurs are Everywhere	Entrepreneurship includes anyone creating new services or products under extreme uncertainty
Entrepreneurship is management	A specific management style for extreme uncertainty
Validated Learning	Using experiments to test elements of an entrepreneur's vision
Build Measure Learn	A fast feedback loop about building products, measuring their success with customers, and learning where to pivot or persevere
Innovation Accounting	Using metrics to measure progress

Figure 7: Five principles of the Lean Startup methodology. Source: Casselman, 2014

"Building fast, release often, measure, learn and repeat" approach – Figure 8 – helps entrepreneurs launch ideas that people actually want, far more quickly and cheaply than traditional methods (Donelan, 2013). Rather than engaging in months of planning and research, Lean Startup approach favors testing hypotheses (wrote down in a framework called business model canvas, later on explained) and getting out of the building approach (called also customer development) to get real customer feedback on all the important elements of the business model over assumptions and a static business plan. Also it optimizes the resources expenditure available, by investing capital in product development, infrastructure, or customer acquisition only after its business model has been validated through a series of MVPs (Minimum viable product) – tests to the most important hypotheses that will make the idea valid (Eisenmann, Ries & Dillard, 2012).

Figure 8: Build-Measure-Learn cycle as a process of developing an idea into a prototype, testing it, and using feedback to pivot or preserve the idea (Donelan, 2013). Source: http://thenextweb.com/entrepreneur/2013/08/06/do-lean-startup-principles-have-a-place-in-the-enterprise/

Entrepreneurs that implement this approach start by proposing a first version of their business model, which translates their vision, and then they start to test, using a series of MVPs. By running frequent experiments that allow entrepreneurs to test each element of their vision, companies will learn how to be sustainable – this is called validated learning and is another principle of the Lean Startup method (Eisenmann, Ries & Dillard 2012).

To conclude, reported by Eric Ries, "Lean isn't simply about spending less money. Lean isn't just about failing fast, failing cheap. It is about putting a process, a methodology around the development of a product". It is about work smarter not harder, has it favors testing and a customer centric approach. Also cited by the author "by the time that product is ready to be distributed widely; it will already have established customers. It will have solved real problems and offer detailed specifications for what needs to be built" (Ries, 2013).

2.4.1 The Lean Startup process in 6 steps

According to Thomas Eisenmann, Eric Ries and Sarah Dillard it is necessary to follow 6 steps to implement the Lean Startup methodology in an organization – Figure 9 (Eisenmann, Ries & Dillard, 2012).

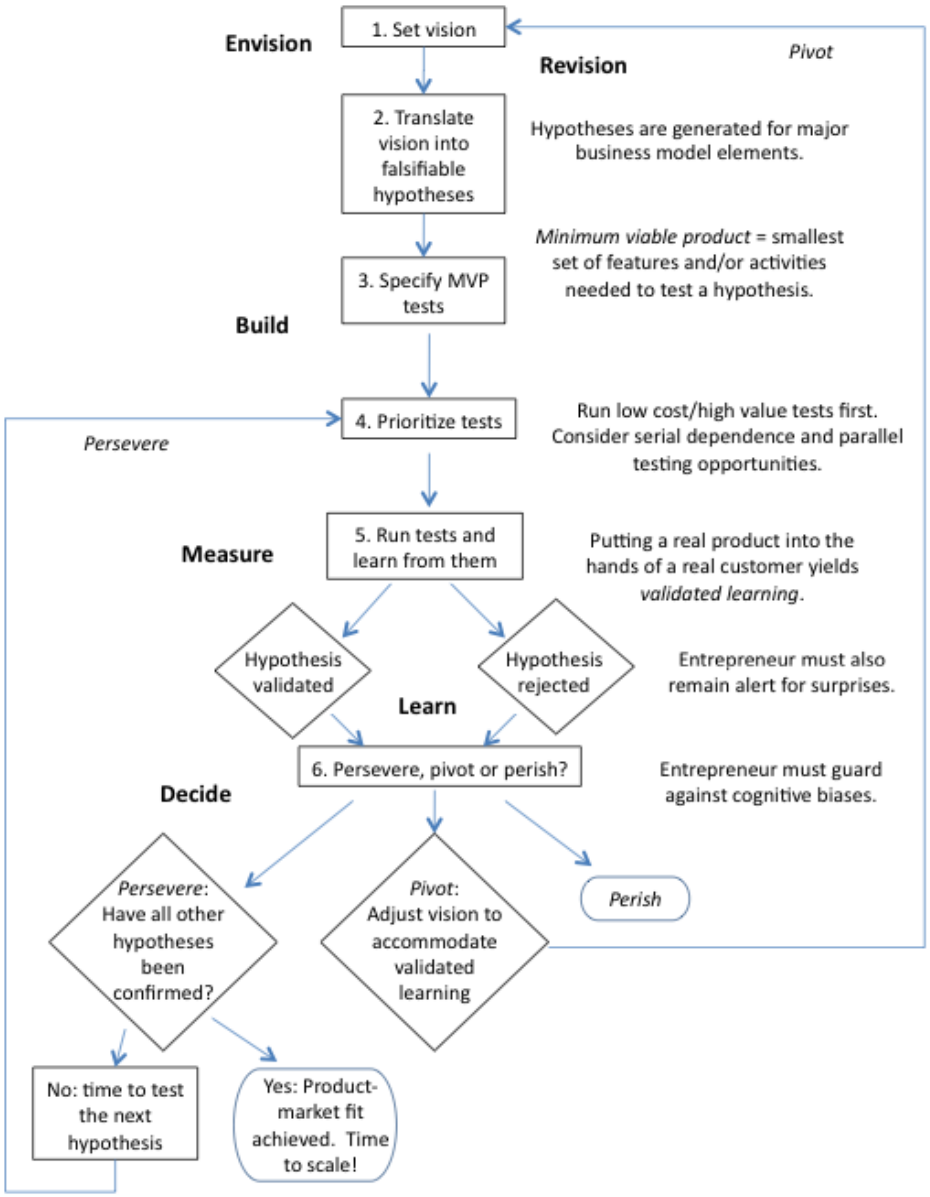

Figure 9: 6 Steps to implement the Lean Startup methodology. Source: Hypothesis-Driven Entrepreneurship: The Lean Startup by Eisenmann, Ries, & Dillard (2012)

Beginning by developing the vision behind the product, it is necessary to understand what are the problem entrepreneurs want to solve and the solution that they offer to customers. For this initial step, entrepreneurs must understand if there is really a problem to solve and if the solution is better than what already exists.

Following, entrepreneurs must translate their vision into hypotheses and then put each of them in the appropriate block of the business model canvas – Figure 10.

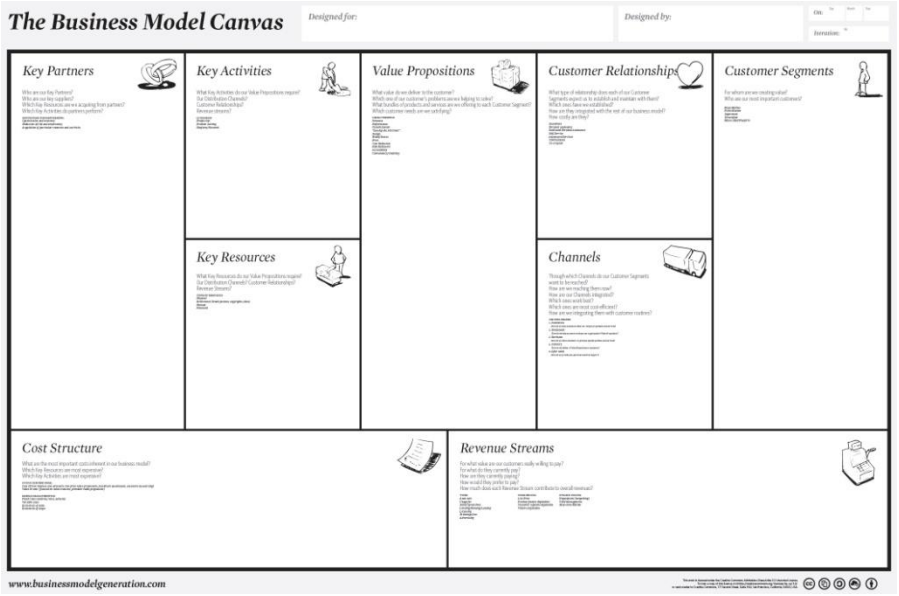

Figure 10: Business Canvas Model, founded by Alex Osterwalder, "describes the rationale of how an organization creates, delivers, and captures value". It takes into account not only the actual value proposition of the product or service, but also all the surrounding variables that determine market success (Osterwalder, Pigneur, 2010).

In this stage, it is important to remember that hypotheses are sequential, which means that one may depend on the other. Also they must be falsifiable, meaning it can be validated or rejected through a decisive experiment. The hypothesis will involve measurement and learning and will include actionable metrics that can demonstrate cause and effect question, if the hypothesis is not falsifiable, you cannot gain validated learning, moreover if you cannot fail you cannot learn.

The third step has the objective to "launch early and often". To do this, entrepreneurs must develop MVP tests to solve the uncertainty and reduce product development batch sizes and cycle times. MVP tests are better than traditional techniques such as focus groups and surveys, since it gets more reliable feedback when they put a real product/service in the hands of real customers in a real world context.

Entrepreneurs usually are reluctant about MVP tests, since they are afraid of the idea been stolen or the MVP may have limited features and/or have bugs that will imply reputational damages.

The fourth step as to do with the selection of hypotheses: what to test first or what to test in parallel. The rule is simple, major risk with less cost, first.

Following that step, comes one of the fundamental principles of the methodology: learn and evaluate the feedback taken from the MVP tests (based on the Build-Measure-Learn cycle

developed by Eric Ries – Figure 8). In this stage, entrepreneurs must be careful with two fallacies:

1. Customers may claim to know what products they want or need, however considering that sometimes can led towards a big mistake. A new technology sometimes is all it takes to change consumers' minds. Therefore, to decrease this fallacy, entrepreneurs should also watch how customers are using the product instead of just listen to how they would like to use it;
2. Entrepreneurs usually see and expect what they have one day planned for the idea (as to do with lean psychology). Therefore a good solution would be taking a step back and ask for second opinion of what the entrepreneur saw and evaluate from the feedback given.

At the end, the 6th step is to decide, based on what they evaluated, if they must (1) persevere (means everything is fine with the idea); (2) pivot (change something in the business model) or (3) perish (let the idea fall).

Once the MVP is established and all the hypotheses are validated the venture is ready for the market (product-market fit), and it is then time for the optimization cycle and preparing to scale.

2.4.2 Evolution of the Lean Startup method

The Lean Startup methodology is a concept with just a few years old, though terms such as the business model canvas, MVP and pivoting have quickly taken root in the startup world (Blank, 2013).

Also according to the document written by Steve Blank "Why the Lean Start-Up Changes Everything", we can find around the world many organizations, such as Startup Weekend, introducing the Lean method to hundreds of prospective entrepreneurs (Blank, 2013).

As well, although initially thought to be exclusively implemented by startups, more than 25 universities, business schools, MBA programs and online courses (such as Udacity.com) have already begun adapting themselves to teach and learn this approach (e.g.: changing business plans to business canvas models) (Blank, 2013).

Furthermore, in 2011, in a program called the Innovation Corps, the U.S. National Science Foundation began also using lean principles to commercialize basic science research.

Resulting from this, eleven universities now teach the Lean Startup methods to hundreds of teams of senior research scientists across the United States (Blank, 2013).

Steve Blank's course called "Lean LaunchPad" for educators is also increasing year after year, training over 250 college and university instructors a year.

Additionally to this huge evolution around the world, according to Steve Blank's knowledge, the Lean Startup methodology is now beginning to be implemented in large corporations, such as General Electric, Qualcomm and Intuit:

For instance, the large established company GE already used the approach to promote innovation. General Manager Prescott Logan, in 2010, was sure that a new battery could disrupt the industry. Therefore, instead of using the traditional methodology and start to invest in the necessary equipment to develop the new product, Logan applied Lean Startup techniques. The Manager started by searching for real customer feedback, "getting out of the building" and for people's frustrations about the previous battery. Followed by an intensive learning about how customers bought industrial batteries and how often they used them. Ultimately they found new segments and narrowed their previous one. In 2012, GE with $100 million built a world-class battery manufacturing facility in Schenectady, New York. According to press reports, the new batteries are having a huge success (Blank, 2013).

Overall the Lean Startup movement hasn't gone totally mainstream, which means that we will have yet to feel its full impact. Companies not yet widely understood the essence of the method and are just beginning to grasp. Though, when the Lean Startup practices of failing fast and continually learning will be totally spread, startups will have a better chance to succeed and, in the long-term, some of its biggest payoffs may be gained by the large companies that embrace it (Blank, 2013).

2.5 Formulation of the hypotheses and summary of the research objectives

Initially the Lean Startup methodology came to enhance the way startups were planning projects. However, Scott Cook, cofounder of Intuit Company, came with a different perspective reporting that this method was also appropriate for established companies as a way to avoid innovation stagnation. Therefore, it is seen, slowly, that this new methodology, developed by Eris Ries, is taking its place in established companies' world (Nobel, 2013).

The aim of this thesis is to evaluate to what extent the Lean Startup methodology can be used to promote innovation in mature companies.

Hypotheses that will be tested throughout the thesis:

1. Innovation is very important for companies to stay on track and they are aware of it, therefore firms want to get better in the way they innovate;
2. Using different types of innovation will contribute to the efficiency of the company;
3. The essence behind the Lean Startup methodology is getting progressively spread into all companies, without them relating it to the term “Lean Startup”;
4. The use of the Lean Startup methodology can provide more benefits for established companies than the traditional methodology companies already use;
5. Companies that use the Lean Startup methodology are getting more radical in the way they innovate.

Chapter 3

3. Methodology and data collection

To support the four research questions that are addressed in the Literature Review, a two parts division will be made in the methodology: survey and real project.

3.1 Survey

First a survey was conducted to established companies. The survey had the objective to observe the companies' knowledge and usage of the Lean Startup methodology to promote innovation inside their own organizations.

In appendix A, the survey that was conducted is seen.

3.1.1 Approach

Accordingly to the dissertation's relevance, companies were chosen. The companies selected were established firms, meaning that they are publically recognized, have stable revenues and are important in their own industry, since they exist long enough to be recognized like that. Companies were ranged by industry category and the contacted departments were specified (appendix B).

A total of 50 companies within 7 industries – phone operators, technology companies, energy companies, banks, insurance companies, retailers and service companies – were contacted through email and asked to fulfill the survey.

Mainly Marketing, Special Projects and Innovation departments were contacted to give more accuracy to the answers given to the survey. Respondents' information was found through the internet, mentor's personal network of contacts and friends' and family's contacts.

3.1.2 Follow-up interview

In the end of the survey participants had the opportunity to give their personal contact to a follow-up interview. A total of 14 companies provided their personal contact to be later spoken to. Accordingly to their knowledge, experiences and thesis's relevance a follow-up interview was made. Some companies were unavailable at that time to do it.

The interview developed profoundly the major topic of the dissertation, which is to understand if established companies are already using the Lean Startup methodology and if it

is appropriate to promote innovation inside their own firms. For those unfamiliar with the methodology and still showed availability to a 15Minutes interview, questions were related to the adoption of innovation inside their companies and how they used to innovate. An example of a follow-up interview is seen in chapter 4.

3.2 Real project

Following, the author had accompanied side by side an initiative of Millennium BCP, called Millennium Lab. The project's main objective was to foster innovation inside the firm, applying the Lean Startup methodology. This initiative was a real example of what was being tested throughout the dissertation.

3.2.1 Approach

After successfully overcoming the difficulties resulting from the European financial crisis, one of the main objectives of the bank was to give more visibility to the young generation of employees, giving them the possibility to provide ideas, test and apply them. Also, Millennium BCP wanted to reposition itself as a market leader.

With that in mind, the bank created the Millennium Lab project to promote innovation inside their firm and thus creating conditions for them to grow. The project was done through a different approach using the Lean Startup methodology. "Keep it simple" and "think out of the box" were the inspirations to this project.

A contest was developed during approximately one week, where employees had to give a breakthrough idea to promote innovation inside Millennium BCP. 327 young professionals aged until 31 years old had the opportunity to participate. At the end just 57 workers were selected accordingly to their motivation, performance and potential.

The reward for the first winner team of Millennium's Lab initiative was an internship of 1 to 3 months in an international operation company (Poland, Angola or Mozambique). For the second and third winner team a participation in a conference or an internship of 1 month in any bank was provided. For all the three teams, professional training was offered.

The project had the duration of approximately 2,5 months (from the 27th of February till the 20th of May) and was composed by 12 teams for each of the 12 final ideas.

Millennium Lab initiative was comprised by 6 sessions.

The 1st meeting was a presentation session, where the methodology of the initiative was presented to all participants. The Faststart methodology, Lean Startup methodology and business model canvas were the methodologies used throughout the entire initiative. Additionally, three ice breakers were made ("avatar", "my name" and "life timeline"). All of them done with the main purpose of giving participants the opportunity to know each other better. This fact would make the selection of each team simpler and more effective, since choosing each member accordingly to his characteristics, would make the team more complete, powerful and rich. At the end, 12 ideas were revealed and 12 teams were formed.

The next 3 sessions were bootcamps, where working sessions were developed and projects were monitored. The sessions developed topics such as: designing of the business model canvas and customer development approach; how to create and test value propositions with all the possibilities available nowadays through MVPs (interviews, surveys, landing pages, A/B testing, crowdfunding, etc.); sources of revenue and pricing models; among others.

Summarizing, the bootcamps were mainly focused in the way teams could apply the 9 blocks of the business model canvas to their specific idea. All of that related to the approach used by them: Lean Startup methodology.

The purpose of the 5th session was to evaluate all the work done by each team until that day. Also feedback was given about the final pitch presentation the teams wanted to present in the final session.

Finally, the last session, based on the 10/7/28 rule (10 slides, 7 minutes, font 28 – taught by the professor), was a 7minutes presentation of the idea of each team, using the pitch taught in class. At the end, teams were evaluated by 5 important members of Millennium BCP and the winners were chosen.

Chapter 4

4. Results' analysis

In this next chapter, the results of the survey, the follow-up interview and Millennium BCP's case study are presented.

The survey and the follow-up interview are conducted based on the four research questions of this thesis:

Q1: Why is innovation important for companies?
Q2: What are the different types of innovation?
Q3: How do companies innovate?
Q4: Can mature companies use Lean Entrepreneurship to foster innovation?

4.1 Surveys' results

The survey was sent to 50 important companies in Portugal.

Figure 11 shows the 7 different industries to which the companies that have participated in the survey belong:

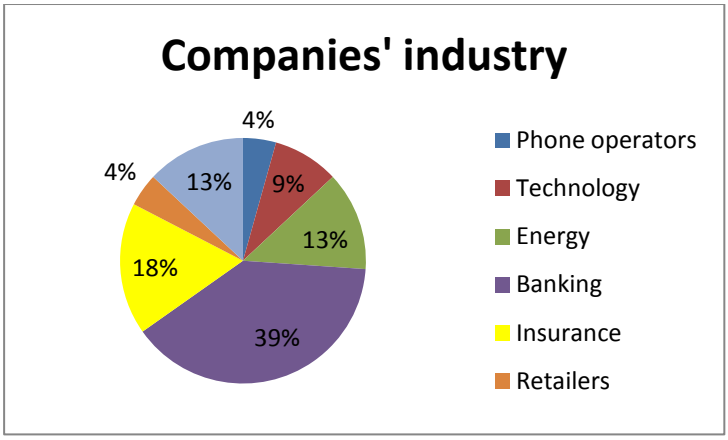

Figure 11: Companies' industry

The choice of the companies for the survey was made based on the Portuguese Stock Index (PSI) 20 and general PSI. In addition, the employees that were contacted in each company were rigorously selected by their department's relevance. Marketing, Innovation and Special Project departments were the main target, although it was not always possible to reach these departments in every company. It was noticed that the response rate was significantly higher

in cases where the author had a personal/professional connection to the survey's participant. Overall a total of 23 companies answered the survey, accomplishing a response rate of 46%.

4.1.1 Importance of innovation (Q1)

The first question presented to the 23 companies that have participated in the survey was whether or not innovation is important for the company they were working for. A total of 78% said that innovation is very important, 18% reported that innovation is important and 4% cited "more or less". Employees had no doubts regarding the importance of innovation inside their companies, as none of the participants answered "not at all" to this question – Figure 12.

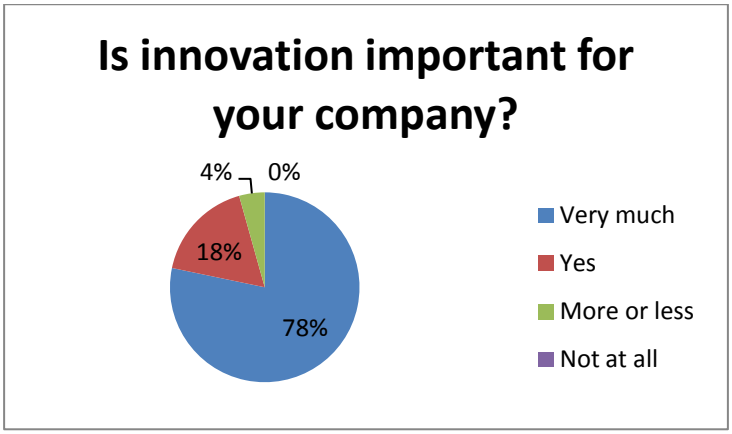

Figure 12: Innovation's relevance for the companies

Respondents showed great awareness concerning innovation importance. Innovation was majorly cited by them as being (1) a great opportunity to enhance the relationship with clients and (2) a good way to differentiate the company from the other firms in the same industry (later on, the follow-up interview will expand on this subject).

4.1.2 Different types of innovation used by companies (Q2) and how they innovate (Q3)

After understanding the importance of innovation, respondents were asked to rate in a scale of 1 to 5 (1 being "not used at all" and 5 "used a lot") the usage of the ten types of innovation in the organization. The types of innovation were selected based on the *Ten Types of Innovation: The Discipline of Building Breakthroughs* book by Larry Keeley – Figure 2.

All types of innovation are, in some way, used across all companies (appendix C). Though, innovating in the process through which the company acts – such as ideas that can enable the company to use unique capabilities, function efficiently, adapt quickly, and build market–

leading margins – is the type of innovation companies use more often, with 82% (sum of the scale rate 4 and 5) positive response rate – Figure 13.

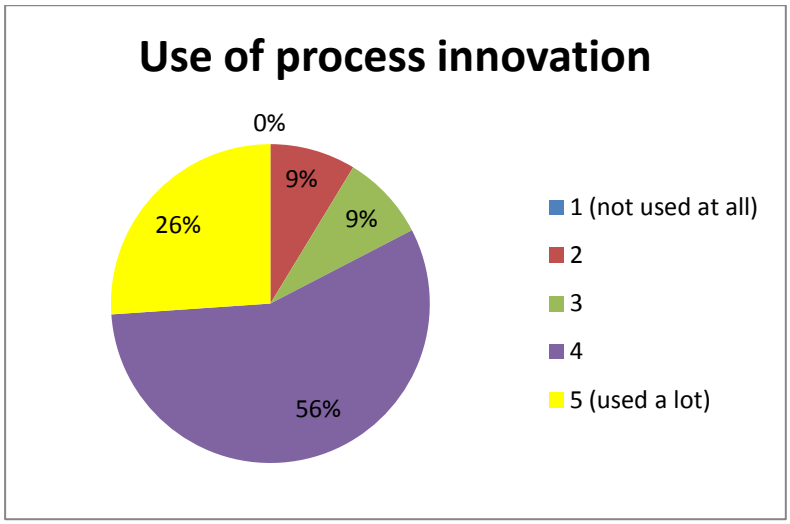

Figure 13: Use of Process innovation

With 70% (sum of the scale rate 4 and 5) positive response rate, companies seem to invest in the way they present their brand to give competitive advantage to their organization – Figure 14.

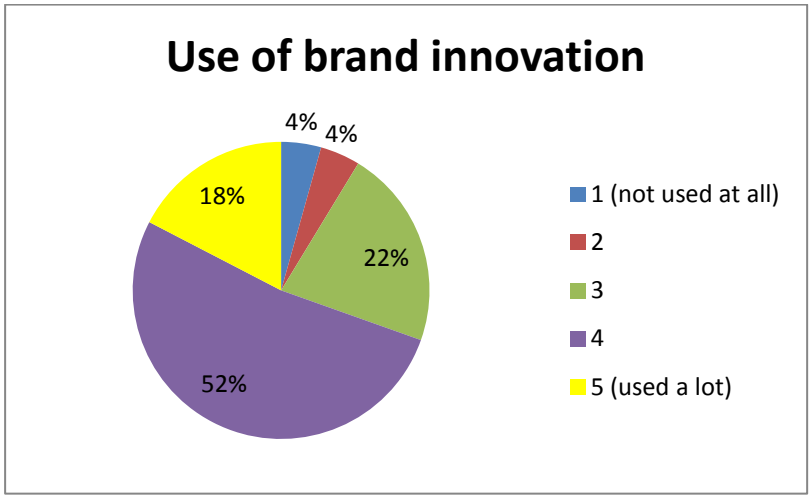

Figure 14: Use of Brand innovation

On the other hand, the less important type of innovation, with 48% (sum of the scale rate 4 and 5) positive response rate, is the companies' use of the "system product" innovation – the capacity of the company to create new complementary products/services to that specific product – Figure 15.

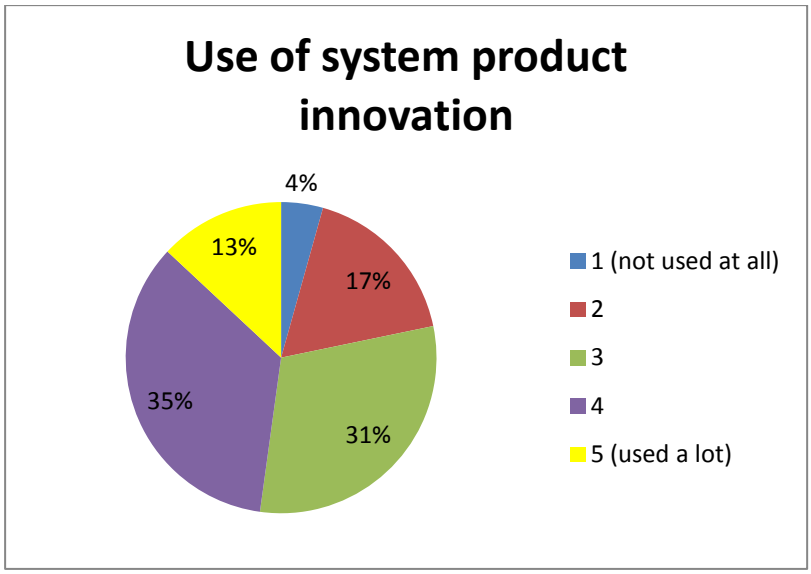

Figure 15: Use of System Product innovation

Furthermore, 96% of the respondents reported having already considered improving in the way they innovate, against only 4% that said the opposite.

Still related to the way companies innovate, the question "Did you ever think of applying the Lean Startup Methodology in your company?" was mostly answered negatively, with 61% of the respondents saying no, whether or not they knew the methodology – Figure 16.

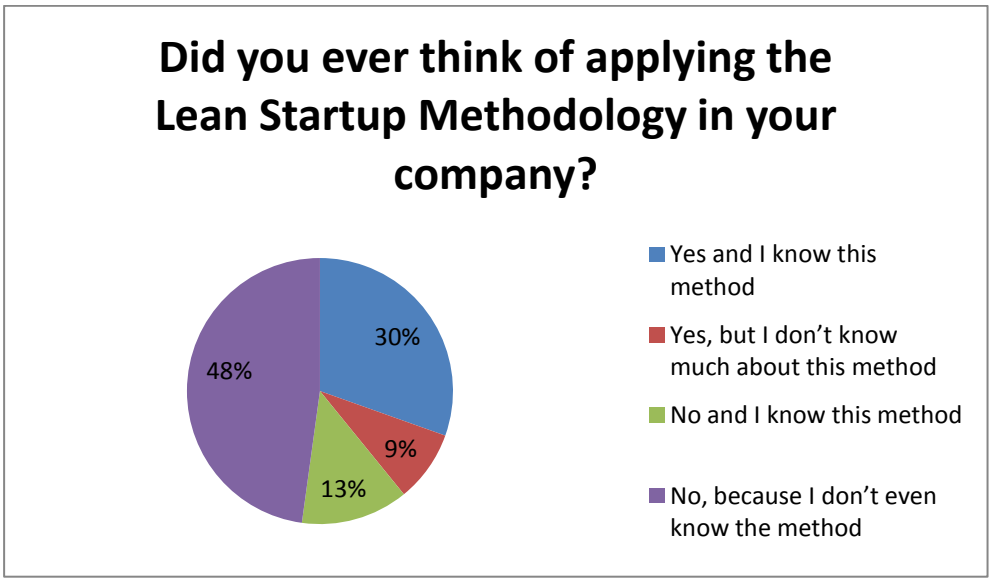

Figure 16: Thinking of applying the Lean Startup methodology in the company

4.1.3 Mature companies and the Lean Startup methodology (Q4)

Respondents that in the previous question answered that they were not familiar with the methodology (13 respondents – 57%) had the opportunity to read a brief definition of what is the Lean Startup methodology. In this way, it was assured that every participant had at least a

basic knowledge of the method's principles for the remaining questions. The next question was about whether the companies had already used the Lean Startup method. A total of 9 respondents (39%) answered yes against the 14 (61%) that said no – Figure 17.

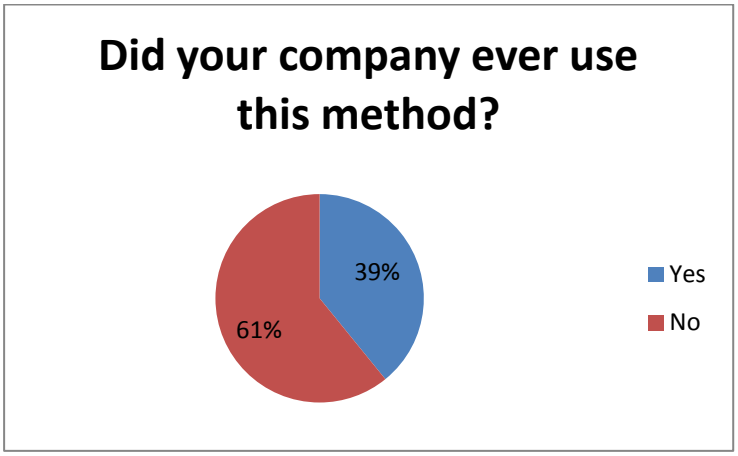

Figure 17: Use of the Lean Startup methodology in the company

Those who answered positively were asked if the workers were comfortable when using that method. A total of 7 respondents in 9 (78%) said "yes", compared to the other 2 respondents (22%) reporting "no", giving as reason that people weren't used to the way the new methodology functioned – Figure 18.

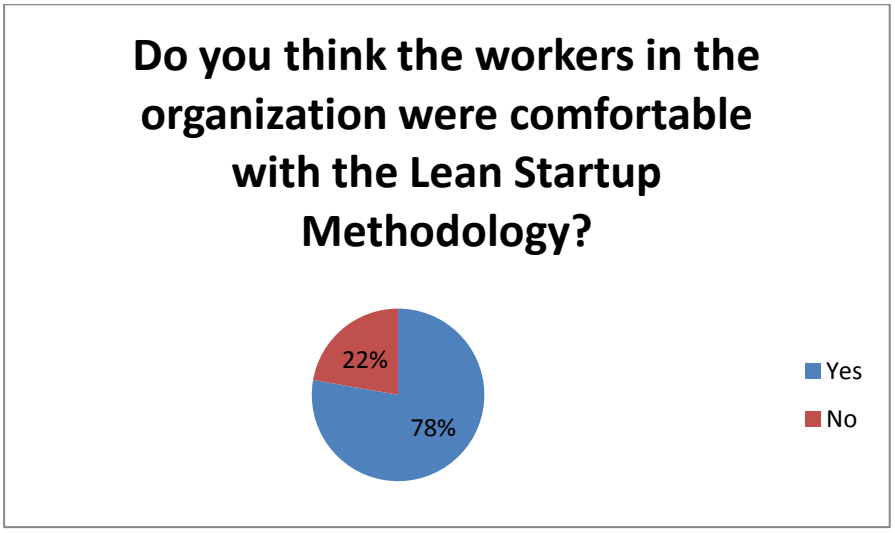

Figure 18: Workers' comfort level when using Lean Startup methodology

As well in the scope of this thesis was to understand whether companies that used the Lean Startup methodology (9 respondents in 23) used it to foster innovation: to which all the participants answered yes. More precisely, they had to scale from 1 to 10 how radical was the innovation – 1 being an incremental innovation (ideas that are small upgrades of the current capabilities) and 10 a radical innovation (ideas that can change customer experience or create

a new market). Figure 19 below shows that none of the companies used the Lean Startup methodology to implement an incremental innovation and that more than 50% (a total of 6) answered that the innovation was more of a radical innovation than incremental innovation.

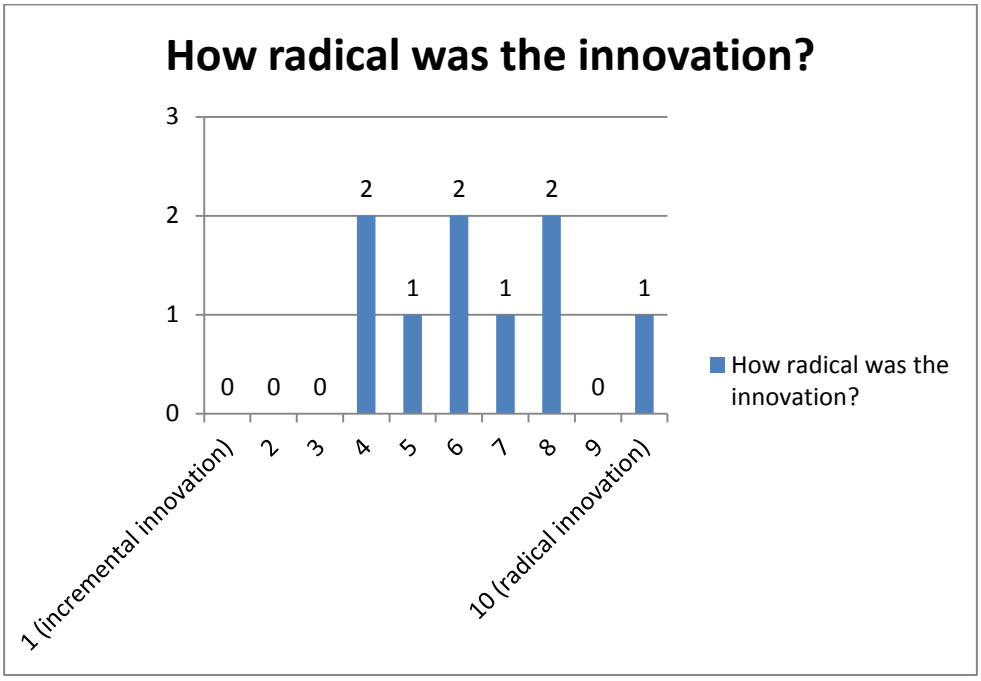

Figure 19: Radical or incremental innovation

A total of 78% of the companies that used the Lean Startup methodology said it was successfully implemented, against the other 22% (2 respondents in 9) which were a minority. Within that group, 1 respondent reported that the project wasn't a success due to the small amount of customer feedback achieved and the other was unaware at that time – Figure 20.

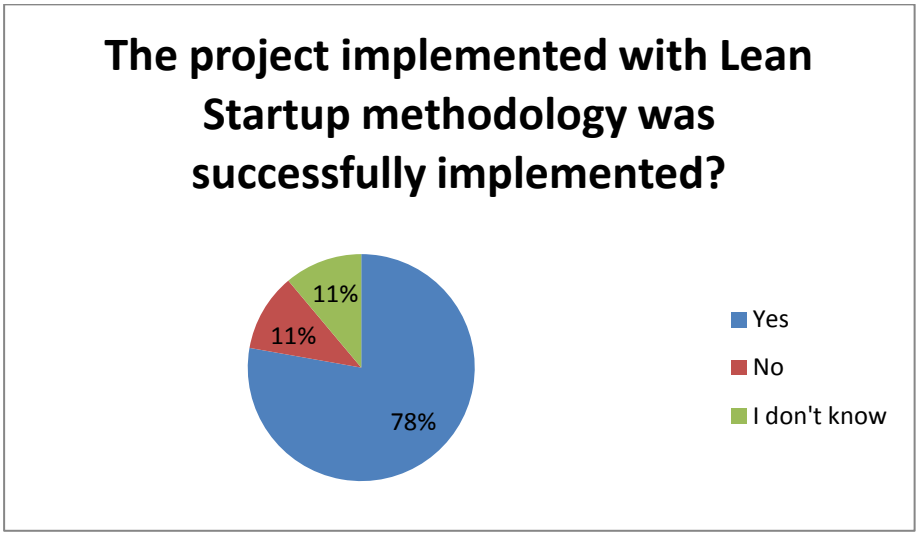

Figure 20: Project's success when Lean Startup was implemented

4.1.3.1 Participants and their own personal experience

To have more insight into participants' knowledge on the Lean Startup methodology, they were asked if they had ever implemented this methodology in a project they were part of. Most of the respondents said "no", at total of 65% (15 respondents in 23) – Figure 21.

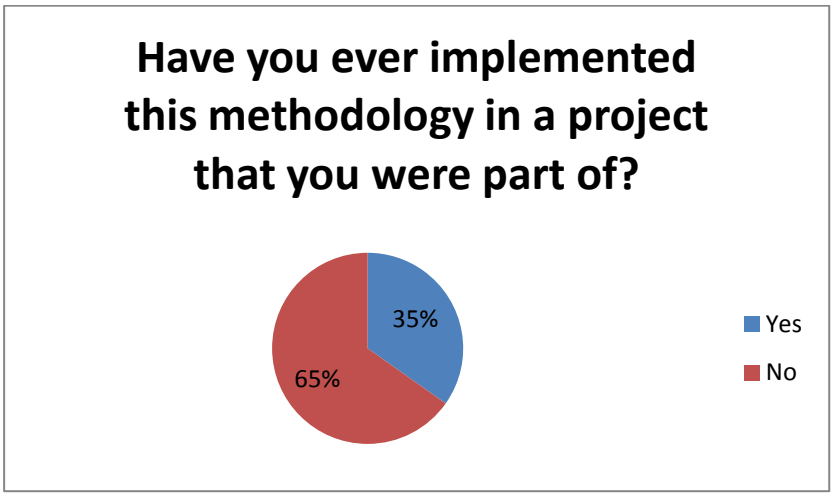

Figure 21: Personal implementation of the Lean Startup methodology

Those who answered negatively the previous answer were asked to identify the main reasons for it. 9 respondents (60%) reported that they didn't use it due to the fellow's unaware of the methodology; 3 (20%) cited that the company didn't allow this methodology; 2 respondents said they didn't use it since they didn't know the methodology and 1 respondent answered "I didn't want to implement it, because I am not used to" – Figure 22.

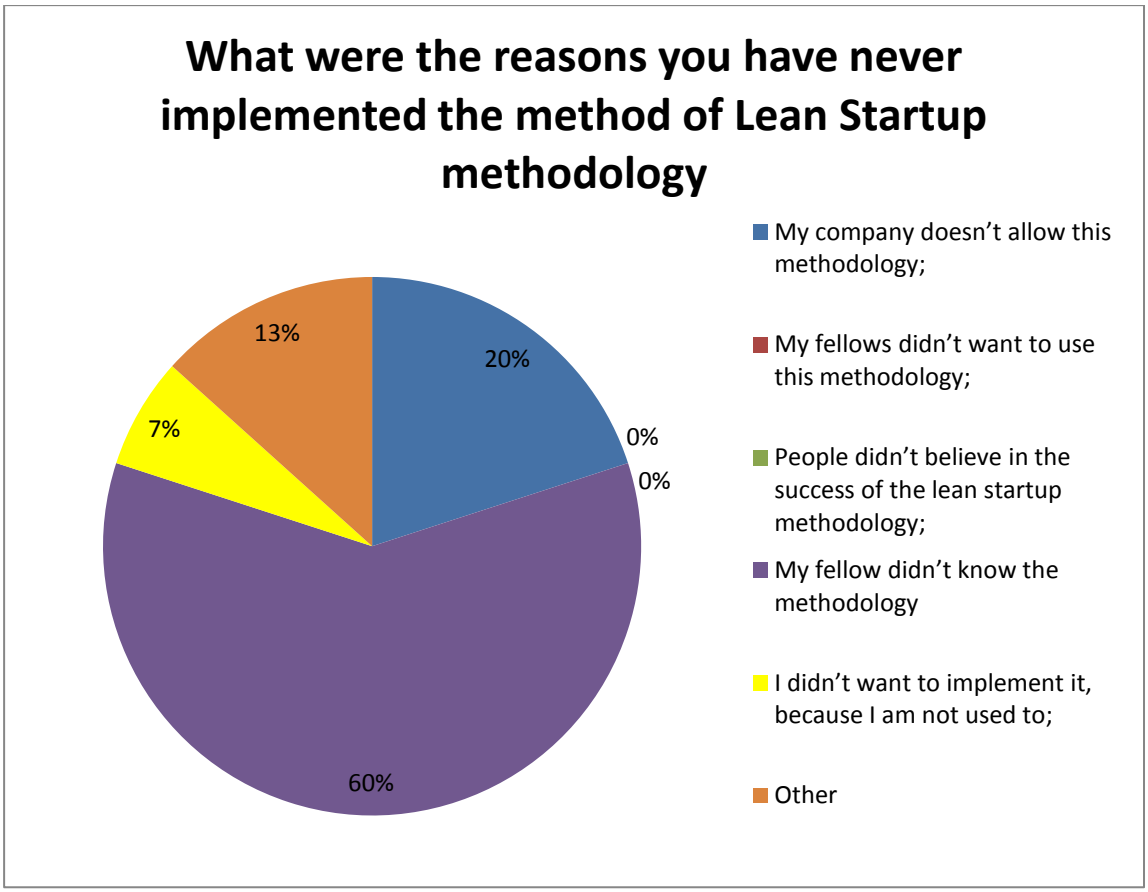

Figure 22: Reasons to not implement the Lean Startup methodology

Similar questions about the project were asked to the respondents who have already applied the Lean Startup methodology. Again, within the group of respondents that have applied the Lean Startup methodology (8 respondents in 23), all reported that the project was for innovation purposes. Figure 23 below shows that none of the companies used the Lean Startup methodology to implement an incremental innovation and that 75% answered that the innovation was more of a radical innovation than incremental innovation.

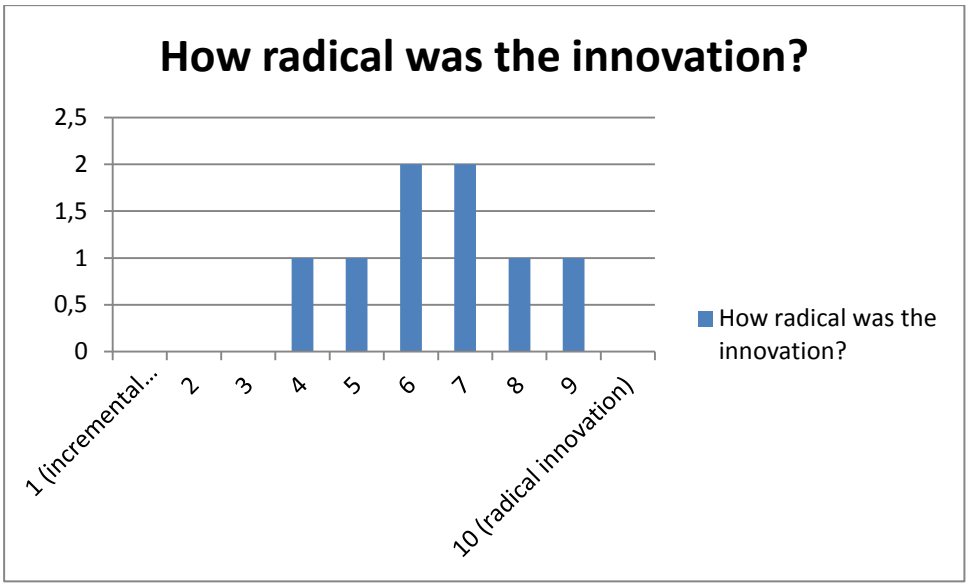

Figure 23: Radical or incremental innovation

In this case, all reported the success of the projects (8 respondents in 8).

Then, a brief explanation of the fundamental principles of the Lean Startup methodology was given to the participants:

The Lean Startup Methodology focuses mainly in the fundamental principle of Building-Measuring-Learning. Meaning that first entrepreneurs develop an idea into a prototype, then they test it (using MPVs) and afterwards, entrepreneurs use feedback to pivot, perish or preserve the idea.

After this explanation, respondents were asked a series of questions to assess whether they were already using (or have used in the pass) the principles of the Lean Startup methodology at the company they worked for.

Results showed that all respondents somehow put into practice the fundamental principle of Building-Measuring-Learning and that they have taken precautions accordingly to what they have learned – moreover 7 respondents pivoted (changed something about the business model) and 1 perished (went on with what they already had).

Regarding the MVP – Figure 24 – 5 respondents (62%) said they used it in the pass. The other 3 respondents (38%) said: (1) not knowing the concept; (2) not applied it due to the lack of time and (3) not applied it because the MVP concept didn't fit any of their projects.

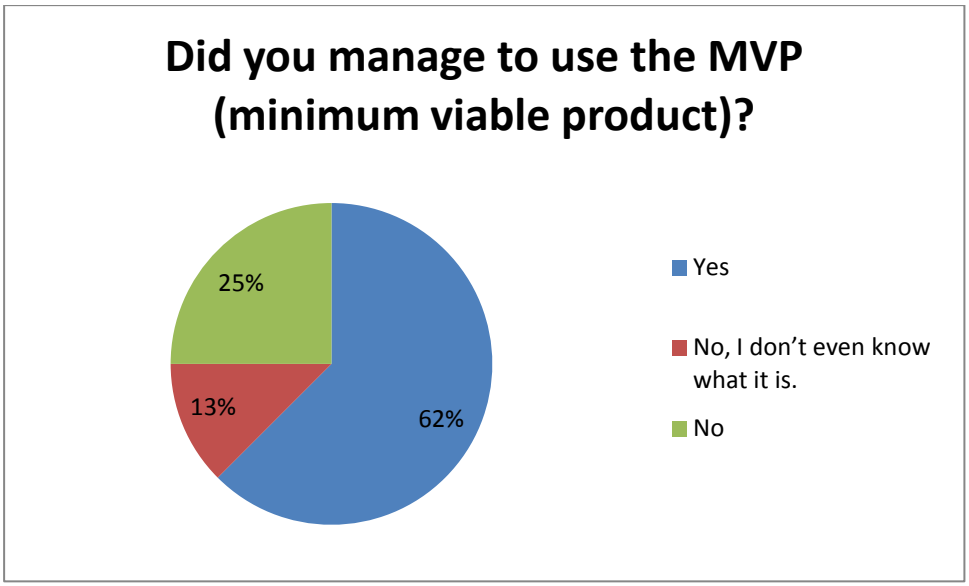

Figure 24: Use of the MVP

Participants were then asked whether they managed to formulate their business idea after the hypotheses were validated and fitted the market. To that, 7 respondents (88%) said they managed to and only 1 reported that speeded up the process.

Finally, with 100% of positive answers, participants showed great satisfaction and overall experience when asked about their preference for the Lean Startup methodology compared to the traditional methodology. The benefits of the Lean Startup methodology most commonly cited were: "at the end of the process it gives you less mistakes to handle with" (38%); "it gives a good understanding of what customers want (feedback of customers always present)" (31%) and "less risky" (19%) – Figure 25.

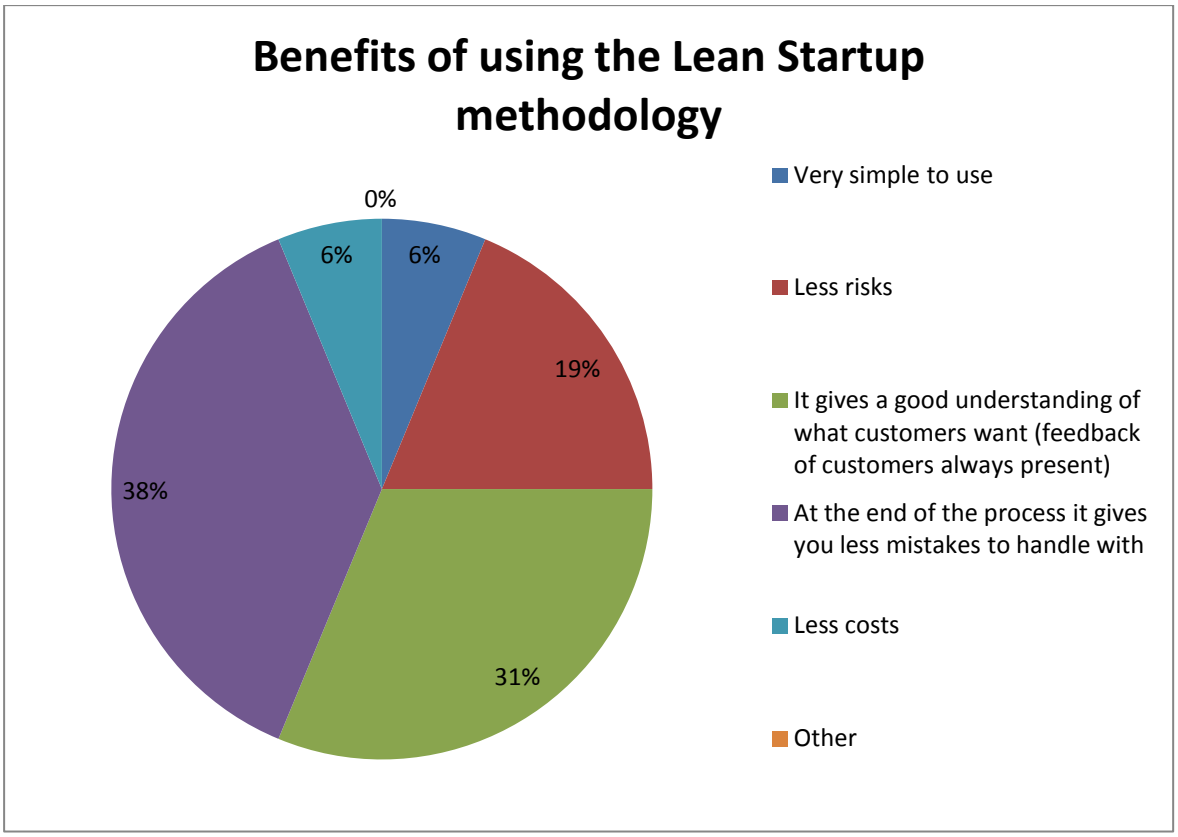

Figure 25: Benefits of using the Lean Startup methodology

The most common reasons given to justify why they preferred more the Lean methodology compared to the traditional methodology were: Less mistakes in the end (26%); higher chance to succeed (26%) and early feedback (21%) – Figure 26.

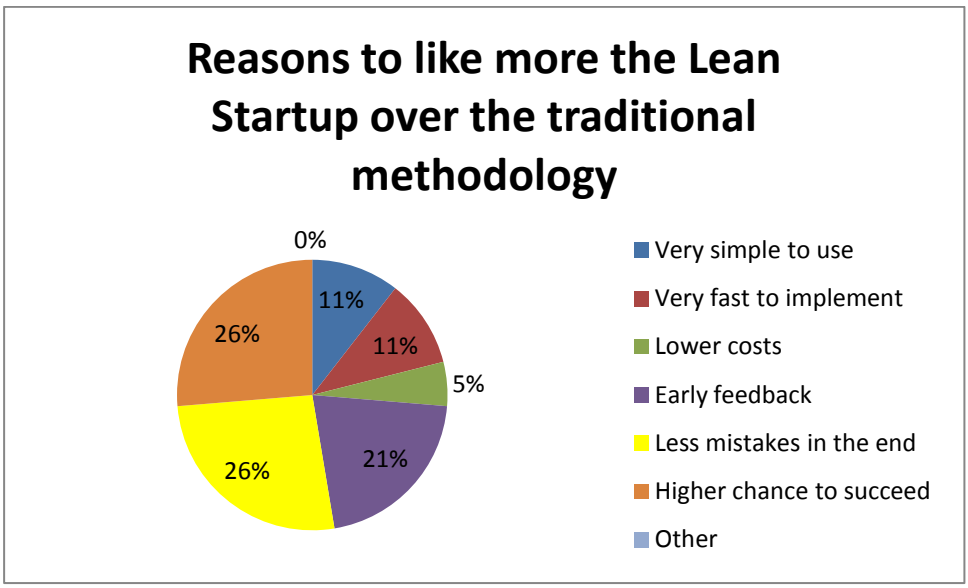

Figure 26: Reasons to like more the Lean Startup over the traditional methodology

Concerning the projects' details – Figure 27 and 28, illustrate the projects duration and the total cost of the 8 companies that have applied the Lean Startup methodology:

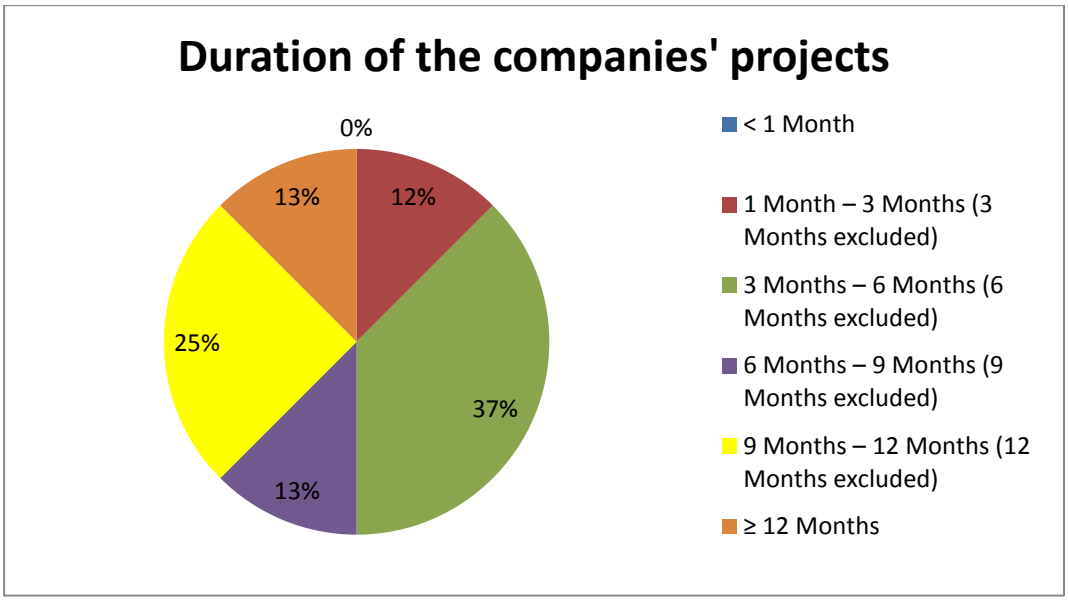

Figure 27: Companies' projects duration

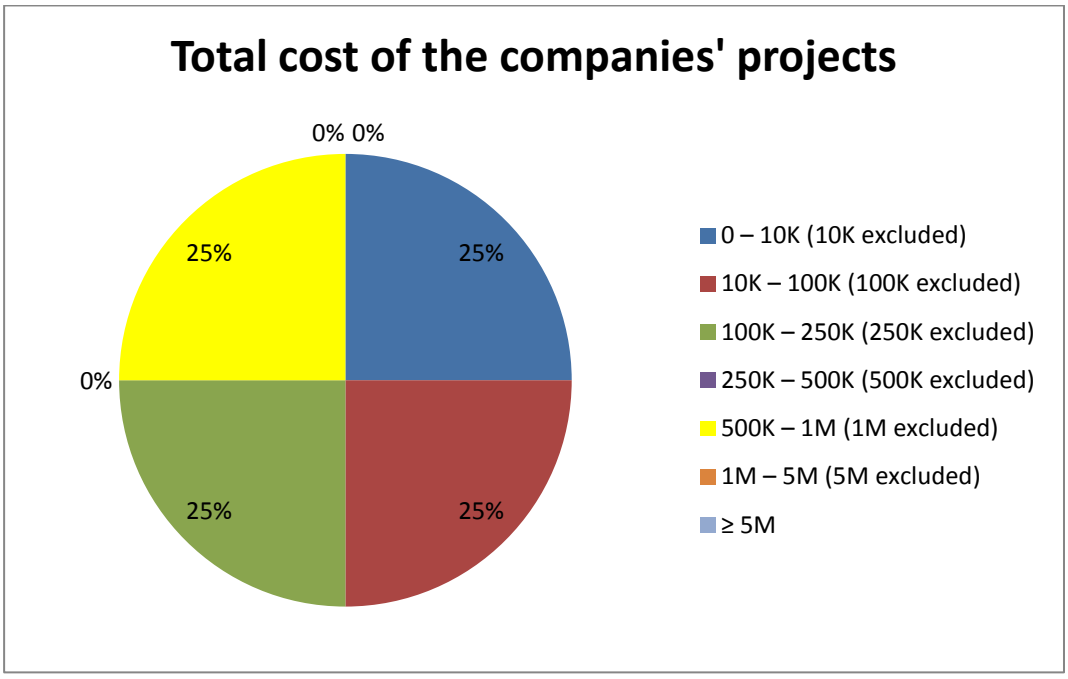

Figure 28: Companies' projects total cost

4.2 Follow-up interviews' results

A total of 14 out of 23 (61%) were available for a follow-up interview, while only 7 of them (30%) were contacted, accordingly to their availability at that time. The participants were asked to answer a series of open-ended questions depending on their knowledge and answers to the previous survey.

The follow-up interview had as a main objective to support the survey and try to better understand how and why companies innovate and how they work with the Lean Startup methodology. The 7 participants contacted were split into 3 groups:

4.2.1 First group: Didn't know the Lean Startup methodology and have never used it

To those who were available but didn't know the methodology and have never used it (two respondents, Açoreana Seguros and Unilever, from different industries), the article "Why the Lean Start-Up Changes Everything" by Steve Blank was sent to give them a better idea of what the thesis was about. Also, they were invited to share with the author their own way to innovate inside their companies and why innovation is important for them. The results showed that the two companies were in fact using a methodology really similar to the Lean Startup methodology. However the Lean Startup methodology showed to be more accurate than the other method of work they were using since it uses fundamental bases of pivoting and applies the MVP. It was also revealed that those companies were slowly increasing their innovation's efficiency every year and, in the future, possibly moving towards the Lean Startup methodology. The slowly transition effect, in their opinion, is due to the dimension of the companies as well as their old fashion mindset.

4.2.2 Second group: Knew the Lean Startup methodology and have already applied it

Within the group of respondents that knew the methodology and have already applied it, as well as their companies (three respondents, SGS, ActivoBank and BP Portugal from different industries), the follow-up interview was focused on their experiences with the methodology. The three companies demonstrated a positive overall experience with the Lean Startup methodology. Some witnessed failures as usual in all projects, however for them this methodology should be the standard system all companies should use. They have also shared that from project to project the implementation of the principles of the Lean Startup was different. Though the overall cycle was always concluded in some way or another according to what the project needed.

4.2.3 Third group: Knew the Lean Startup methodology, but have never applied it

The other group was that of respondents that knew the Lean Startup methodology, but still haven't applied it nor their companies (two respondents, Corticeira Amorim and Ocidental

Seguros, from different industries). Their main reason for not applying the Lean Startup methodology was the lack of their colleagues' knowledge about the method. They were also asked to share their experience in their own company, regarding how they innovate and why it is so important for them. Companies showed methodologies similar to the Lean Startup methodology, however most of the times feedback in an early stage was neglected. The process is made most of the time from the inside out rather than from the outside in. Some companies were afraid of the idea being stolen and sometimes the early feedback wasn't a good match with a specific project.

The other seven respondents weren't available at that time to a follow-up interview; therefore their feedback wasn't gathered.

4.2.4 Follow-up interview – ActivoBank

Carlos Gomes, responsible of ActivoBank's Innovation department, made himself available to give a more detailed follow-up interview about the Lean Startup methodology and his experience with it.

As the founder of the Innovation department, Carlos Gomes made clear his position about the importance of innovation inside a company. However with the inflexible regulation banks have to follow, making all kinds of creative innovation is impossible, he reported. Nevertheless Carlos Gomes stated that the Lean Startup methodology is used to foster innovation whenever possible.

"Differentiation" and "relationship with customers" were the two words reported by him to describe why innovation is important for ActivoBank. Since the regulation is very restrictive, according to Carlos Gomes, banks have to innovate to be different from each other.

As said, the major competitive advantage the bank could ever have is in the relationship with customers. Therefore ActivoBank switched the way "old banks" used to think and invested in the proximity with clients in a totally different way – for instance, generating new services that would increase their customers' engagement, breaking all the possible boundaries.

Carlos complemented by saying that the company's main value is how they work inside Activo, which is far from being replicable (cultural innovation isn't replicable as innovation technology is). Having fewer levels of hierarchy and an agile decision making – all decisions are taken around the table – contributed to this value. However, it is obvious that in larger

companies, these initiatives wouldn't be so easy to apply: a huge amount of banks are many times the size of ActivoBank and the high number of departments and managers is a major barrier.

The process of innovation inside ActivoBank is initiated firstly by the Innovation department. The department, which is composed only by 2 employees (typically one of them is an university's intern to foster outside ideas), works separately from all the others departments and all the decision-making goes directly to the CEO:

In the first stage of the process, they go "out of the building" to find new ideas.

Then, after having a proposal, they go directly to the CEO to get the approval to start developing the concept (second step).

Thirdly, the idea is explored to a point of solution prototyping and high level business case. Depending on the type of the project, customers are or not involved, since they do not always have the ability to know what is possible or not to be implemented (legal boundaries restrictions). In this stage, accordingly to Carlos Gomes, the Lean Startup methodology is put in practice, but first the method is adapted accordingly to the bank industry. Carlos Gomes thinks that this approach is more custom-made to new products or technology innovations.

After that, directors are included in the process and each director's department has to approve and add on the idea. In the implementation phase, made by one selected department, innovation department acts like a project manager.

A recent trading platform project for example was developed under the help of the Lean Startup methodology. ActivoBank invested in this platform to enhance even more the relationship they had with their clients, using the methodology to accomplish it successfully. This platform was initially tested with potential customers during some months. Meanwhile, with the feedback taken from customers, the platform was reconstructed accordingly. After the approval and all the pivoting, the platform was launched to the market.

In addition, ActivoBank had already other projects done with the Lean Startup methodology, which were also successful. For instance, "QR code P2P transfers" project – where people can make transfers and other services with the QR code – was first tested with several customers to check the usability of the new feature.

Furthermore, some initiatives, related to innovation, are already taking place in ActivoBank:

1. An internal idea generation program initiative, where workers can generate ideas to improve the bank and then the ideas are selected and evaluated to implementation; 2
2. Several innovation workshops taking place every a couple months, where some of the workers are recruited to have a day "out of the box", with the objective to think about ideas in a completely different environment;
3. Regular meetings to discuss all the projects "in the table" and new ideas.

For those and more successful projects, innovation department's founder thinks that an organization can get really successful when using innovation. Moreover, to be successful in it, the methodology of Lean Startup can be really helpful to foster innovation inside the company, when used in an appropriate way. To support that, Carlos Gomes reported some of the benefits of the Lean Startup methodology, such as being very simple to use, less risky and in the end of the process fewer mistakes have to be corrected. Furthermore, he also showed great enthusiasm about this methodology compared to other traditional methodologies, since it is of fast implementation and has feedback in an early stage, contributing to fewer errors at the end of the process.

By "using the Lean Startup in an appropriate way", Carlos Gomes meant that for each project and each industry the methodology needed to be adapted accordingly with the requirements. However a huge part of it being successful is being able to switch the close mind of big companies' workers as well as their way of acting inside the company.

Concluding, all the initiatives taken by ActivoBank are very important to their mission's accomplishment. They are working every day towards a trustful service and taking advantage of innovation as an asset to achieve it.

4.3 Case study: Millennium Lab's results

All three bootcamps were evaluated by each participant, making possible the analysis of the case study in a more precise way (appendix D).

Within a scale from 1 to 4, where 1 was totally disagree and 4 totally agree, a survey was conducted along with the participants of the Millennium Lab project. The main objective of this survey was to assess the benefits the project brought to the entire team. Below the results showed to each of the 3 bootcamps.

4.3.1 First bootcamp (52 participants)

When asked if the bootcamp reached the proposed objectives, 29 participants of the total 52 (56%) totally agreed with the question. It was also seen that 19 participants just agreed and, on the other hand 3 participants disagreed/totally disagreed with the proposition. 1 participant didn't have opinion on the subject.

Furthermore, the participants were asked more details about the contents, methods and structure of the first bootcamp. The two highlights of the survey were the relevance of the content addressed and the enhancement of the knowledge of each participant. The results showed that most of the participants totally agreed with these affirmations: 58% (30 participants) and 73% (38 participants), respectively. In contrast 4 participants and 1 participant totally disagreed/disagreed, respectively, about the relevance of the content taught and enhancement of their knowledge.

Regarding the actual learning the Lean Startup methodology allowed, 26 participants (50%) were in favor with it, 22 cited a total agreement and 4 participants (8%) disagreed.

Future application of the approached used was also positively verified: 42 participants (81%) showed confidence in starting applying new competences acquired and enhance some other skills they might have, compared to the small percentage of 15% (8 participants) that didn't show confidence to do it. 2 participants were indifferent to the question.

Majorly all participants reported an overall satisfaction towards the content taught in the first bootcamp and would recommend this trainee to their fellows.

4.3.2 Second bootcamp (45 participants)

Similarly to the first bootcamp, positive results were cited by the participants regarding the achievement of the proposed objectives. However it seems that participants were more certain about it in the first bootcamp than in the second: 67% of the respondents said "agree" and just 22% said "totally agree". Concerning the others, 11% said that disagree about the affirmation and none participant said totally disagree.

Additionally, contents taught, structure and methods applied were under analysis. Positive results were also seen, but again, with less certainty than in the first bootcamp. For instance, 38 participants (85%), contrasting with the other 5 respondents (11%), reported that addressed contents were relevant (2 participants were indifferent). Concerning the knowledge improvement, again a positive value was seen: 41 participants agreed compared with the 3

participants that disagreed (1 participant didn't answer). As well satisfaction was reported as 78% (35 participants) of the participants agreed about the effective learning the methodology allowed, compared to the other 9 participants. 1 respondent remain indifferent to the question.

Future application of the contents taught is also expected: 32 participants (71%) will might put in practice what was taught compared to the 8 participants that didn't demonstrate confidence to use it (5 participants didn't answer).

Again, an overall experience was showed by the participants regarding the second bootcamp, however this time more participants showed uncertainty about having the necessary conditions in the firm to apply the new techniques.

4.3.3 Third bootcamp (40 participants)

In the third bootcamp, results were also similar to the other bootcamps.

Participants reported an overall achievement of the objectives proposed for the initiative, this time with 98% of positive responses.

Concerning the contents taught, method applied and structure, once more, an overall agreement of the relevance of the addressed contents was reported. For instance 38 participants (95%) agreed compared to the 2 respondents that disagreed with the affirmation. Improvement of the knowledge of each participant was also proved with more than 50% of positive answers (39 participants – 98%). In addition, the method used in the Millennium Lab brought to the participants an effective learning, as proved in the results: 36 participants (90%) showed satisfaction towards the methodology used compared to the others 4 respondents (10%).

Furthermore future application was analyzed. 32 participants reported ability to apply the new competences acquired with the methodology, to improve their way of exercise their functions. However 4 respondents didn't feel like doing that and 4 other participants didn't have opinion about that affirmation.

Satisfaction was again seen and supported towards Millennium Lab, making them recommend the initiative.

4.3.4 Conclusions and suggestions made

An overall satisfaction was showed towards the initiative conducted by Millennium BCP, which in fact provided young employees an opportunity to stand out inside the company.

To improve the bank's next initiative, some suggestions were made by the participants. These suggestions included:

1. More supervision – people aren't used to the methodology and are still afraid to use it without any supervision and constant feedback;
2. More support from "superiors" – some participants reported that some departments and superiors weren't available to share information and help, making obvious that people inside established companies still have a close mind towards new perspectives and approaches;
3. Lack of time to understand deeply the new contents taught, making them doubt about the success of the new approach – participants worked all their career with a perspective that has little to do with this new methodology, so they showed initially a little bit of resistance when learning a totally different approach. Therefore more time was needed to make them confident.

Conclusions of this initiative were also provided:

1. An overall satisfaction towards the contents taught were showed by participants;
2. Participants felt an improvement in the way they work because of the new skills achieved;
3. Some respondents stated that this opportunity made them grow in a personal and professional way.

Chapter 5

5. Discussion and limitations

5.1 Survey limitations

The survey was given to the largest and most important companies in Portugal. For the accuracy of the results, the survey was given to the largest and most influential companies that operate today in Portugal (based on the PSI 20 and general PSI). Consequently their reluctance to answer the survey was higher than expected: as the companies operate all over the world, they have to be very competitive and therefore careful about all the information they release to the public. This fact explains partly the response rate of 46%.

The survey is composed mainly by close-ended questions. The exactness and quantity of collected data is not as extended as if the survey was an interview instead, since it was based mainly on "yes" and "no" answers. Therefore, to give respondents the opportunity to deep more into the subject, a follow-up interview was made after the survey to deepen some answers.

Approach. Since the survey is composed mainly by close-ended questions, respondents didn't have the opportunity to develop about the methodology they use in the company. In fact, several respondents demonstrated unawareness about the Lean Startup methodology when asked, which then led them to answer that they had never used it. However, in the follow-up interview, when questioned about their way to promote innovation inside their organizations, respondents reported using a very similar methodology, though without connecting it to the name "Lean Startup methodology".

5.2 Sample limitations

Response rate of 46%: 23 responses over 50 surveys delivered. There were three major factors that had contributed to the small sample: (1) The importance of the companies that were asked to participate in the survey; (2) not all employees were capable to answer the survey, due to the specificity of the subject and (3) the departments that were contacted were usually small, reducing the probability of them answering.

Companies' industries. In the sample, 7 different industries were analyzed, based on the companies' importance in Portugal. The sample didn't include all the existing industries in Portugal, far from it.

Restructure. Portugal is having a hard time overcoming the latest economical struggles. Consequently several important companies are making changes and restructuring internally their departments. With that in mind, some innovation initiatives and project departments were excluded, making less probable to find the right individual answering the survey.

Methodology. Although participants of the survey were selected rigorously according to their knowledge on the subject, only one person inside the company was asked to answer. This fact might make the results less accurate, since the author couldn't be sure that the result expressed by that specific individual represents the mind-set of the entire company. To demonstrate this concern the author asked from two different fellows at Portugal Telecom to answer the survey. The answers were different – one knew and already used the methodology and the other didn't. However the respondent that knew the Lean Startup methodology said that Portugal Telecom already used it and the other was unaware of the company using that specific methodology.

Biased sample. As already mentioned, the sample was selected and chosen based on the companies' degree of importance in Portugal. Also the participants within the organizations were selected based on their knowledge of the topic. Not choosing the sample randomly can be somehow considered a bias contributor.

5.3 Discussion

In this part, the author will evoke the hypotheses stated throughout the thesis and put them into discussion. Regarding those hypotheses, the main surveys' and interviews' findings were the follow (appendix E):

1. Innovation is in fact important for companies to stay competitive in the industry;
2. Using different types of innovation will actually contribute to the efficiency of the company;
3. Mostly all companies that were unfamiliar with the term "Lean Startup methodology", did report use of specific principles aligned with that methodology;
4. For those established firms that already used the Lean Startup methodology, more benefits were achieved while using it instead of the traditional methodologies;

5. Radical innovation is used more inside a company that applies the Lean Startup methodology instead of the traditional methodologies.

5.3.1 Innovation in established companies

As suggested by Abernathy and Michael Porter, innovation is the best way companies have to gain competitive advantage over other firms (Abernathy, 1978; Porter, 1990). Moreover for many known authors this sense of need is higher for established companies since they face a tremendous competition caused by their systematic/rigid way of operating.

Due to these reasons and more (for instance differentiating themselves from others firms in the same industry); innovation is stated as important/very important for all the companies questioned (23 companies, 7 industries). Supporting that, results also showed that the way they are innovating inside the company is being improved from year to year.

The survey's results clearly validate this hypothesis. Companies are showing acknowledgement towards the importance of innovation and their attitudes confirm that: Firms are investing in new services and processes that will bring them more clients, meaning that they are already using innovation to get stronger attachment with their customers and achieve greater economic results. They are using the brand in a way that will differentiate them over the others. Companies also showed great interest and care in spreading internally this innovative spirit and techniques.

5.3.2 Types of innovation

Nowadays the different types of innovation a company is able to use, in order to become more efficient and outstanding, are of major importance. Organizations that do it in the wrong way may be rapidly substituted by new firms that do it more effectively (Hedner, Maack, Abouzeedan, & Klofsten, 2010).

Results showed that the process through in which the company is operating and the way they present their brand are the two types of innovation companies use more often. Those two types, with 82% and 70% positive responses rate, respectively, represent the path companies found to give them competitive advantage over others established firms.

It is also revealed that all companies use in a certain way the ten different types of innovation, according to what they need in their industries. Contradicting what was thought for many years, development of new products is not the only type of innovation companies use to achieve competitive advantage.

5.3.3 Lack of individuals using the Lean Startup methodology

The Lean Startup methodology is a recent acquisition that is slowly taking its place in the world.

Named by Eric Ries for startups usage, it is now slowly being adopted also by important established companies (Nobel, 2013). For that reason, not all inquired companies are yet familiar with this specific methodology – a total of 9 respondents (39%) answered yes compared to 14 (61%) that said no, whose companies never used that method.

However follow-up interviews showed something very interesting: Most respondents who weren't familiar with the term, revealed great tendency to apply the essence behind the Lean Startup methodology, without knowing that they were in fact using the fundamental basis of it. This suggests that although a high portion of respondents were not familiar with the method, they did use specific principles aligned with the methodology.

On the other hand, the group that claimed familiarity with the method and did apply it (8 respondents in 23) showed knowledge of it. All the respondents indicated awareness of the fundamental cycle (building-measuring-learning cycle) and took precautions according to what they have achieved – moreover 7 respondents pivoted (changed something about the business model) and 1 perished (went on with what they already had). The MVP was the most controversial part of the overall process, revealing some individuals that manage to use it and some not even knowing the meaning of the concept. Also follow-up interviews revealed that different projects would ask for different types of processes and in this part common sense was generally put into practice. When launching the idea, almost all had great experiences and accomplished the process whenever the idea fitted the market.

At the end, results are contradicting Ron Ashkenas thoughts about the methodology being a "going back in time" and that established companies are still using the traditional business plan (Ashkenas, 2011). What has been seen, based on the results of this thesis, is that companies are going, increasingly, towards the essence behind the Lean Startup model and fewer are still using the traditional method of applying the business plan.

5.3.4 Benefits achieved by existing companies from using the Lean Startup methodology

8 in 23 respondents (35%) answered that they had already used the Lean Startup methodology in a project they were part of. Those respondents reported an overall success of the projects having demonstrated a preference to this methodology over the traditional one.

Benefits of the Lean Startup methodology most commonly cited by them were in fact very similar to what Steve Blank and Eric Ries reported: the Lean Startup methodology will reduce risk and will contribute to fewer mistakes along the way (Ries, 2011; Blank, 2013). Indeed, very similar to what was answered by the respondents: “at the end of the process it gives you less mistakes to handle with” (38%); “it gives a good understanding of what customers want (feedback of customers always present)” (31%) and “less risky” (19%). Moreover, the most common reasons respondents gave to justify why they liked more the Lean methodology compared to the traditional methodology were: Less mistakes in the end (26%); higher chance to succeed (26%) and early feedback (21%).

The fourth hypothesis is validated with the results showed and comes to support what Scott Cook reported by saying that established companies will benefit more from the Lean Startup methodology than startups. This methodology will help them be more successful by making them avoid the innovation stagnation companies face: "Success is a powerful thing, it tends to make companies stupid, and they become less and less innovative" - Scott Cook (Nobel, 2013).

Therefore, Lean Startup methodology is actually a great tool companies have to foster innovation, and so established companies should use it too.

5.3.5 Radical innovation is strongly related with the usage of the Lean Startup methodology

Individuals that are part of mature companies work under a systematic way, inhibiting them to bring radical innovations (ideas that can change customer experience or create a new market) to the market and, unfortunately, making the incremental exploitation (ideas that are small upgrades of the current capabilities) the most common innovation used (Martin, 2009). Though, with the introduction of the Lean Startup methodology inside established firms what is seen is that they tend to use more radical innovations and thinking out of the box, bringing inevitably more success to the company.

Validation of this hypothesis is strongly demonstrated in the survey's results. It is seen that none of the companies used Lean Startup methodology to implement an incremental innovation and that more than 50% of the respondents (67% in the first part of the survey, 75% in the second part) answered that the innovation was more a radical innovation than incremental innovation.

Chapter 6

6. Conclusion and future research

6.1 Conclusions

The aim of this thesis was to evaluate to what extent Lean Startup methodology could be used to foster innovation in mature companies. To do so, four research questions were developed and explored. The main conclusions, based on what was seen in this thesis, are described below:

1. Innovation is important for companies to stay competitive in the industry. In fact, when asked about that question in the survey, results revealed that companies acknowledge and acted towards that;
2. Companies do use different types of innovation to be more efficient. It is seen in the results that the process of operating and the way companies represent their brand, are the most common types of innovation used;
3. Mostly all companies that were unfamiliar with the term "Lean Startup methodology" did report to use specific principles aligned with that methodology. The results showed that many of the companies that were unfamiliar with the Lean Startup methodology were in fact using a really similar process, which will possibly evolve, later on, to the Lean Startup methodology;
4. Results came to prove that established firms that use the Lean Startup methodology achieve more benefits than companies that use the traditional methodology;
5. It was shown that the use of radical innovation increases when the company applies the Lean Startup methodology instead of the traditional methodology.

6.2 Future research

An important area that needs to be subject of future research is obviously the survey. Improvement of the survey is something that is needed in order to have a more precise conclusion. Having a larger sample, with more industries included will contribute to more meaningful findings. Also more employees inside the same company had to be questioned. Although they were selected rigorously accordingly to their knowledge about the topic, the enhancement could increase the accuracy of the results, since the author couldn't be sure that

the result expressed by that specific individual represents the thinking of the entire company. Furthermore, investing in more detailed follow-up interviews will certainly add value to the research.

Besides investing in surveys and interviews, conferences about the Lean Startup methodology and its benefits, will be a great way to educate people. Workers need to start opening their minds, therefore having them participating in conferences and group works about it will help them learn different ways of thinking and acting. Those sessions and activities should be made by people that work inside established firms and know, believe and had past experiences with that method.

Since the Lean Startup methodology is very "startup" and "product" centered, an adaptation of the method to mature firms should also be explored. Established organizations should know how to use the method accordingly to their needs and in the best way to foster innovation.

Furthermore, other theses about this topic could be developed, in fact during research it was found that not many studies have been developed by students. Two examples of research done by students around Lean Startup methodology are that of Thomas Casselman's thesis focused in the Lean Startup methodology applied in complex products (Casselman, 2014) and Aleksander Blomberg's thesis focused in the applicability of the method outside Silicon Valley (Blomberg, 2012).

Chapter 7

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Chapter 8

8. Appendices

8.1 Appendix A – survey template (provided to the participants in Portuguese)

Introduction

My name is Liat Schliesser and I am currently enrolled in the last semester of the course of Strategy and Entrepreneurship, doing my thesis, at Católica School of Business and Economics University.

As part of my thesis, I will analyze the Lean Startup model and how it may be used to promote innovation in established companies. Thus, I conducted a survey directed to enterprises of great importance in Portugal, to assess how the innovation and the Lean Startup methodology are introduced under the same.

Companies that agree to participate in this inquiry will have the opportunity to view the final report and access to all relevant data. This report will give an overview of how the company is positioned compared to others on the market as a means of innovation.

As a student, your participation in this survey is extremely important for the completion of the thesis, as it will support the research that I'm doing. Therefore, I appreciate your availability.

1) Is innovation important for your company?

Very much	
Yes	
More or less	
Not at all	

2) Please, from a scale of 1 to 5, evaluate each of these ten types of innovation accordingly to the usage it has in your company.

(Help button) To see more: **Ten Types of Innovation: The Discipline of Building Breakthroughs book by Larry Keeley**

	Name	Evaluation
1	Profit model	
2	Network	
3	Structure	
4	Process	
5	Product performance	
6	Product system	
7	Service	
8	Channel	
9	Brand	
10	Customer engagement	

Definitions (help button):
(1) Business/Profit Model, different ways that the enterprise can find to make money; (2) Network, ideas that will help the firm to connect with customers creating more value to them; (3) Structure, how the firm is able to organize itself with what they have available (assets and talents), in order to create more value; (4) Process, through which the company is doing things – ideas that can enable the company to use unique capabilities, function efficiently, adapt quickly, and build market–leading margins that are ideally not replicable; (5) Product performance, how the company can create a product over the edge and different from all the others that will create more value to the customer; (6) Product system, the capacity of the company to create new complementary products/services to that specific product; (7) Service, new ways to deliver the service to the customer that amplify the value of the offering; (8) Channel, the capacity that the company has in innovating through different types of channels that are available in the market to communicate with customers; (9) Brand, the way that the company represents itself can be a way of innovation also and, (10) Customer engagement, how the company can get, keep and grow customers in an innovative way.

3) Have you ever thought of getting better in the way you're innovating in your company?

Yes	
No	

4) Did you ever think of applying the Lean Startup Methodology in your company?

Yes and I know this method	
Yes, but I don't know much about this method	
No and I know this method	
No, because I don't even know the method	

Lean Startup Methodology definition
(Help button) Developed by Eric Ries, the Lean Startup Methodology, mainly used by startups, will make the process of launching a business or a project less risky. The process is in favor of launching any new business or product based on validated learning, experimentation and frequent releases which allow you to measure and gain valuable customer feedback.
To know more see: "why lean startup changes everything" by Steve Blank

2) Did your company ever use this method?

Yes		Continue to question 3
No		Continue to question 7

3) Do you think the workers in the organization were comfortable with the Lean Startup Methodology?

Yes	
No - why do you think people were uncomfortable?	(1)Lack of understanding about the methodology; (2)People weren't used to the way the new methodology functioned; (3)Some of the workers had bad past experiences with the methodology; (4)Lack of success' credibility towards the new method; (5)I am not aware of; (6)Other? Explain

4) The project that your company tried to developed under this methodology was for innovation purposes (for example: new ideas to develop, new products to implement, etc.)?

Yes		Continue to question 5
No - What kind of project was?		Continue to question 6

5) From 1 to 10 how radical was that innovation? 1 being an incremental innovation (ideas that are small upgrades of the current capabilities) and 10 a radical innovation (ideas that can change customer experience or create a new market).

1 5 10

6) Do you think it was successfully implemented?

Yes	
No – Why?	(1)Lack of information; (2)Lack of time; (3)Resistance from the members of the board and so, lack of resources to do it in the right way (e.g. company doesn't allow them to do a lot of tests; manager doesn't believe in the success of this methodology); (4)Lack of involvement in the overall company (people aren't used to this new methodology); (5)Not much customer feedback achieved; (6)Other? Explain
I don't know	

7) Have you ever implemented this methodology in a project that you were part of?

Yes		Continue to question 8
No – Why?	(1)My company doesn't allow this methodology;	Continue to question 19

	(2)My fellows didn't want to use this methodology; (3)People didn't believe in the success of the lean startup methodology; (4)My fellow didn't know the methodology; (5)I didn't want to implement it, because I am not used to; (6)Other? Explain

8) The project was for innovation purposes (for example: new ideas to develop, new products to implement, etc.)?

Yes		Continue to question 9
No - What kind of project was?		Continue to question 10

9) From 1 to 10 how radical was that innovation? 1 being an incremental innovation (ideas that are small upgrades of the current capabilities) and 10 a radical innovation (ideas that can change customer experience or create a new market).

1 5 10

10) In your point of view, were you able to apply it successfully?

Yes	
No – Why?	(1)Lack of time (not much time to do experimentations, to do research, to have customer feedback, etc.); (2)Lack of information; (3)Lack of support in the organization; (4)Other? Explain

The Lean Startup Methodology focuses mainly in the fundamental principle of Building-Measuring-Learning. Meaning that first entrepreneurs develop an idea into a prototype, then they test it (using Minimum Viable Products) and afterwards, entrepreneurs use feedback to pivot (change something in the business model), perish (continue) or preserve the idea.

The questions below will be focused mainly on the methodology you used.

11) Have you gone through the fundamental cycle of this methodology, of building, testing and learning with the results achieved?

Yes	
No	(1)Didn't have time; (2)Didn't ask feedback before launching the product;

	(3)Made my own methodology that I were used to it; (4)Other? Explain

12) Did you manage to use the MVP (minimum viable product)?

Yes	
No, I don't even know what it is.	
No	(1)Lack of time (not much time to do experimentations, to do research, to have customer feedback, etc.); (2)Lack of info about how to do it properly; (3)Lack of support in the organization; (4)I tried to make it, but it went wrong; (4)Other? Explain

13) Did you take actions accordingly to what you have achieved?

Yes	(1)Pivoted (change something about the business model); (2)Perished (go on with what you have); (3)Preserved (drop the idea)	
No		

14) Did you manage to build your idea only after the entire hypotheses were validated and your idea fitted the market?

Yes	
No	(1)I rushed the process; (2)Other? Explain

15) In general, did you like to use the Lean Startup Methodology? What were the benefits/limitations that you have found? (Choose how many options you would like)

Yes, I will use it again – Why?	(1)Very simple to use; (2)Less risks; (3)It gives a good understanding of what customers want (feedback of customers always present); (4)At the end of the process it gives you less mistakes to handle with; (5)Less costs; (6)Other? Explain
No, I won't use it anymore – Why?	(1)Very confusing, a lot of tests to do, a lot of hypothesis; (2) Not used to it, so I'm not comfortable about using it;

	(3)Not so convinced that it is successful; (4)Other? Explain

16) Now that you were able to try both methods, what type did you like most: Traditional one or the Startup methodology? Why?

Traditional one – Why?	(1)Very precise; (2)Methodic; (3)I'm familiar with/used to it; (4)Other? Explain
Lean Startup Method – Why?	(1)Very simple to use; (2)Very fast to implement; (3)Lower costs; (4)Early feedback; (5)Less mistakes in the end; (6)Higher chance to succeed; (7)Other? Explain

17) What was the length of the project that was under the Lean Startup Methodology?

< 1 Month	
1 Month – 3 Months (3 Months excluded)	
3 Months – 6 Months (6 Months excluded)	
6 Months – 9 Months (9 Months excluded)	
9 Months – 12 Months (12 Months excluded)	
≥ 12 Months	

18) What was the total cost of the project (in euros)?

0 – 10K (10K excluded)	
10K – 100K (100K excluded)	
100K – 250K (250K excluded)	
250K – 500K (500K excluded)	
500K – 1M (1M excluded)	
1M – 5M (5M excluded)	
≥ 5M	

19) Would you like to add something that you think would be relevant to my dissertation?

20) Department where you work

Marketing Department	
Inovation Department	

Project Department	
Financial Department	
Strategy Department	
Another one?	

21) Company name where you work (all the information will be exclusively used for dissertation purposes)

22) Company industry

Phone operators	
Technology	
Energy	
Banks	
Insurance companies	
Retailers	
Service companies	
Healthcare insurance	
Another one?	

23) Would you have time to a quick interview with me?

Yes		Please provide me an email or any other contact, to be able to get in touch with you
No		

All the participants will be sent an email with the main conclusions of this research.
Thank you for your time!

8.2 Appendix B – Companies' list

Industry	Company's name	Department
Phone Operators	Vodafone Portugal	Human Resources
	NOS	
	MEO	
	PT	External relations and startups VS. financial department (mãe Luís)
Technology	Samsung	Human Resources
	Intelligent Sensing Anywhere (ISA)	Innovation
	Tlantic (Sonae group)	Chief Information officer
	Glintt	
Energy	EDP	

companies	GALP	Commercial
	BP Portugal	Marketing
	Repsol	
	Ren	Investment relations
Banking	Millennium BCP	
	BNP paribas	Human Resources
	Banif	Especial Projects
	Novo Banco	Marketing
	Santander	Innovation
	Caixa Geral de Depósitos	Human Resources
	ActivoBank	Innovation
	Invest	Marketing
	Banco popular	Marketing
	Caixa capital	Capital de risco
	BPI	Investment relations
Insurance companies	AXA	
	Tranquilidade	Executive Board Member
	Fidelidade	Marketing
	Ocidental seguros	Strategic projects
	Multicare	
	Medis	Project
	AdvanceCare	
	Açoreana	Innovation
Retailers	Unilever	Chief Executive Officer
	Jerónimo Martins	
	Nestle	
	SUMOL + compal	Linkedin contact
	SONAE	Human Resources
Service companies	Amorim cortiça	Innovation
	Teixeira Duarte	Marketing
	SGS (mediador de seguros)	Commercial
	CTT	Innovation
	DHL	Marketing
	Soares da Costa	Marketing
	CIMPOR (cimentos de portugal)	Marketing
	Portucel S.A.	
	Martifer	Investment relations
	INAPA	Investment relations
	TAP	Marketing
	Cofina	Investment relations
	Media capital	Investment relations

	Email sent and answered
	Email sent but no answer
	Email sent and refused to answer
	Companies that answered to the survey and give a follow-up interview

Number of companies contacted	50
Number of answers	23
Number of follow-up interviews	7

8.3 Appendix C – The other types of innovation analyzed

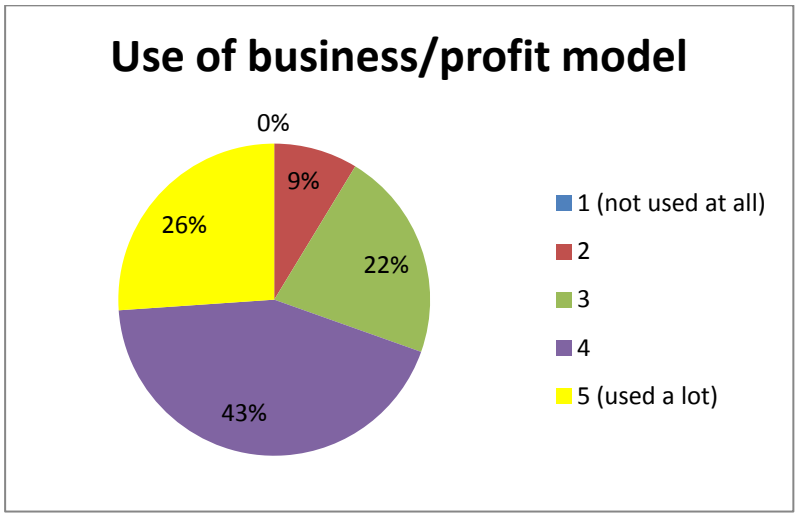

Figure 29: Use of Business/profit model innovation

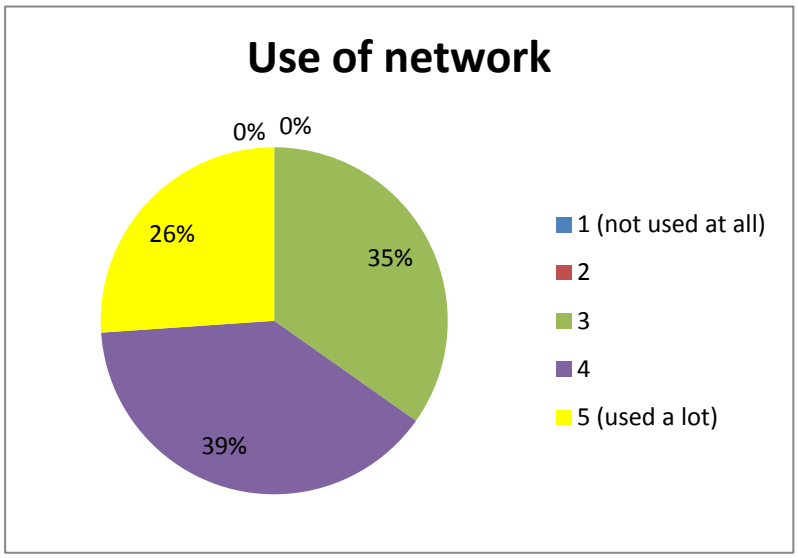

Figure 30: Use of Network innovation

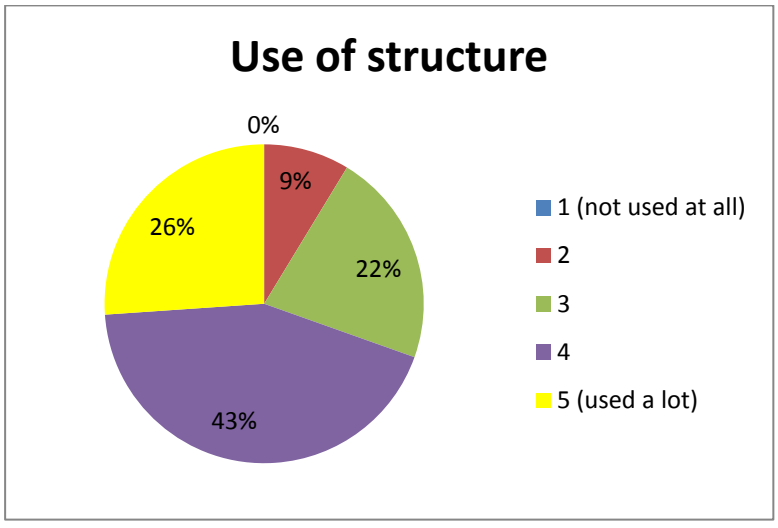

Figure 31: Use of Structure innovation

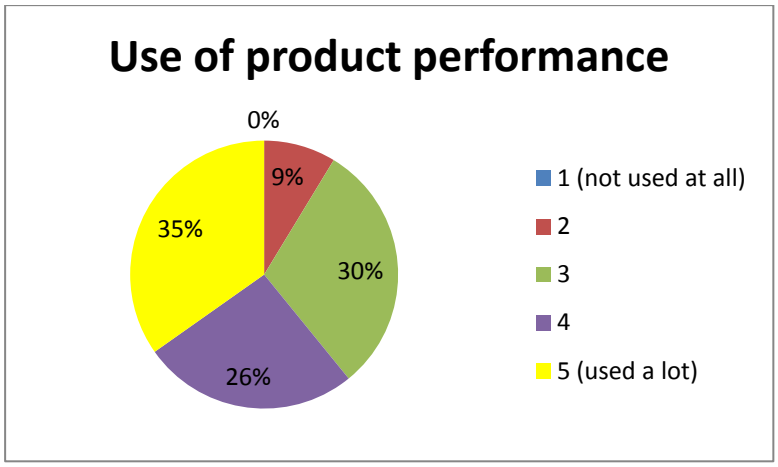

Figure 32: Use of Product performance innovation

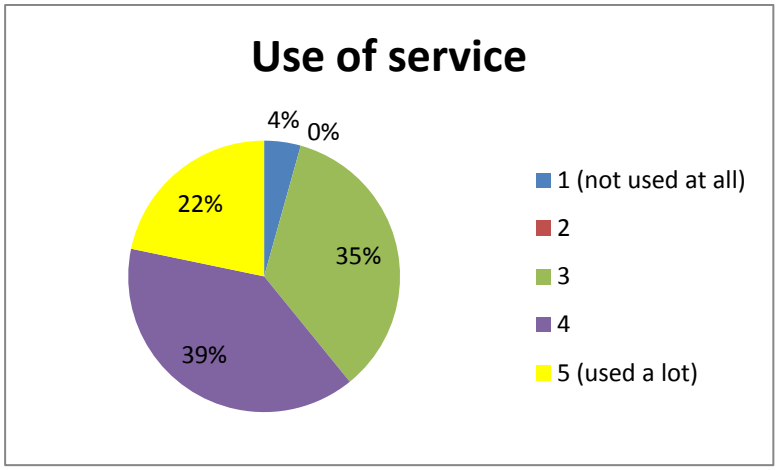

Figure 33: Use of Service innovation

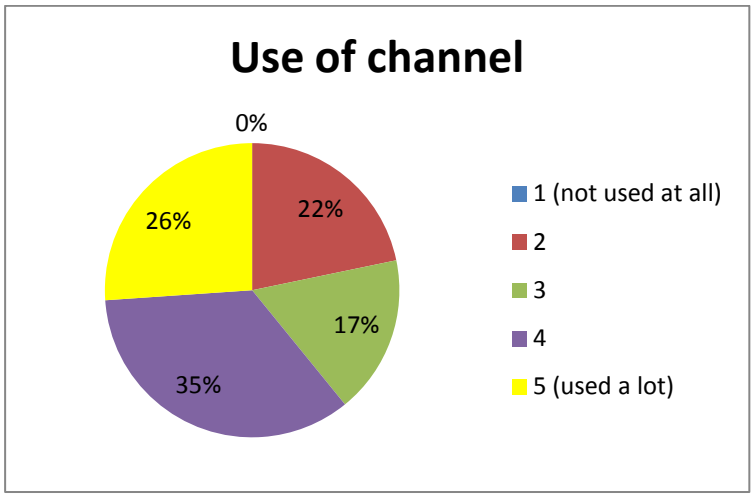

Figure 34: Use of Channel innovation

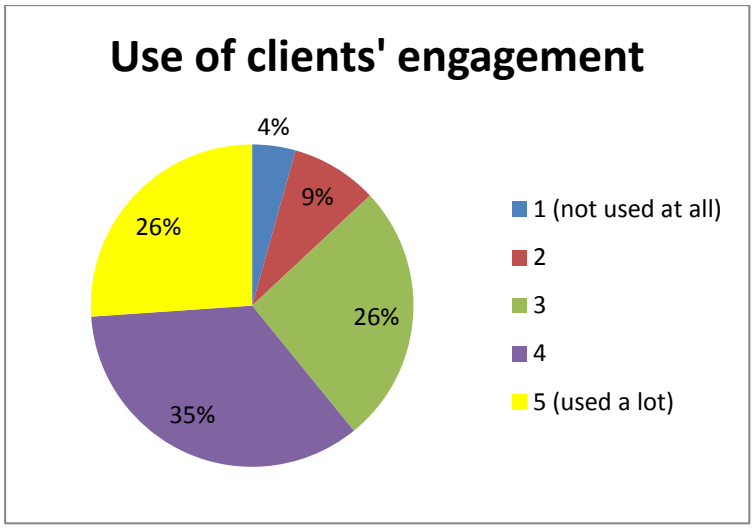

Figure 35: Use of Clients' engagement innovation

8.4 Appendix D – survey template made by Millennium BCP (provided by them in Portuguese)

Curso	Acção	Id do questionário	N.º de formandos com respostas
BCP - ID 77	Millennium Lab - Sessão de abertura e 1º bootcamp	77	52
Média das Médias: **3,461** (55,383/16)			

1. Objetivos			
	1.1.	Esta ação de formação atingiu os objetivos que se propôs.	Resposta 1 - **1** ocorrências - 1,92% Resposta 2 - **2** ocorrências - 3,85% Resposta 3 - **19** ocorrências - 36,54% Resposta 4 - **29** ocorrências - 55,77% Resposta s/r - **1** ocorrências - 1,92% **Média: 3,49**
	1.2.	A ação de formação foi ao encontro das minhas expectativas.	Resposta 1 - **2** ocorrências - 3,85% Resposta 2 - **3** ocorrências - 5,77% Resposta 3 - **20** ocorrências - 38,46% Resposta 4 - **26** ocorrências - 50,00% Resposta s/r - **1** ocorrências - 1,92% **Média: 3,37**
	1.3.	Tive conhecimento antecipado dos objetivos desta ação de formação.	Resposta 1 - **1** ocorrências - 1,92% Resposta 2 - **4** ocorrências - 7,69% Resposta 3 - **27** ocorrências -

			51,92% Resposta 4 - **20** ocorrências - 38,46% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,27**
2. Conteúdos, métodos, estrutura			
	2.1.	Os conteúdos abordados são relevantes para a minha função atual/futura.	Resposta 1 - **1** ocorrências - 1,92% Resposta 2 - **3** ocorrências - 5,77% Resposta 3 - **17** ocorrências - 32,69% Resposta 4 - **30** ocorrências - 57,69% Resposta s/r - **1** ocorrências - 1,92% **Média: 3,49**
	2.2.	Esta ação de formação acrescentou valor aos conhecimentos que eu já possuía.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **1** ocorrências - 1,92% Resposta 3 - **11** ocorrências - 21,15% Resposta 4 - **38** ocorrências - 73,08% Resposta s/r - **2** ocorrências - 3,85% **Média: 3,74**
	2.3.	As técnicas de formação adotadas (apresentações, casos, exercícios simulações, discussão em pequenos grupos, etc.) contribuíram eficazmente para desenvolver as competências previstas nos objetivos.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **2** ocorrências - 3,85% Resposta 3 - **20** ocorrências - 38,46% Resposta 4 - **29** ocorrências - 55,77% Resposta s/r - **1** ocorrências - 1,92% **Média: 3,53**
	2.4.	O método usado permitiu-me uma aprendizagem efetiva.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **4** ocorrências - 7,69% Resposta 3 - **26** ocorrências - 50,00% Resposta 4 - **22** ocorrências - 42,31% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,35**
	2.5.	Considero adequada a duração e a repartição de tempos desta ação de formação.	Resposta 1 - **3** ocorrências - 5,77% Resposta 2 - **12** ocorrências - 23,08% Resposta 3 - **22** ocorrências - 42,31% Resposta 4 - **13** ocorrências - 25,00%

			Resposta s/r - **2** ocorrências - 3,85% **Média: 2,90**
3. Intervenção do formador			
	3.1.	O formador revelou bons conhecimentos das matérias em apreço e boa preparação.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **0** ocorrências - 0,00% Resposta 3 - **11** ocorrências - 21,15% Resposta 4 - **41** ocorrências - 78,85% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,79**
	3.2.	O formador revelou bom domínio das técnicas e métodos de formação utilizados.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **0** ocorrências - 0,00% Resposta 3 - **9** ocorrências - 17,31% Resposta 4 - **43** ocorrências - 82,69% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,83**
	3.3.	O formador dinamizou a participação de todo o grupo.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **2** ocorrências - 3,85% Resposta 3 - **9** ocorrências - 17,31% Resposta 4 - **40** ocorrências - 76,92% Resposta s/r - **1** ocorrências - 1,92% **Média: 3,75**
	3.4.	As potencialidades do grupo foram aproveitadas em pleno.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **5** ocorrências - 9,62% Resposta 3 - **21** ocorrências - 40,38% Resposta 4 - **26** ocorrências - 50,00% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,40**
4. Aplicação futura			
	4.1.	Com as novas competências adquiridas, sinto-me capaz de melhorar de imediato a forma como exerço as minhas funções.	Resposta 1 - **2** ocorrências - 3,85% Resposta 2 - **6** ocorrências - 11,54% Resposta 3 - **18** ocorrências - 34,62%

			Resposta 4 - **24** ocorrências - 46,15% Resposta s/r - **2** ocorrências - 3,85% **Média: 3,28**
	4.2.	Possuo as condições necessárias no meu local de trabalho para aplicar de imediato estas novas competências.	Resposta 1 - **1** ocorrências - 1,92% Resposta 2 - **6** ocorrências - 11,54% Resposta 3 - **24** ocorrências - 46,15% Resposta 4 - **16** ocorrências - 30,77% Resposta s/r - **5** ocorrências - 9,62% **Média: 3,17**
	4.3.	Recomendo esta ação de formação a todos os colegas com necessidades de formação idênticas às que eu tinha.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **3** ocorrências - 5,77% Resposta 3 - **17** ocorrências - 32,69% Resposta 4 - **28** ocorrências - 53,85% Resposta s/r - **4** ocorrências - 7,69% **Média: 3,52**
5. Apreciação global da ação de formação			
	5.1.	Apreciação global da ação de formação	Resposta 1 - **2** ocorrências - 3,85% Resposta 2 - **2** ocorrências - 3,85% Resposta 3 - **15** ocorrências - 28,85% Resposta 4 - **32** ocorrências - 61,54% Resposta s/r - **1** ocorrências - 1,92% **Média: 3,51**

Curso	Acção	Id do questionário	N.º de formandos com respostas
BCP - ID 77	Millennium Lab - 2 bootcamp	77	45
Média das Médias: **3,107** (49,707/16)			

1. Objetivos			
	1.1.	Esta ação de formação atingiu os objetivos que se propôs.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **5** ocorrências - 11,11% Resposta 3 - **30** ocorrências - 66,67%

			Resposta 4 - **10** ocorrências - 22,22% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,11**
	1.2.	A ação de formação foi ao encontro das minhas expectativas.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **10** ocorrências - 22,22% Resposta 3 - **27** ocorrências - 60,00% Resposta 4 - **8** ocorrências - 17,78% Resposta s/r - **0** ocorrências - 0,00% **Média: 2,96**
	1.3.	Tive conhecimento antecipado dos objetivos desta ação de formação.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **3** ocorrências - 6,67% Resposta 3 - **31** ocorrências - 68,89% Resposta 4 - **11** ocorrências - 24,44% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,18**
2. Conteúdos, métodos, estrutura			
	2.1.	Os conteúdos abordados são relevantes para a minha função atual/futura.	Resposta 1 - **2** ocorrências - 4,44% Resposta 2 - **3** ocorrências - 6,67% Resposta 3 - **26** ocorrências - 57,78% Resposta 4 - **12** ocorrências - 26,67% Resposta s/r - **2** ocorrências - 4,44% **Média: 3,12**
	2.2.	Esta ação de formação acrescentou valor aos conhecimentos que eu já possuía.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **3** ocorrências - 6,67% Resposta 3 - **28** ocorrências - 62,22% Resposta 4 - **13** ocorrências - 28,89% Resposta s/r - **1** ocorrências - 2,22% **Média: 3,23**
	2.3.	As técnicas de formação adotadas (apresentações, casos, exercícios simulações, discussão em pequenos grupos, etc.) contribuíram eficazmente para desenvolver as competências previstas nos objetivos.	Resposta 1 - **1** ocorrências - 2,22% Resposta 2 - **6** ocorrências - 13,33% Resposta 3 - **27** ocorrências - 60,00% Resposta 4 - **10** ocorrências - 22,22% Resposta s/r - **1** ocorrências - 2,22% **Média: 3,05**
	2.4.	O método usado permitiu-me uma aprendizagem efetiva.	Resposta 1 - **1** ocorrências - 2,22% Resposta 2 - **8** ocorrências - 17,78% Resposta 3 - **28** ocorrências - 62,22% Resposta 4 - **7** ocorrências - 15,56% Resposta s/r - **1** ocorrências - 2,22% **Média: 2,93**
	2.5.	Considero adequada a duração e a repartição de tempos desta ação de formação.	Resposta 1 - **2** ocorrências - 4,44% Resposta 2 - **14** ocorrências - 31,11% Resposta 3 - **21** ocorrências -

			46,67% Resposta 4 - **8** ocorrências - 17,78% Resposta s/r - **0** ocorrências - 0,00% **Média: 2,78**
3. Intervenção do formador			
	3.1.	O formador revelou bons conhecimentos das matérias em apreço e boa preparação.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **1** ocorrências - 2,22% Resposta 3 - **22** ocorrências - 48,89% Resposta 4 - **22** ocorrências - 48,89% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,47**
	3.2.	O formador revelou bom domínio das técnicas e métodos de formação utilizados.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **2** ocorrências - 4,44% Resposta 3 - **21** ocorrências - 46,67% Resposta 4 - **21** ocorrências - 46,67% Resposta s/r - **1** ocorrências - 2,22% **Média: 3,43**
	3.3.	O formador dinamizou a participação de todo o grupo.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **6** ocorrências - 13,33% Resposta 3 - **21** ocorrências - 46,67% Resposta 4 - **18** ocorrências - 40,00% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,27**
	3.4.	As potencialidades do grupo foram aproveitadas em pleno.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **10** ocorrências - 22,22% Resposta 3 - **25** ocorrências - 55,56% Resposta 4 - **10** ocorrências - 22,22% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,00**
4. Aplicação futura			
	4.1.	Com as novas competências adquiridas, sinto-me capaz de melhorar de imediato a forma como exerço as minhas funções.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **8** ocorrências - 17,78% Resposta 3 - **21** ocorrências - 46,67% Resposta 4 - **11** ocorrências - 24,44% Resposta s/r - **5** ocorrências - 11,11% **Média: 3,08**
	4.2.	Possuo as condições necessárias no meu local de trabalho para aplicar de imediato estas novas competências.	Resposta 1 - **1** ocorrências - 2,22% Resposta 2 - **10** ocorrências - 22,22% Resposta 3 - **21** ocorrências - 46,67%

			Resposta 4 - **8** ocorrências - 17,78% Resposta s/r - **5** ocorrências - 11,11% **Média: 2,90**
	4.3.	Recomendo esta ação de formação a todos os colegas com necessidades de formação idênticas às que eu tinha.	Resposta 1 - **1** ocorrências - 2,22% Resposta 2 - **5** ocorrências - 11,11% Resposta 3 - **20** ocorrências - 44,44% Resposta 4 - **13** ocorrências - 28,89% Resposta s/r - **6** ocorrências - 13,33% **Média: 3,15**
5. Apreciação global da ação de formação			
	5.1.	Apreciação global da ação de formação	Resposta 1 - **1** ocorrências - 2,22% Resposta 2 - **7** ocorrências - 15,56% Resposta 3 - **23** ocorrências - 51,11% Resposta 4 - **12** ocorrências - 26,67% Resposta s/r - **2** ocorrências - 4,44% **Média: 3,07**

Curso	Acção	Id do questionário	N.º de formandos com respostas
BCP - ID 77	Millennium Lab - 3º bootcamp	77	40
Média das Médias: **3,245** (51,915/16)			
1. Objectivos			
	1.1.	Esta ação de formação atingiu os objetivos que se propôs.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **1** ocorrências - 2,50% Resposta 3 - **28** ocorrências - 70,00% Resposta 4 - **11** ocorrências - 27,50% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,25**
	1.2.	A ação de formação foi ao encontro das minhas expectativas.	Resposta 1 - **1** ocorrências - 2,50% Resposta 2 - **0** ocorrências - 0,00% Resposta 3 - **29** ocorrências - 72,50% Resposta 4 - **9** ocorrências - 22,50% Resposta s/r - **1** ocorrências - 2,50% **Média: 3,18**
	1.3.	Tive conhecimento antecipado dos objetivos desta ação de formação.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **1** ocorrências - 2,50% Resposta 3 - **25** ocorrências -

			62,50% Resposta 4 - **13** ocorrências - 32,50% Resposta s/r - **1** ocorrências - 2,50% **Média: 3,31**
2. Conteúdos, métodos, estrutura			
	2.1.	Os conteúdos abordados são relevantes para a minha função atual/futura.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **2** ocorrências - 5,00% Resposta 3 - **26** ocorrências - 65,00% Resposta 4 - **12** ocorrências - 30,00% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,25**
	2.2.	Esta ação de formação acrescentou valor aos conhecimentos que eu já possuía.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **1** ocorrências - 2,50% Resposta 3 - **24** ocorrências - 60,00% Resposta 4 - **15** ocorrências - 37,50% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,35**
	2.3.	As técnicas de formação adotadas (apresentações, casos, exercícios simulações, discussão em pequenos grupos, etc.) contribuíram eficazmente para desenvolver as competências previstas nos objetivos.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **3** ocorrências - 7,50% Resposta 3 - **26** ocorrências - 65,00% Resposta 4 - **11** ocorrências - 27,50% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,20**
	2.4.	O método usado permitiu-me uma aprendizagem efetiva.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **4** ocorrências - 10,00% Resposta 3 - **26** ocorrências - 65,00% Resposta 4 - **10** ocorrências - 25,00% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,15**
	2.5.	Considero adequada a duração e a repartição de tempos desta ação de formação.	Resposta 1 - **1** ocorrências - 2,50% Resposta 2 - **7** ocorrências - 17,50% Resposta 3 - **24** ocorrências - 60,00% Resposta 4 - **7** ocorrências - 17,50% Resposta s/r - **1** ocorrências - 2,50% **Média: 2,95**
3. Intervenção do formador			
	3.1.	O formador revelou bons conhecimentos das matérias em apreço e boa preparação.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **0** ocorrências - 0,00% Resposta 3 - **20** ocorrências - 50,00% Resposta 4 - **19** ocorrências - 47,50% Resposta s/r - **1** ocorrências - 2,50%

			Média: 3,49
	3.2.	O formador revelou bom domínio das técnicas e métodos de formação utilizados.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **0** ocorrências - 0,00% Resposta 3 - **21** ocorrências - 52,50% Resposta 4 - **19** ocorrências - 47,50% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,48**
	3.3.	O formador dinamizou a participação de todo o grupo.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **1** ocorrências - 2,50% Resposta 3 - **18** ocorrências - 45,00% Resposta 4 - **20** ocorrências - 50,00% Resposta s/r - **1** ocorrências - 2,50% **Média: 3,49**
	3.4.	As potencialidades do grupo foram aproveitadas em pleno.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **7** ocorrências - 17,50% Resposta 3 - **19** ocorrências - 47,50% Resposta 4 - **12** ocorrências - 30,00% Resposta s/r - **2** ocorrências - 5,00% **Média: 3,13**
4. Aplicação futura			
	4.1.	Com as novas competências adquiridas, sinto-me capaz de melhorar de imediato a forma como exerço as minhas funções.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **4** ocorrências - 10,00% Resposta 3 - **22** ocorrências - 55,00% Resposta 4 - **10** ocorrências - 25,00% Resposta s/r - **4** ocorrências - 10,00% **Média: 3,17**
	4.2.	Possuo as condições necessárias no meu local de trabalho para aplicar de imediato estas novas competências.	Resposta 1 - **1** ocorrências - 2,50% Resposta 2 - **2** ocorrências - 5,00% Resposta 3 - **24** ocorrências - 60,00% Resposta 4 - **8** ocorrências - 20,00% Resposta s/r - **5** ocorrências - 12,50% **Média: 3,11**
	4.3.	Recomendo esta ação de formação a todos os colegas com necessidades de formação idênticas às que eu tinha.	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **2** ocorrências - 5,00% Resposta 3 - **21** ocorrências - 52,50% Resposta 4 - **10** ocorrências - 25,00% Resposta s/r - **7** ocorrências - 17,50% **Média: 3,24**

5. Apreciação global da ação de formação			
	5.1.	Apreciação global da ação de formação	Resposta 1 - **0** ocorrências - 0,00% Resposta 2 - **5** ocorrências - 12,50% Resposta 3 - **23** ocorrências - 57,50% Resposta 4 - **12** ocorrências - 30,00% Resposta s/r - **0** ocorrências - 0,00% **Média: 3,18**

8.5 Appendix E – Standard survey

1) Is innovation important for your company?

Very much	
Yes	
More or less	
Not at all	

2) Please, from a scale of 1 to 5, evaluate each of these ten types of innovation accordingly to the usage it has in your company.

(Help button) To see more: **Ten Types of Innovation: The Discipline of Building Breakthroughs book by Larry Keeley**

	Name	Evaluation
1	Profit model	
2	Network	
3	Structure	
4	Process	
5	Product performance	
6	Product system	
7	Service	
8	Channel	
9	Brand	
10	Customer engagement	

3) Have you ever thought of getting better in the way you're innovating in your company?

Yes	
No	

4) Did you ever think of applying the Lean Startup Methodology in your company?

Yes and I know this method	30%	(39%)
Yes, but I don't know much about this method	9%	
No and I know this method	13%	(61%)
No, because I don't even know the method	48%	

Lean Startup Methodology definition

(Help button) Developed by Eric Ries, the Lean Startup Methodology, mainly used by startups, will make the process of launching a business or a project less risky. The process is in favor of launching any new business or product based on validated learning, experimentation and frequent releases which allow you to measure and gain valuable customer feedback.

To know more see: "why lean startup changes everything" by Steve Blank

2) Did your company ever use this method?

Yes		Continue to question 3
No		Continue to question 7

3) Do you think the workers in the organization were comfortable with the Lean Startup Methodology?

Yes	
No - why do you think people were uncomfortable?	(1)Lack of understanding about the methodology; (2)People weren't used to the way the new methodology functioned; (3)Some of the workers had bad past experiences with the methodology; (4)Lack of success' credibility towards the new method; (5)I am not aware of; (6)Other? Explain

4) The project that your company tried to developed under this methodology was for innovation purposes (for example: new ideas to develop, new products to implement, etc.)?

Yes		Continue to question 5
No - What kind of project was?		Continue to question 6

5) From 1 to 10 how radical was that innovation? 1 being an incremental innovation (ideas that are small upgrades of the current capabilities) and 10 a radical innovation (ideas that can change customer experience or create a new market).

1 2 3 4 5 6 7 8 9 10

6) Do you think it was successfully implemented?

Yes	
No – Why?	(1)Lack of information;

	(2)Lack of time; (3)Resistance from the members of the board and so, lack of resources to do it in the right way (e.g. company doesn't allow them to do a lot of tests; manager doesn't believe in the success of this methodology); (4)Lack of involvement in the overall company (people aren't used to this new methodology); (5)Not much customer feedback achieved; (6)Other? Explain
I don't know	

7) Have you ever implemented this methodology in a project that you were part of?

Yes		Continue to question 8
No – Why?	(1)My company doesn't allow this methodology; (2)My fellows didn't want to use this methodology; (3)People didn't believe in the success of the lean startup methodology; (4)My fellow didn't know the methodology; (5)I didn't want to implement it, because I am not used to; (6)Other? Explain	Continue to question 19

8) The project was for innovation purposes (for example: new ideas to develop, new products to implement, etc.)?

Yes		Continue to question 9
No - What kind of project was?		Continue to question 10

9) From 1 to 10 how radical was that innovation? 1 being an incremental innovation (ideas that are small upgrades of the current capabilities) and 10 a radical innovation (ideas that can change customer experience or create a new market).

1 2 3 4 5 6 7 8 9 10

10) In your point of view, were you able to apply it successfully?

Yes	
No – Why?	(1)Lack of time (not much time to do experimentations, to do research, to have customer feedback, etc.); (2)Lack of information;

	(3)Lack of support in the organization; (4)Other? Explain

The Lean Startup Methodology focuses mainly in the fundamental principle of Building-Measuring-Learning. Meaning that first entrepreneurs develop an idea into a prototype, then they test it (using Minimum Viable Products) and afterwards, entrepreneurs use feedback to pivot (change something in the business model), perish (continue) or preserve the idea.

The questions below will be focused mainly on the methodology you used.

11) Have you gone through the fundamental cycle of this methodology, of building, testing and learning with the results achieved?

Yes	
No	(1)Didn't have time; (2)Didn't ask feedback before launching the product; (3)Made my own methodology that I were used to it; (4)Other? Explain

12) Did you manage to use the MVP (minimum viable product)?

Yes	
No, I don't even know what it is.	
No	(1)Lack of time (not much time to do experimentations, to do research, to have customer feedback, etc.); (2)Lack of info about how to do it properly; (3)Lack of support in the organization; (4)I tried to make it, but it went wrong; (4)Other? Explain

13) Did you take actions accordingly to what you have achieved?

Yes	(1)Pivoted (change something about the business model); (2)Perished (go on with what you have); (3)Preserved (drop the idea)	
No		

14) Did you manage to build your idea only after the entire hypotheses were validated and your idea fitted the market?

Yes	
No	(1)I rushed the process; (2)Other? Explain

15) In general, did you like to use the Lean Startup Methodology? What were the benefits/limitations that you have found? (Choose how many options you would like)

Yes, I will use it again – Why?	(1)Very simple to use; (2)Less risks; (3)It gives a good understanding of what customers want (feedback of customers always present); (4)At the end of the process it gives you less mistakes to handle with; (5)Less costs; (6)Other? Explain
No, I won't use it anymore – Why?	(1)Very confusing, a lot of tests to do, a lot of hypothesis; (2) Not used to it, so I'm not comfortable about using it; (3)Not so convinced that it is successful; (4)Other? Explain

16) Now that you were able to try both methods, what type did you like most: Traditional one or the Startup methodology? Why?

Traditional one – Why?	(1)Very precise; (2)Methodic; (3)I'm familiar with/used to it; (4)Other? Explain
Lean Startup Method – Why?	(1)Very simple to use; (2)Very fast to implement; (3)Lower costs; (4)Early feedback; (5)Less mistakes in the end; (6)Higher chance to succeed; (7)Other? Explain

17) What was the length of the project that was under the Lean Startup Methodology?

< 1 Month	
1 Month – 3 Months (3 Months excluded)	
3 Months – 6 Months (6 Months excluded)	
6 Months – 9 Months (9 Months excluded)	
9 Months – 12 Months (12 Months excluded)	
≥ 12 Months	

18) What was the total cost of the project (in euros)?

0 – 10K (10K excluded)	
10K – 100K (100K excluded)	
100K – 250K (250K excluded)	
250K – 500K (500K excluded)	
500K – 1M (1M excluded)	
1M – 5M (5M excluded)	
≥ 5M	

19) Would you like to add something that you think would be relevant to my dissertation?

20) Department where you work

Marketing Department	
Innovation Department	
Project Department	
Financial Department	
Strategy Department	
Another one?	

21) Company name where you work (all the information will be exclusively used for dissertation purposes)

22) Company industry

Phone operators	
Technology	
Energy	
Banks	
Insurance companies	
Retailers	
Service companies	
Healthcare insurance	
Another one?	