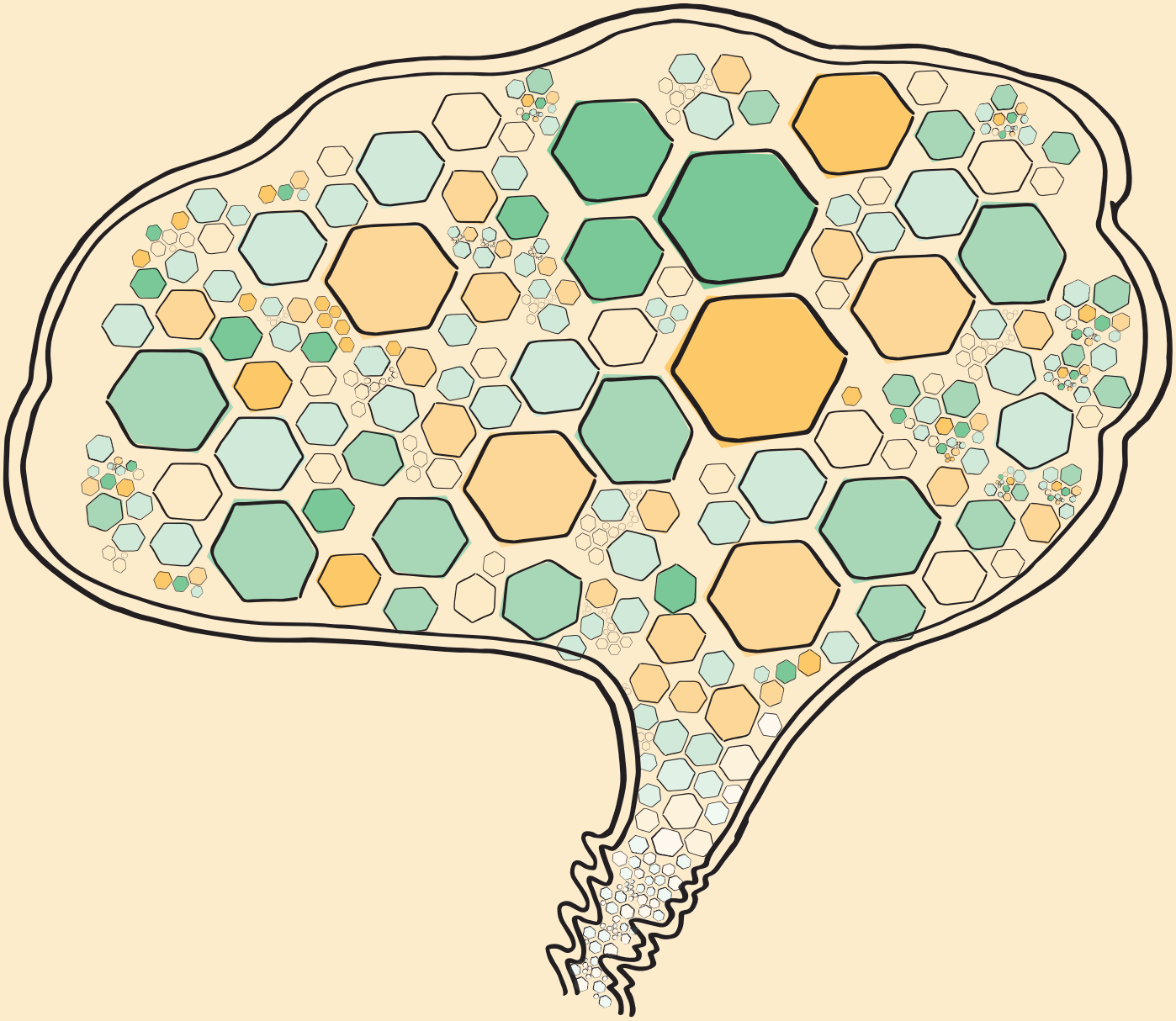
A Graduation story -
Luc van Wanroij



Brains of innovation

Setting the PEPP mind to it

TU Delft

pon

area 52

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For Mr. Joseph Majakusi,
the man that has so far inspi-
me most.

"We look, reflect and do
mostly from a feeling

to not lose what we have
it is
a feeling of fear

To provide you,
with a new view
opportunity glasses,
is why I want to be here"

Luc van Wanroij

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Oh, one last thing; good to know, before reading

Conclusions are highlighted by means of a dark-yellow box

The word 'innovation' is used 369 times and is an all-time winner

The colors as well as the hexagons are distracted from the brand of Area52

The name 'Area52' is derived from Area51, a former chemical testing place in the states

The poems you will find, are all personal work, no copies from others.

Preface - a deserved word of thanks

Here we are, the first words of my graduation report. The end of an incredible journey, my personal journey. For me, when I think about my graduation project so far, I have to think back to a certain moment during my master study.
It was during a meeting with Christine, two years ago. In a team of four students, we were doing a project for KLM and the assignment was to design a 'new way of working' for the Business Development Department. I remember presenting our observations to Christine and while talking, I got a lot of new thoughts. Realizing the challenge was not easy, I shared some (for that time being) complex issues about High Performance Organizations with my team and Christine. I found this was something I had to solve within the scope of the project. I remember getting a glance from Christine. At the time, felt she was saying *'This is something you could solve, but not right now'.* After this thought, this was confirmed with words, where Christine said; *"Oh haha Luc, I have been here and I can tell you, this topic is a graduation project in itself".*
It turned out to be.
Christine, it basically started with you. Somehow you were able to 'read' me, let me be myself and guide me to higher levels. The way you coached me has been exactly as I like it; appreciate what I am doing, compliment on some points, add some extra theory/challenges or difficult questions and always end with; "And I know you can do this!"
I did not need much more. Thank you Christine, it has been incredibly inspiring to have you as my chair!

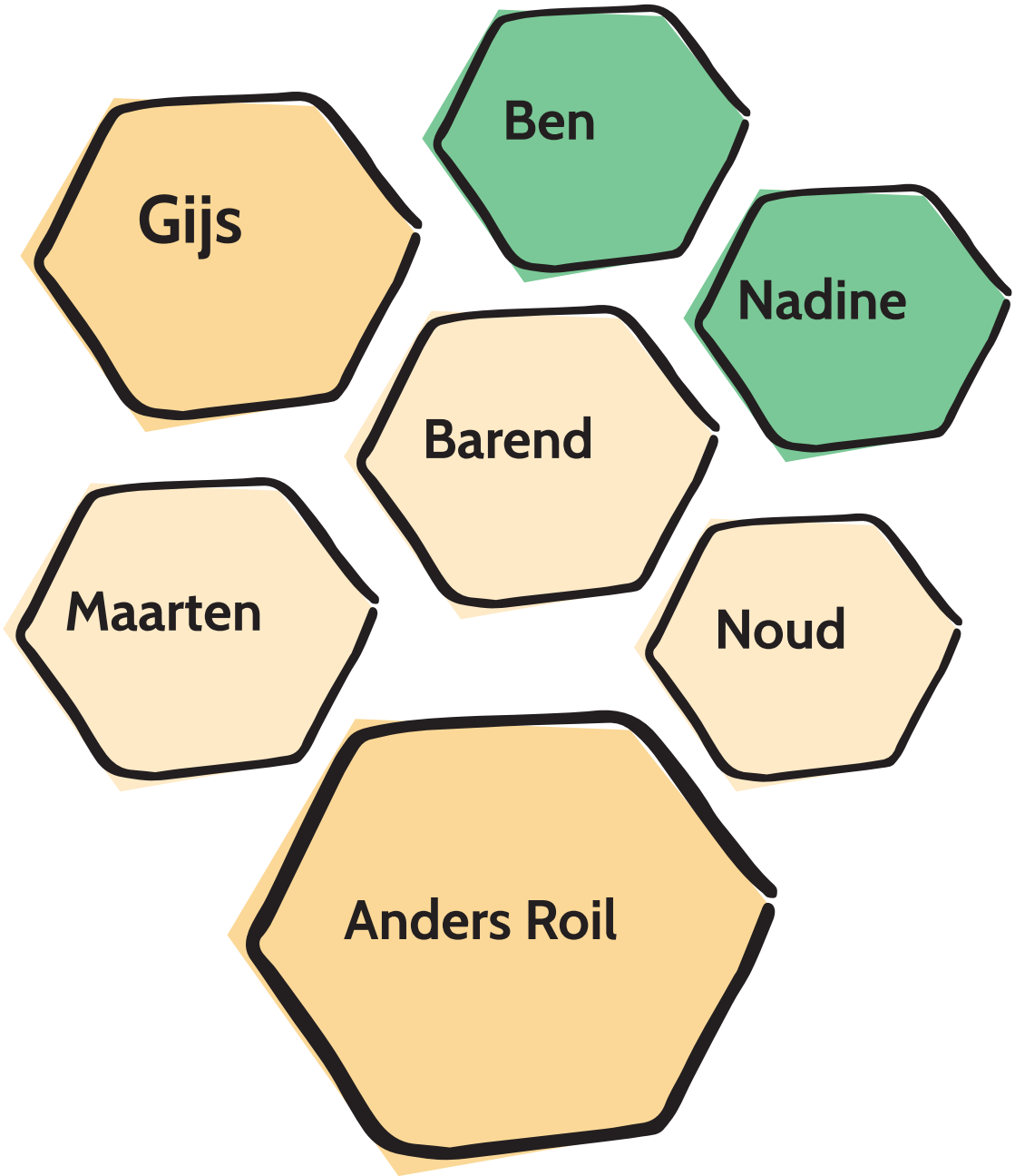
Eva, basically the second one who joined the team. I think I can say I have had the coolest company mentor ever. Again, we understood each other and I think we also complemented each other in some ways. From the beginning we were getting along very well and as the project progressed, I learned a lot from you. Not only on a corporate content level, but mostly on how to be a stragner (as a designer) in the middle of corporate suites. During the NOC*NSF Sportgala, Frans Timmermans (EU Commissioner) gave a speech for the best sport coach of the year.
He said: "A good coach makes you a better sporter, but a topcoach makes you also a better person."
Eva, you are a top coach! Thank you!

The last who joined the team, and I would like to give a big word of thanks is Bart.
Christine and Eva were more energetically pushing me, where you have always been so calm.
You took the time to listen to my story and experiences, and came with such practical and useful feedback. I remember a moment where I was a bit struggling with experiments.
You made me realize that I should not be making it too hard for myself. With a single sentence, spoken very quietly, I really learned a lot.
"Luc, just think of this: You have seen this and this, you think to have found a solution, can I test this and this?"

It were those moments that helped me just 'do it' instead of going back, and thinking and thinking again about what would be next. Bart, thank you a lot for being in this team!

And not to forget, people who helped me a lot during my project.
Being there, listening to my fuzzy thoughts, correcting my English and so on.
They deserve a special place in my story!

Thank guys!



Part 0

Preface

The story of the opportunity glasses

"No matter who you are, where you are, you are able to see an opportunity to change- or improve something."

Preface - My graduation story

This graduation project is my last project at university and I want to make the best out of it. The people who know me well, are aware of the fact that I might be a bit dreamy now and then. I like to express myself in rather vague trains of thought. By means of a drawing or a poem I aim to tell stories. This is me, and this is who I want to be.
Luc the guy that wants to help people by telling inspiring stories.

Figure 1: Ed Catmull - Founder of Pixar

The first thing that I want to say about this report is that I don't want to call it a report. Neither a thesis. If I did, it would not reflect the approach I used for this graduation journey.
As Bart mentioned during one of our meetings:
"You try to set up a structure for your report which is standard, according to university norms. But as I see you(r) work, and read your reflections, you created your own standard. So, write your own story then!"
So, it will be a story. This does not mean it goes without a challenge.
Ed Catmull, founder of Pixar, explained this nicely when talking about how he created the movie Toy Story. He says that, down to the very basics, it is not hard to create computer animated figures. However, the audience must have the same experience that they experience while watching real movies, with real people. It is not about programming the 'reality' of context. (Catmull, Wallace, & Srilakshmi, 2015)
It is about the people, who have inseparable emotions. Giving your story the emotions that should come across to the audience: that is the challenge!.
I would say that this is my challenge as well. To give my story emotion and let the reader experience it in the same way as I did. Not only in the form of this written experience. It also means a verbal and visual experience. Therefore, I will use verbal and visual expressions throughout this novel. Some parts are more theoretical but need to have a place as well. When it gets too dry or detailed, I will refer to the appendices.

Before you start reading the full story, I found it good to wrap it up two pages. To make you eager to read more, and to briefly explain what parts the story will consist of.

The story in short

Part 0: The world of Pon

Tuesday 16th of October. I was sitting in Delft at my desk as Eva approached me with a funny quote she heard from one of the executives at Pon.
"We had enough innovation on the agenda last week, do we really need it again this week?"
Yes, Innovation.
It can be seen as the most frustrating buzzword of the century and definitions differ, ranging from creating the iPhone, to uncovering a new way to do things. No matter what definition is used, in business everyone agrees that for every company, innovation is not just an option. It is vital! The CEO from one of the most disruptive companies at this moment, Jeff Beszos , is very clear on this:
"There is no bad time to innovate" as Stone (2013) quotes him in his book about Amazon's boss.
In 1955, Fortune Magazine listed the 500 largest companies on their success. Now, almost 65 years later, only 71 of those companies still remain. Companies like Nokia and Kodak were not prepared for the fast changes in an industry that was now focussing on digital innovations, showing that both a company, as well as their employees, need to innovate, or the business can be shut down (Vocoli, 2014).
One of the employees I had an interview with, said:
"Here at Pon, we don't want to become the Kodaks of our time, you know, so we have to innovate in order to stay relevant for our customers."
Pon is a big family business founded in 1980. To this day, their operation consists of four business groups. These groups each have different operating companies that serve different customers. Some years ago, the Pon Equipment and Pon Power group were given the mission to innovate. To properly guide this, an innovation team was set up with the name Area52. They were given the challenge to bring innovation to the group with a focus on disruptive innovations, or the third horizon (Area3) as described by McKinsey.

Part 1: The challenge and approach

In practice, the team of Area 52 spends too much time initiating and monitoring Area 1 and Area 2 initiatives. The result is that they spend too little timeand attention on Area 3 innovations.
Ideally the responsibility for Area 1 & Area 2 innovations should be placed with the Operating Companies (OpCo's), but because they have no process, resources and focus, the priority for these projects is too low. This is due to a focus on the current companies they run. If the results within them become stressful, attention weakens and budgets for these projects are cut. The risk is that these companies become too internally focused and their future profitability is at stake. So, the challenge for this research has been to design an innovation framework that enables Operating Companies from Pon Power and Pon Equipment to support a clear and lasting innovation process. To start off, two 'role-model' companies, were used as cases. For some time now, I have been one of the regulars in both Pon Equipment Norway and Pon Power Netherlands. Using the DIKW model, I finally structured the findings into the main challenges for the company.

Part 2: The observations

Talking, listening, observing and questioning at both companies resulted in a lot of data. This was transcribed into information, resulting 25 findings per case. Together with the operating companies, these findings were clustered into main observations. Knowledge that I could use to interpret these observations and formulate them as six main challenges, for the PEPP-group as a whole. First, operating companies need to clarify their innovation direction with a clear definition and innovation portfolio. Strategic choices must be made on how innovations can serve the greater goal and these choices need to be communicated, so that people know what to expect. Second, a goal without people responsible for it, without obligations, is a hard one to reach. Hence, structures and processes need to be put in place so that people get responsibilities and as a result, the employees within the organization have the desired expectations.
Third, from both the interviews and the cultural survey I have seen that people perceive financial re-

sults as most important. The companies need to understand that the road to achieving results is just as rewarding as only the (financial) result. In practice; a culture in which it may try, fail and learn.
The fourth challenge I have seen is about a culture of working in silos. I often heard the phrase, "sharing is caring"- and because the group wants to take care of their employees and customers, they should share more. There is a lot of hidden knowledge, in the form of ideas, suggestions or frustrations, and because of the culture of working in silos where little is shared, these ideas don't often see the light of day. The fifth challenge stems from something that is repeatedly said: "Our people and customers are our biggest assets".
Investment in people, however, is rather narrow. The employees receive too much training in hard skills, not soft skills. This leads, for example, to people not knowing how to change their way of working on the one hand. The challenge is to invest in new skills for the workers.
The final challenge is to provide people and processes with more structural support to enable them to make good use of their capabilities.

Part 3: Design of the framework

These six challenges served both as requirements, as well as input for a theoretical- and practical framework. The framework was built on a theoretical model that consists of three elements: mindset, methods and infrastructure. Based on the observations, the fourth element strategy was added. With the four elements, six connections between them were found which led to an innovation framework consisting of four fields of innovation for the operating companies. These fields underline the importance of having a clear purpose, the capabilities and people needed for this, structural support for these people and proper responsibilities and governance.
Within these fields, the operating companies can set up their own innovation process. First, they must understand what the fields mean for them, at this moment. Second, they should choose which track of innovation they would like to follow. Third, within this track they can follow a generic innovation process. The end goal of the framework is to have the companies working towards 'taking care of innovation'.

Part 4: The implementation

The last challenge for the companies is about how the framework goes from abstract to concrete, from paper to the workplace. Take a look at this metaphor;if your goal is to have your employees be in good shape, you can simply ask them to get in shape. However, this might be abstract. Rather, you would want to tell them to walk 30 minutes every day. How can we really take care of innovation? How can we involve everyone in the organization, with innovation? Just like a virus, it always has to start somewhere and with someone. In this case, a full-time Area2 coordinator will be appointed to supervise and help operating companies set up their track for innovation.
This person has all the knowledge about the framework and practical details. From here, this person will train Innovation Experts in every operating company. With the knowledge about the framework, innovation processes and tools and the help of different triggers to activate the behavior of the employees, this person is able to steer innovation within an operating company and to involve all employees inthinking about innovation, with ultimately the whole group set on innovation.

There is only one thing left, that I would like to share with you before continuing with the full story. I would like to end this part with another story, one that is about Mr. Joseph Majakusi. It is something that inspires me to do what I do in my graduation project. How can I thrive? How can I pivot every time? What is my belief for doing what I do?

Mr. Joseph Majakusi and the opportunity glasses

Namelok 2013 - It should not be difficult to imagine yourself in Africa, more specifically Kenya. You have probably seen or heard a lot of stories about African people. Indigenous Africans, who live in in small clay houses, in the middle of nowhere. They herd cows, fight lions, drink blood and are lazy.
It was December 1982 and a young man named Joseph Majakusi, was born in a small village called Namelok, on the border of Kenya and Tanzania. Joseph is the second son of a Masaii warrior, brother of twelve other brothers and sisters and since two years father of Joseph jr.

Joseph has to pass through dusty roads every day. Despite the literal 'shit' he goes through, he still dreams that one day his wish to become an entrepreneur and help his community will come true. In my third year at university, I spent 3 months with Mr Majakusi and together we made a convection dryer to keep a surplus of tomatoes.. I remembersitting in a taxi on the way to a very luxurious lodge with a can of our dried tomatoes to sell to thelodge owner. We were excited because this was an important day for us. During our trip Joseph joked all the time. Out of nervousness, I think.

"Luc! Look over there!"
He was pointing to some electricity poles that were about to be installed.
"Those are Wifi cables for our business office!"
"And over there", Joseph pointing to nowhere,
"We can make our helicopter platform, so you can come and visit the business office very easily!"

While joking and dreaming, Joseph suddenly puts his hands in his pocket, takes them out and wraps his fingers around his eyes. He was making glasses and I did not understand why he was doing this. Then he said something that I will never forget and that to this day inspires me in everything I do:
"Luc, these are opportunity glasses. I always have them and they are very, very important. It enables you to see beautiful opportunities and today I see them. We are going to sell our very first sundried tomatoes and make our company big, very big."

Opportunity glasses.

I have been thinking about it ever since. Everyone, no matter how old, how poor or how rich, has got opportunity glasses. It fascinates me every day.
Some people are able to use them; see opportunities and make something out of it.
Others see them, but are not able to do anything with them and others do not (yet) see them, but do have the capacities to fulfil them, if they would would only look.My true conviction is that everyone has opportunity glasses and is able in his or her wayto see something that he or she would like to do, to make thenow just a tiny bit better.
Not only in Africa, but also in the business environment of Pon Equipment and Pon Power.

In the following sections I will not only use these glasses myself to see opportunities and inspiring stories, but I will also try to give this mindset to every reader, my team, and the people I have spoken to during my research.

Well, that's about it, let the story begin!

"Luc, these are opportunity glasses. I alw
important!. It enables you to see beautif

Figure 2: Joseph Majakusi during a business class about entrepreneurship for the scholars of the Polytechnique school in Namelok

vays have them and they are very very
ful opportunities."

Part 1

Introduction

Just do it.

“Don’t tell people how to do things, tell them what to do and let them surprise you with their results.”

Shoe dog.- Bill Knight(2014)

Why should I tell this story?

Most stories start with 'a long time ago there was...', and as with every story, mine too has its reasons to start
The first reason is that this is part of finishing the master Strategic Product Design of the faculty Industrial Design Engineering at the TU Delft. The main reason for this specific assignment at Area52 within the Pon Power and Equipment group is that they need to review the way they do their business. Business must continue to run and that is why they cannot do the things as they have always done. The question is, how then should they do it?

Next to their needs, it has to be a challenge for me as well.
So, why dive into the rather old-fashioned world of equipment?
Why would I want to study this world that isnot really sustainable in its roots?
What attracts me in researching and telling a story about Pon Equipment and Pon Power?

To be honest, it attracts me when something, somebody or an organization can use help. In that respect, I think this company faces a very interesting challenge.. They have a long history of doing very good business and in various fields, such as the "Volkswagen-busje". In this they have become true pioneers. But industries, customers and competition are changing, requiring them to rethink the added value of their businesses. This is nothing new, a lot of companies need to do this.
But what makes this particular company interesting to me is that I think they're only at a starting point of change. Both company and its employees.
Working for a company for where innovation is relatively new means that I might get more space and support to play.

I will try to dive into the current way things are done, and I will look for meaning and generic strengths to use in an innovation framework. To reveal the elements that could contribute in such a framework, I will use two case studies at the operating companies. Pon Power Netherlands (PPNL) and Pon Equipment Norway (PENO) were chosen because they are perceived as the best operating companies at this moment, both generally and in terms of innovation.

Literature has written loads of papers and books about the topic of 'managing innovation'. Some are less relevant to this story than others. The purpose of this story is not to invent a completely new innovation process. It is to design a custom solution for Pon Equipment and Pon Power. The focus of this research is on case specificity, looking at how things are done and how things can be done. This will lead to suggestions that will be immediately tested within the two companies. Therefore, an iterative process is followed with the goal of not coming up with an innovation, but to extract relevant elements that enable the company to work on future innovation. For that reason, this story does not take into account industry or business-related issues or trends.

The world of Pon, Pon Power & Equipment, Area52

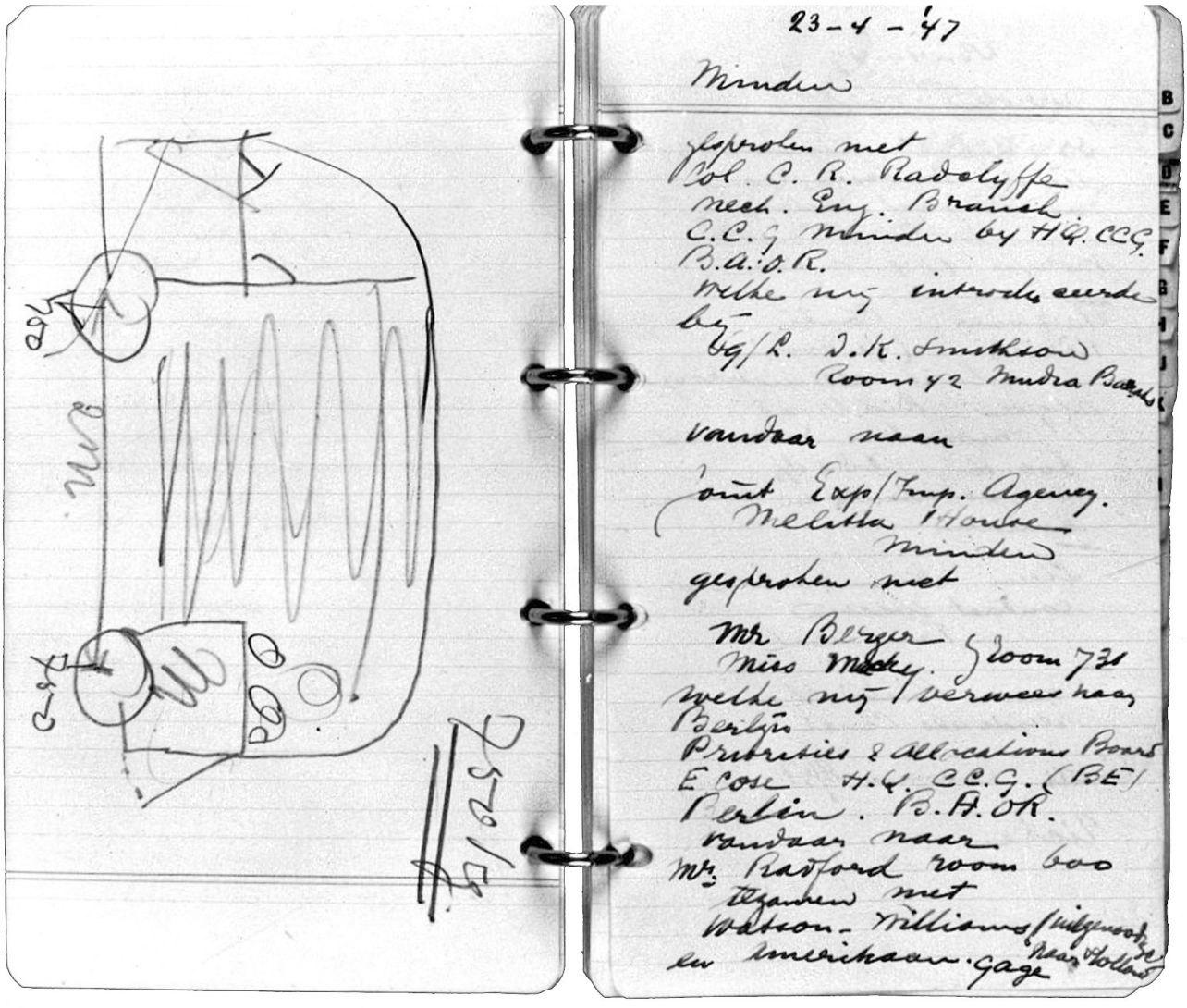
Pon

Pon is originally founded as a trading-company by Mijndert Pon in 1895. They started off in Amersfoort with shops in soap, tobacco and naaimachines. In 1900 they start trading bicycles and from 1920 they add automotive and tires to their portfolio.

1947 is an important moment in the history for the company. Ben Pon (senior) arranged that Pon Automotive becomes the first dealer of Volkswagen in the Netherlands.

Next to this historical happening, he is also involved in designing the first Volkswagen Transporter, which is now famously known for the 'Volkswagen hippie busjes'. (Figure 3)

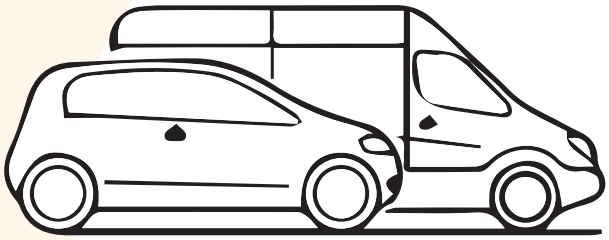
In the years that would follow, Pon expands its business from bicycles and automotive, to marine and industrial mobility. From 1980, the company is led by Ben Pon (junior), after his father and grandfather led the company.



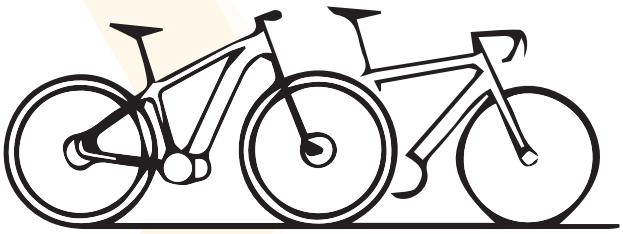
Pon's Transporter-Skizze (1947)

Figure 3: Sketch of the first Volkswagen Transporter

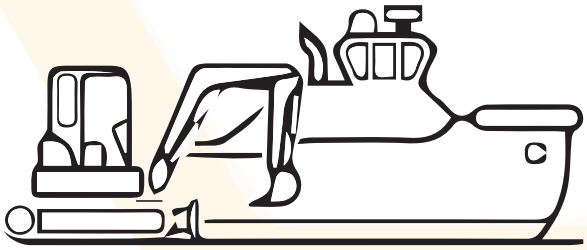
With an annual turnover of approximately 7 billion, the company is still one of the biggest family businesses in the Netherlands with one of the grand daughters still in the advisory board of the holding. As of today, 13.000 employees work at Pon divided over four business groups. (Figure 4).



Automotive



Bike



Equipment & Power

Industrial mobility

Figure 4: The four business groups of Pon

A few of the characteristics mentioned above have an important impact on the way business is done nowadays.
First of all, the company has been in existence for 120 years now and in principle still does the same business as when they started. In practice, this also means that ***employees are relatively*** old and have worked for the company for more that 20 years on average.. They usually expand their business activities by acquiring other companies that are close to their core business.
Secondly, they are active in many different companies, because the company is essentially a trading/ dealership. With 13000 employees working in 80 different operating companies, ***mutual understanding has proven to be a difficult issue.***
Lastly, the companies are located in 32 different countries. It may happen that a specific company is located in different countries. ***Cultural and contextual differences*** in doing business or managing often arise, which means that a specific way to run the business holistically is a complex issue.

Pon Equipment and Pon Power (PEPP)
The Power and Equipment business group is active in two different industries. Power is the part that sells ship engines and generators, which is included in the service contracts. The overlapping industry is maritime sector. Equipment has the same structure as Power, where parts or products for land cultivation are sold. Examples of equipment are excavators or trucks.

An important fact to mention about this business group is that they have an ***extensive and important partnership with Caterpillar***. Both Power and Equipment buy engines or equipment from Caterpillar and are therefore an essential stakeholder for the group. Because they trade Caterpilar components and equipment, they are very dependent on this company and which direction they want to go with their products or services.

Area52

To stay competitive in future businesses, the PEPP-group introduced Area 52 two years ago. An independent business unit operating with full focus on starting- and improving innovations within the business group. In here, the innovation strategy is aligned with the long-term strategy of the PEPP-group and an innovation process is introduced as well. All innovative initiatives that contribute to improving the core-business of the companies, should be created in the operating companies itself. These are called 'Area 1 initiatives'. Innovations related to the corebusiness but are more or less new, get support from Area 52. These are called 'Area 2' initiatives. Innovations that deal with new business models and eventually might compete with the current business, are developed within Area 52 and are called 'Area 3 initiatives'. (Figure 5).

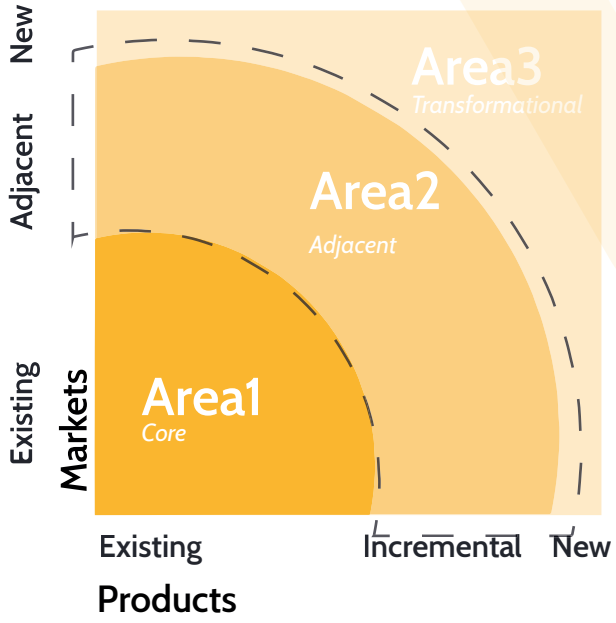


Figure 5: Three areas of innovation, based on McKinsey's 3 horizons (Nagji and Tuff, 2012).

Some facts about Area52 that are important to know:

- The team exists of three people the work full-time.
- They are physically split from the PEPP-group, meaning they operate from an own office in Delft.
- The employees working at Area52, all have a background at Pon
- Area52 has their own budget to spend on innovation on different levels.
- The team of Area52 directly reports to the executive board of the PEPP-group

Start of the story; the challenge

As Albert Einstein once said, 'If I had one hour to solve a problem, I would spend 55 minutes on thinking about the problem and 5 minutes thinking about solutions.'
A process Einstein might have gone through in that time, is very different from a graduation process. It did make me aware of the relevance of understanding the challenge and not getting to solutions too quickly.

While introducing the challenge to me some months ago, the team of Area 52 explained that they spend too much time starting and monitoring Area 2 innovations. As a result, they spend too little time on Area 3 innovations.. Ideally, the responsibility of Area 1 & Area 2 innovations should be placed at the Operating Companies (OpCo's), but because they have no process, resources and focus, the priority for these projects is too low. This is due to the focus on the current companies they run. When these become stressful, attention weakens and budgets for these projects are cut. The risk is that these companies become too internally focused and their future profitability is at stake.

Therefore, some of the questions that I think need to be answered are:
How do we make these operating companies work on their future?
How do we make sure that they are able to organize innovation?
How do we make sure that innovation is a lasting process?
How do we increase a collective innovation power and speed?

I have bundled the scope of all these questions into a single challenge statement:

Design an innovation process for the Pon Equipment and Pon Power group, that is transferable to the different operating companies.

It was required that the innovation process should have generic elements so that it could be transferred to other OpCo's within the group, taking into account business and cultural differences.

After a few weeks, I had three questions in addition to the initial problem statement:
-If I design everything by myself, will it be lasting within the organization and be sustainable?
- Why not co-design or think or do - it?
- Why a process, and not a framework?

An innovation process is an end-to-end, step-by-step process that is used to achieve a specific goal by a specific user. In theory, it would hardly be possible to design an innovation process for the group, since this is not a specific user.
However, an innovation framework is an approach to solving a problem that provides a rough outline of the process that will achieve a specific goal, but not the level of specificity found in a process. In general one starts with identifying a framework that could work within a corporate culture. Then a process can be defined based on adapting the framework to the specific needs of an operating company. This provides a place to take into account the different industries, cultures, countries (Gilley, 2014).

So the actual

Challenge

is to

Design an innovation framework that enables the different operating companies, to define an innovation processes that supports employees to be involved with innovation

The approach and models

Designing a framework requires input from how things are done in the organization, or how things can be done. This part briefly explains the input and how I could best find them.

Last summer I read the book The Innovators DNA. (Dyer, Gregersen, and Christensen ,2009). In this book the authors talk about five discovery skills to unveil innovation.
Associating, questioning, observing, experimenting and networking. This book inspired me to use these skills, for obtaining rich information.

3,2,1- Action!

The five skills of discovery are all formulated as active verbs. Therefore, an action-based approach will be used for this story. This means that the whole process is constantly about thinking and doing at the same time. It is about the continuous iteration of questioning observations and using the reflections to proceed to the next steps. First, I will explain how my approach has been put into practice. The second part shows which methods I used to structure both thinking and doing.

Models and fuzziness

To structure my process of discovery, I used two models that are widely used a lot in the field of design engineering.
1. Double Diamond model; to go from a lot of information, to structured priorities.
2. IBM design thinking model; to have a sense of iteration in the process.

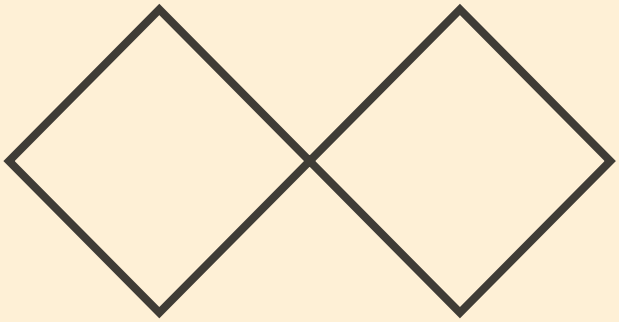


Figure 6: Double diamond

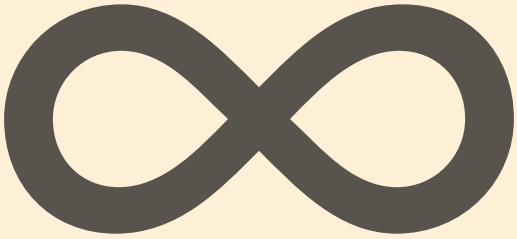


Figure 7: IBM design thinking model

The concept of the double diamond (figure 6) will be mostly used in the beginning, to go from a lot of observations, to a couple of most important findings. After this, I will be iteratively playing around with the observations and sharpening them while doing so. (figure 7).
Because it may seem quite sequential, I often combined the models. The reason for this is that the double diamond is rather linear. For some moments within the process this is fine, but for other moments it needs extra layers of circularity, for example when adjusting interview questions based on earlier observations.

I think that every student uses these models, sometimes knowing, sometimes not knowing. It has become part of a design thinking mindset. Diverging and gathering a lot of data and information, to eventually converge this into knowledge and wisdom.

The models I mentioned will help me to structure the observations. Next to these models my approach is shown in figure 8.
The image of the fuzzy front end of design is added because it nicely illustrates that, seen from an holistic perspective, I won't be working linear, nor will it be circular. Fuzziness allows me to have some randomness and space for out bordering the models.

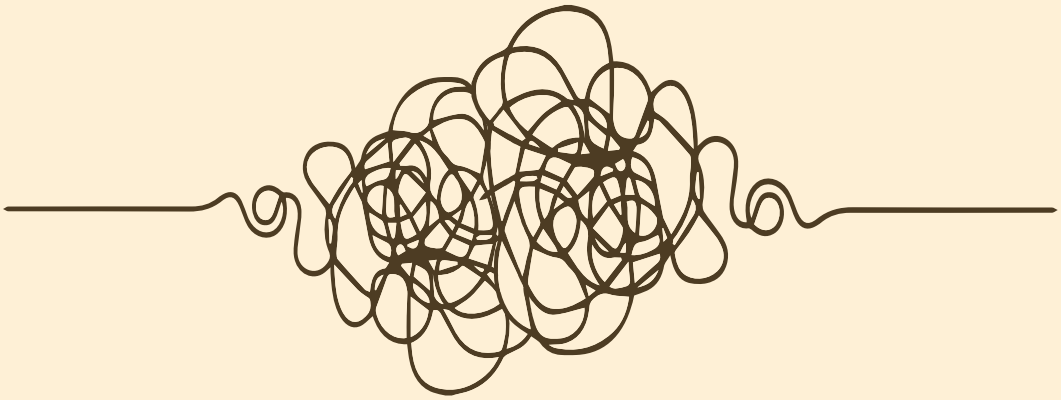
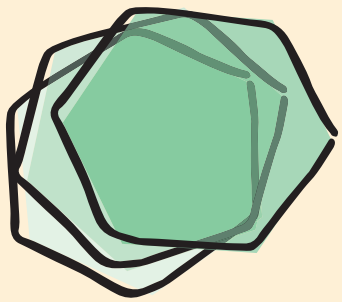


Figure 8: Fuzziness of design (Kim & Wilemon, 2002).

This made me think of a book I read, named 'The Click Effect'. In this book, Frans Johansson (2012) writes about how we sometimes randomly run into solutions, and how we can force a little bit of randomness. He mentions an example of something that resembles how I sometimes use this randomness within my project.

This story is about the co-founder of Nike, Bill Bowerman. He was a track and field coach at the time, and he was looking for ways to make shoes lighter and faster. On a Sunday morning in 1971, he was having breakfast with his wife and while he was eating waffles, it suddenly dawned on him that the pattern in the waffle iron his wife was using, could be an excellent mould for a running shoe.
"So, he got up from the table and went tearing into his lab and got two cans of whatever it is you pour together to make the urethane and poured them into the waffle iron."
This outcome is the foundation for the success of Nike's running shoes. Literally as well as figuratively. (Peterson, 2016).

Johansson calls this moment a 'click moment'. Sometimes as in the story of Bill Bowerman, a solution or idea just appears. Sometimes, from all the context that I have been seeing, it just comes together. This is something that, partly inspired by this book, I find really important for my process. For this reason, I will elaborate on different click moments during this story.



Click moment!

Figure 9: Bill Bowerman - Co-founder of Nike

Putting the models in practice

By combining the models and mindset, they can configure two different processes that take place in parallel during this story. (Figure 10), As explained before, I will do two case studies at Pon Equipment Norway and Pon Power Netherlands. These cases can be seen as one process. The findings from these case studies will be used in parallel to reflect on a more holistic (PEPP-group) level, to come up with general requirements for the innovation framework, the other process.

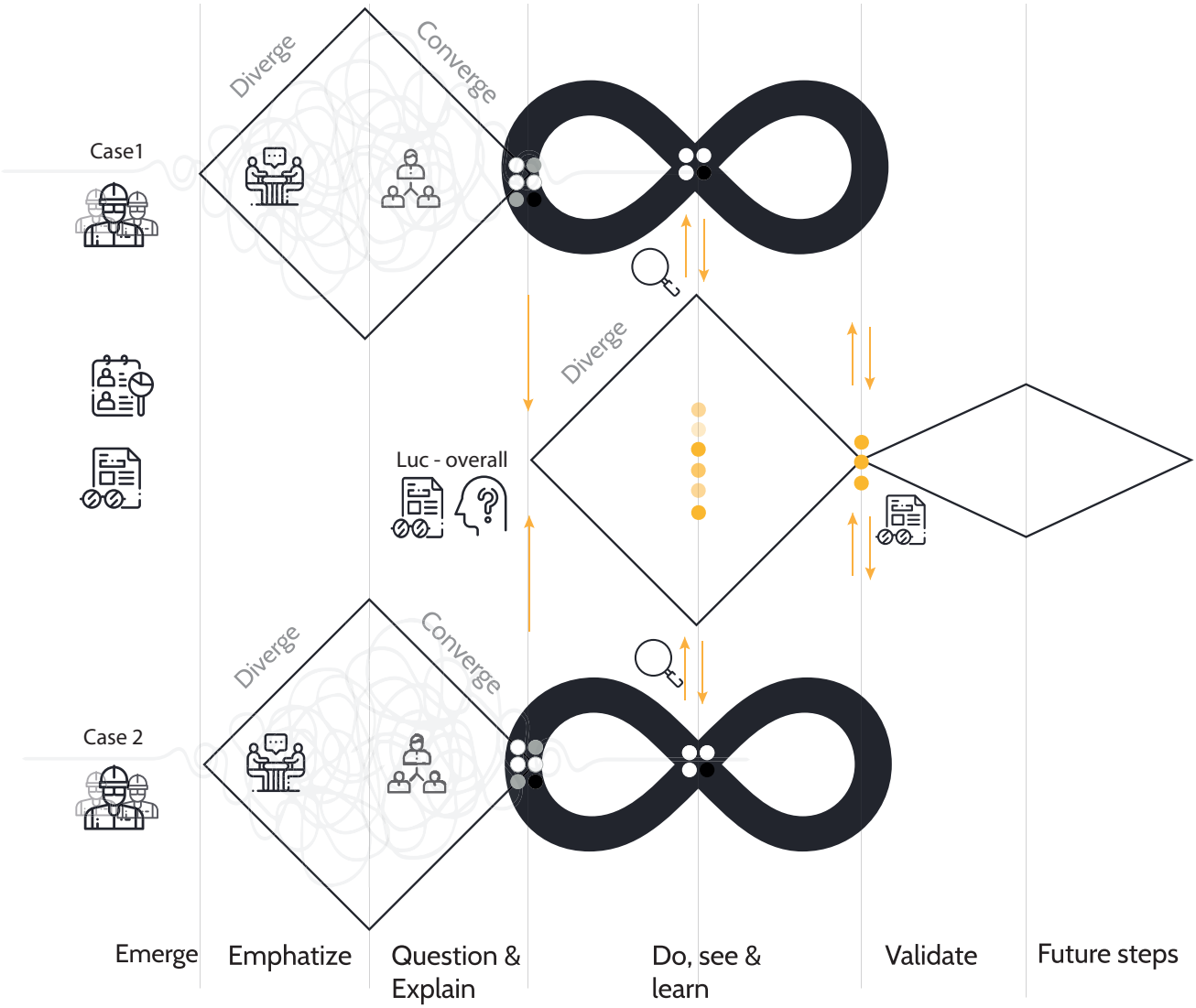


Figure 10: Overview of approach

Figure 11: Tools and methods used for the approach

The right tools for the challenge

I can imagine of a path to walk, be it structured or random, but without the right tools it becomes a tough journey. For this project I used different methods and tools. (Figure 11).
First, the standard methods like literature studies, case studies, benchmarks, qualitative and quantitative research were used. Secondly, I have made some adjustments to the standard methodologies and have created my own sources of data, which will be further elaborated in this section. (I have made a number of personal additions that are 'me').

Literature studies - Written knowledge

An important source of inspirational knowledge for this story has been several literature studies and books. Important to note is that literature study has never been the goal. Hence, the project did not start with a literature study with specific themes to be investigated. Throughout the project, as a result of case studies and both qualitative and quantitative research, I found new topics to be further investigated by means of literature. These topics turned out to be: organizational culture, innovation, innovation process, change management, high performance organization, innovation framework, innovation thesis, innovation portfolio, leadership, design thinking, design doing.
Besides papers and 'hardcore literature', a lot of inspiration came from books. Not books specific on the topics mentioned above. I chose to read and use different books about great leaders or inspirational protagonists. People who, in their own way, have built and managed an ideal, movement, empire or organization in some form. This gave me very valuable, additional insights. Because of this, in addition to a reference list, I have added a specific 'book list', which corresponds to the different parts.

Observations - Experiences from the people in the organizations

My greatest source of knowledge and data has been people. They have provided me with both deep- and rich data by means of qualitative and quantitative interventions.

*Qualitative research - Interviews, observations, the question book**

Interviews - semi-structured interviews to gather deep and rich information about how people experience their job, their organization, the culture within, and their approach towards the future.
An overview with the interviewees can be found in the appendix.
Observations - throughout the process an observation sheet was used to note all things that I hear or see. This is mainly 'unplanned' observation.
Question book - Something I also did, and learned from a book I read, is to set up a question book. Every morning during breakfast I write down the questions I have. With regard to the project, but also on a more general level. This triggers to observe better and has direct impact on questions asked during interviews and observations.

Quantitative research - Survey(s)

To gain a large amount of knowledge, a survey was used in the first part of the process. Harvard Business Review (HBR) came up with an integrated culture framework to identify key attributes of group culture. Two axes are illustrated; how people interact on a range from highly independent or highly interdependent. The other dimension is about how people response to change, be it flexible or stable. (Groysberg, Lee, Price & Cheng, 2018). They identified eight characteristics when culture is mapped along the two axes. The intention has been to create starting points, first overall feelings, of the corporate culture within the organization. Besides the information and answers, the other goal was to check how 'willing' people were to join the survey.

The full study and the list of results of the survey can be found in Appendix B.

Part 2

Observe and see

What the dog saw and untold stories

“We observe day in, day out. We look as things in life pass us by. But how often do we ask the right questions?”

Introduction - What the dog saw

We observe day in, day out. We look as things in life pass us by. But how often do we ask questions?
How often do we observe and try to understand what we actually see?
And if we see something that we think we understand, is this only a matter of perspective?
We make a lot of assumptions based on the things we see or question.
The part 'What the dog saw' tries to find the meaning of the things observed during this story. This title is inspired by the book of Malcolm Gladwell in which he tries to show the world through the eyes of others. Things that seem ordinary, are viewed from a different perspective by asking questions that have never been asked before.
Have you, for example, ever wonder why mustard comes in dozens of varieties, where ketchup has stayed the same?
Or what about the story of Nasim Talib, who became rich by asking different questions when the banks were about to crash around 2008?
What Malcolm Gladwell tries to do with his stories is to find small geniuses or statements that see the world differently.
This is what I want to do for the next part.
How does the world of Pon Power and Equipment look through the eyes of others? Even if the other happens to be something that is not able to speak, like a dog?

The right places and right cases

For this story, two specific cases have been selected both by Area52 and the desire from the OPCO's themselves. These are Pon Power Netherlands and Pon Equipment Norway. Main reason for this selection is that these companies are most developed in general matters as well as in terms of innovation.

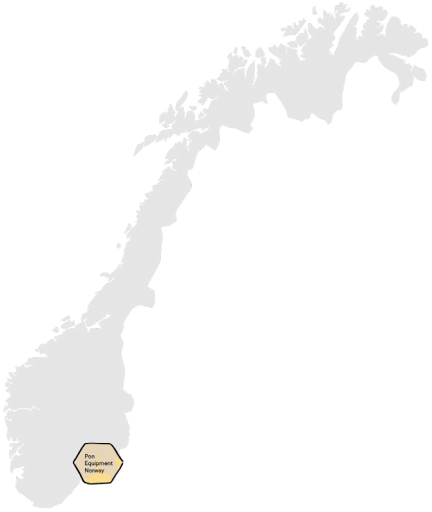


Figure 12: Pon Equipment Norway - Oslo

Pon Power Netherlands - Papendrecht

The right questions

Two ways of asking questions are used, qualitative and quantitative. On a qualitative level it's possible to get more sense of personal values, drives and needs. These kinds of observations were done during the interviews and the overall visits to the different operating companies. On a quantitative level, using a survey, the organizational culture was defined. As the literature states, these two (personal motives and organizational culture) must to be aligned to unlock energy for a common purpose and to promote an organization's ability to thrive.
Both the interview setup, and the culture study setup, can be found in the appendix.

Dive in the deep - what I saw.

The corporate world of Pon Equipment and Pon Power can be metaphorically seen as a big ocean and this part will be a deep dive into it. As a result, this part will show and explain different aspects observed during this dive. Based on 45+ qualitative interviews held in both Pon Power Netherlands and Pon Equipment, approximately 35 hours of raw materials and 400 pages of interview scripts, you can imagine that I have quite some data.
To structure this and to get from data to the main challenges, I worked according to the mindset of a model that is called the 'DIKW' model, as shown in figure 13. (Sanders & Stappers, 2012).

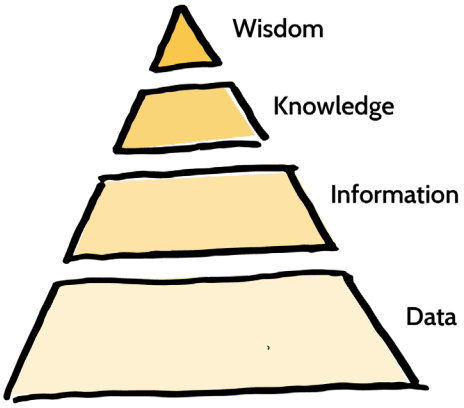


Figure 13: The DIKW model

The model consists of four levels:
Data; all the data I gathered and found, as mentioned above
Information; I interpreted the data and created a list of overall findings per case. This resulted in approximately 25 findings
Knowledge; Together with some of the employees from the the operating companies, I discussed the findings and clustered them into main findings. These correspond with 1-9 on the following pages.
Wisdom; The clusters of main findings, were given a deeper layer of interpretation in order to come up with overall findings for the group Pon Equipment and Pon Power. This was done individually.

The structure of this part will have a vast sequence per case, mainly dealing with the elements of 'knowledge' and 'wisdom'. The full list of findings can be found in the **appendix E.**

Firstly, I will give a brief summary of the case that is about to be discussed, by means of a short story. Secondly, I will take you through the main observations per case, by explaining them with quotes. After this extensive part of observations, I will discuss the cultural study and try to link this to the qualitative observations. Lastly, I will be going back to the story to wrap it up and to come up with my main findings. The four steps per case will be named accordingly to 'A-B-C-D'.

Besides the parts ABCD, the section has different elements:
- The overall story that links quotes and interpretation to each other
- The raw quotes as presented will have a light-yellow box around them
Quotes from PPNL are presented in Dutch, quotes from PENO in English.
- The conclusion for each observation will have a darker yewllo box around them.

This section is nice to read and show the richness and complete picture of the validation. Therefore this has not been place in the appendix. After both cases have been thoroughly discussed, I will try to find some common ground between the observations that will ultimately lead to the main challenges for the innovation framework.

Case 1: Pon Equipment Norway

Figure 14: Main observations Pon Equipment Norway

A. Introducting Pon Equipment Norway

In a country and city that is pretty cold, I have never felt so warm a welcom or been helped as warmly during my graduation. Everything was planned into detail. They made me a specific agenda with appointments and locations for every day. Erik Sollerud, the Managing director of Pon Equipment Norway, thought of the fact that it would be nice to have a 'natural spread' in the interview setting. Lastly, I got a personal ambassador; someone who would help me during my stay if needed; Anders Roil.

The week started and I soon noticed that the people in Norway work very hard on their own projects. Given that context, my topic for the next week was to investigate how Pon Equipment Norway 'manages Innovation'. During the first conversations I noticed that the employees I spoke to all know something about innovation to a certain extent.
However, the definitions and interpretations differ enormously. Almost all the people see the fairly innovative electric excavator (the Z-line) as the definition of innovation. Another example I want to make comes from the front-man of the welding shop. When asked about innovation his reply was:.
"No, I don't really know, I don't really do that in my job."
After 10 minutes the conversations died down and I decided to ask the man to show me the welding shop.
When we came to the welding shop, he started talking:
" If we moved this here, it would be so much more efficient. Now I must go here, go back, come back here and so on. It takes a lot of time."
I listened and watched him show me his daily passion, not knowing that he was actually in fact talking about innovation.

Why do they struggle to bring this to the surface?

The next section will quite extensively describe what observations were most striking, explained by quotes and interpretations. First is that there seems to be an unclear definition of innovation. What is meant by it? What can you achieve with it? And what concrete examples can people expect in an innovation portfolio?
Second observation is a follow-up to the first. If there is understanding, do they have the capacity to support room for innovation?
Third, closely linked to the second observation, is about having an innovation process that structurally helps people with handling ideas and innovation projects.
The last observation is about Norwegians having an introvert culture of sharing and talking. It seems like they only talk about stuff they need, in order to thrive in daily business.

How come?

1. Unclear definition of innovation

The first thing that has been really striking throughout the interviews was that every employee has a different interpretation of innovation. Sometimes this differed more gradually, sometimes radically. But is it only a matter of understanding what is meant by the word? In other words, is it an issue of nomenclature or is there more to clarify?

According to Viki, Toma and Gons (2016), innovation is nothing more than a means of achieving a company's strategic goal. In their book 'corporate start-up' the authors state that companies need an innovation ecosystem, and to do so a company should at least start with having an innovation thesis and an innovation portfolio.
Firstly, having an innovation thesis is about knowing what an organization's future goals are and what strategic objectives an innovation could serve. This means that everyone in the organization knows when something might be innovative, and where this innovation could help us go. Having an innovation ambition is an important aspect of the innovation thesis.
Secondly, when this direction is known it should be put into practice. Or in other words, in concrete examples. An innovation portfolio, as they state, should cover the whole spectrum of innovation the company has or wants to have.

From the interviews, I have seen that both an innovation thesis and portfolio are missing, leading to an unclear definition of innovation. The next parts will explain in depth how employees perceive this.

Definition - what do we mean?

You could interpret an innovation thesis as a document that helps employees speak the same language in a certain direction. Without clarity, guidance and a sense of direction, it is diffcult for employees to feel involved. From the interviews I have seen that the definition of innovation is not ambiguous, so how can we give meaning to it?.
Some claim that innovation is about 'doing something new'

"Innovation is a new way of doing things and earning money with it"
"Innovation is something that is not there yet, something new, you have to break walls for this"
"Innovation is dare to stop- or change doing what you are doing today, it means doing things easier
"Innovation is thinking new, either a system or process or a thing"

Others tend to see it more as something that makes life easier:

"I see innovation as everything that makes life easier"

Or what about innovation as being 'something' that makes us move forward:

"Innovation is nothing more than moving forward"

A more 'philosophical' definition is also found, where an employee stated that in the end everything people make or create, can be seen as innovation.

"Innovation is everything that is, in the end, made by people"

These examples show that different elements are in place. “New”, “moving forward”, “doing things easier” and so on. There is however, quite some room for own interpretation. In that sense, the variables mentioned by the employees are relative.
Innovation to one, could mean business as usual to someone else. Making life easier might have different meaning for different employees. I’m not saying that this is a bad thing, but as a result, people may not have enough clues about whether something is innovative and can actually share it.

The next story is a good example of what unclarity of innovation could result in. Something being an innovation for someone, and business as usual for someone else.

The everlasting oil-sample-struggles

When a machine (an excavator for example) from a customer breaks down, the client usually (directly or indirect) calls a mechanic. The mechanic will arrive at the site and ask the client to stop the other machines. Why? There might be something with the oil which could also ‘break’ other machines. The mechanic takes the oil sample and has to write down a lot of information about the sample. “The mechanics hate doing this, to do administrational work, it takes them a lot of time. Can you imagine that we have about 80.000 samples each year? Do the math” From here, the sample goes to the ‘SOS-lab’.
“The mechanics do not like doing this and as a result they might do it quick with an impossible-to-read-handwriting”
The people in the SOS-lab have a hard time reading the documents that come with the sample, hence this costs them extra time.
“I think this has been a problem for more than 10 years, with a lot of mechanics complaining about it. Somehow, they did not think of it as a problem with a potential innovation, or we were not able to ask the right questions, I do not know”
Nowadays this is showcased as an innovation that has been a rather small idea with huge potential impact.

This is an example of something having the potential to become an innovation for the organization. However, somehow it was not brought to the drawing table and they did nothing with it for 10 years. The mechanics were complaining about it quite frequently; it was just a shitty part of their daily job.
The managers were not listening to them, this was just a part of their daily job.
Somehow, they were not able to see the innovative potential. In my opinion, this is partly due to the fact that people do not understand that these ideas can be seen as innovative.

The innovation goal - what do we want?

Besides having a common understanding of what is meant with 'innovation', having a clear strategic goal for these innovations is important as well. In 'The 7 habits of highly effective people' the author states that one should always begin with the end in mind. This means that we should have a target, a result or destination prepared, before one can commit to anything (Cofely, 1993).
From the interviews I have seen that this is often seen as an unclear issue as well, in order to give the right guidance to the employees.

"Since there are no clear goals?"
"If innovation is a goal, then you need to define that goal, you need to know the goal!"
"The wrong assumptions are made about what is needed, by the wrong people"
" We tend to go directly into solving issues, without knowing if we know the right problem. We think we do, but we are not sure"
"We have the right solution, to the wrong problem"
"A big win would be to plan ahead, to know what is coming for SC and ST"

When talking with employees about innovation; people mean different things and have little understanding about the common goal it serves for the company. What I also heard is that the definition itself is not a big issue, as long as the employees understand when they are innovating. From the interviews it has become clear that a lack of concrete examples of innovative projects, hence the absence of an innovation portfolio makes it for a lot of employees even harder to get an understanding of what is meant with innovation.

The innovation portfolio - some imagination to what is meant in practice.

If we know what we mean, what our goals are, how can we translate this into different kinds of products? An innovation portfolio is about bringing the innovations into concrete practice.

This part is closely connected to the definition in a way that the definition opens the discussion about 'what do we actually have?' The goal of an innovation portfolio is to be able to distinguish different kinds of innovations. Be it a big one, or a smaller one. Be it more incremental, or more radical. It defines the range of possibilities, and without an understanding of this range, the imagination of 'what could be innovation' can stay rather limited.

"It is not clear what could be called innovation, and what is not"
" We are too much in routine, we do not see that something might be an innovation"
"Dividing ideas in A1 A2 and A3 helps, but the barrier for idea input should not be too high"
" Selection or classification comes afterwards, not in the beginning"

To add to this, I asked several employees if they could come up with innovations that are happening within the organization. At first, they could barely mention examples. Most mentioned two.

"Well yeah the Z-line and the QR-samples"

The Z-line and the QR-samples, as mentioned above, are both examples of successful projects. They have been built or implemented and are showcased as innovations throughout the organization. People know that these are innovations. This could mean that the employees see innovation always as something big, whereas it could have been small as well. However, there is little imagination of what 'something small', could mean to them.
And as shown from both observations and literature some concrete imagination in terms of an innovation portfolio might help to expand the range of innovative potential.

When digging a bit deeper, and by explaining that the range of innovations could be extended, they could come up with more than just these examples. This was done by an extra experiment in which we asked employees the following question:
"What improvements did you do in the last year?"

Where, when they were at first asked about innovation, they could only mention the most obvious examples, they could now name many more improvements that also have innovation potential.

This is a good illustrative example I heard after asking these kinds of in-depth questions:

"There was this guy, a mechanic, and he had to be onboarded with the digital communication systems we have. He was explaining me that he listened to books while he was doing his job. He said he needed to do something extra."
I asked him what kind of books, and he started explaining. After a while, he started talking about this bracket he found himself editing and editing all the time. He explained to me, that if this could be done right from the beginning, a lot of time and money could be saved.

And then, the bridge to the next observation, the guy I spoke to said:

" I felt so frustrated, why didn't we hear from this issue before? I immediately thought, "how the heck are we going to do this?"

2. Making room for innovation

A matter of time?

The second cluster could be perceived as a follow-up to the first one. If it is made clear what it means and employees come up with innovations, can we then make room for them?
Most employees replied, directly or indirectly, that this is a struggle for the organization. According to them, the lack of 'time' is the biggest stumbling block for them.

"The best thing would be 25hours per day, and some sleep during the night. If I could get baby sitter it would help a lot ;D We just have to decide and agree in the group, and then implement."
"Challenge is time to think about these things"
"People are not given time"
"Other challenge is to create time"
"Challenge is time, no think to think. No time for 'nice to do'"
"I do not get time to think about innovation"

The argument for being too busy, not having or making time 'to think about innovation' is something that I heard a lot. A solution could be to just give people more time to think, as companies like Google or 3M do. Not getting time could be a reason for innovation to not happen, however the CIO of Pon (Ton van Dijk) states that if people are really eager to think about new ideas, they should find their own time of doing so:

"It could be something employees want to do or think of at home".
"When you have enough time, you have too much time. It is about prioritizing in my opinion"

I cannot say that I fully agree with him. I have heard that people spend time on something because it is expected from them, from a job perspective. Actually, it is not expected to spend time on something, but mostly to deliver results. They get rewarded for achieving results, or rather, they get blamed if they don't achieve these results.
Ton, being someone with a playing field with room to play and experiment in, for him this statement is easy to make. At home of course, there is no pressure and you can just do whatever you want. Also, prioritizing is easier said than done. I believe that time is indeed an issue for a lot of employees. But I also believe that it is not about the motivation to make time, but rather, getting support to use time.

Idea generation and encouragement

Again, people state that time is a big issue for why they do not think about innovations. However, reading between the lines I discovered that there are more fundamental reasons behind it. As for facilitation, those interviewed said that there is little encouragement or support when it comes to generating ideas. They indicated that people should 'help' them to think, by asking questions to the employees.

"We need people like you, to come down here and ask questions and inspire to think of things."
"Someone needs to ask them questions"
"We need ideas, ideas are everywhere but mostly at the frontrunners so the mechanics and technicians who are in contact with the customers. But there is no place to listen to them, or to ask or to see. "

The director of Pon Equipment Norway told me that he once did a session in which he invited 10 people who under the age of 30. He asked them what ideas they could come up with concerning the energy transition.
One guy stood up, pitched an electric excavator.

"I asked him, can you build this? He said, yes I can."
Now some time later, we are actually doing this!

This is interesting!Why did this guy take the time to share his idea? First, as seen from the example, he was asked for it. So, in a way, he was asked to take some time to think about it. Something that was not menioned in this example, but something I heard later , is that the managing director directly asked him; 'This sounds cool, can you do this?'

So, he got recognition for his idea and felt that he was allowed to spend time on it, even if it meant that he would not reach his financial goals.

Yes, it is about time. But as I have seen, it is not only about taking the time to think about innovations. It is mostly about the feeling that you are allowed to take the time. To stop for a moment with your daily business, and take the time to think. If an employee is encouraged to do so, he or she might actually take the time to do this.

Capturing ideas

Generating and encouraging employees to think of ideas is only one side of the medal.
If you inspire your employees to think about improvements, to come up with ideas, problems or suggestions, there might be the need for a certain structure in place to capture these ideas. According to the interviewees this is a big issue for Pon Equipment Norway. They mention that it is hard to 'bring them to the surface'.
Main things they all see happening is that the ideas get stuck somewhere.

"Ideas get stuck in the middle, they do not see the added value. The managers are too busy and might be afraid it will eliminate their work."
"Middle management has no time to listen."
"Ideas get stuck in the middle."
"Often good ideas get stuck or stopped by the middle."

The main reason for this, according to the interviewees, is that there is not a structured way of collecting the ideas from the employees.

"People do not know, if they have an idea or something, who will be the light of the day to share it with."
"We need something to capture all the ideas."
"We need a team to take ideas to the surface."
" Some people do not have the right contact or place to talk to."

A technical communicator, who is in contact with technicians a lot, thinks there is a bigger issue at play here. He explained that it is not only about collecting the ideas, it is about how you deal with them.

"The driver for this, is that we are not able to handle the ideas in a proper way. You need to somehow encourage them to come up with ideas or share the 'secret knowledge' they have. Then you need to collect these ideas and somehow handle them."

Concluding this part about making room for innovation, I have seen that there are three main things happening. Employees constantly say that they have little time to think about innovation. But in my opinion it is not an issue of having too little time. As seen from the example with the electric excavator (the Z-line), an employee was being encouraged to spend time on it. He got support and recognition for his idea. So, encouragement and recognition seem to be important when making room for innovation too. Lastly, something that was mentioned is that if you are encouraged to take time to think about innovation, the ideas need to be captured in a way. How could you otherwise get the recognition for what you came up with? All these elements have something to do with support. I would argue that the room for innovation is there, but it lacks support from different levels.

3. Missing an innovation process

As seen in the second cluster, the issue with supporting room for innovation is mainly about having the right support for the employees.The interviewees explicitly mentioned that such support should be structural, from an organizational point of view. They state that an innovation process that guides innovation is currently missing in the organization.

"They do not have a process, but they only have deadlines for when to finish it"
"I would love a clear process for managing an innovation process"
"The challenge is to have a standardized process and workflow for innovations"

ou could ask yourself, why would they need an innovation process? Do these observations imply that they need an innovation process specifically or just more structure in the organization?

"It is done, but in an unstructured way. Everyone does his or her own type of innovation"

Some of the people I spoke to, state that the problem with 'everyone doing it his or her way' is that it is hard to control or scale. Meaning that when the company grows, more people should (in ratio) be working on innovation. If these people have to create or think of their own 'way to do it' it could be inefficient and even withhold people from doing it.

"The organization has grown a lot the last years, without guiding the growth. We just gave them a laptop or a screwdriver, said 'Go, go, go'. The result is that people are freestyling their way out of it, without a clear process."

"We have outgrown our processes and flows"

"Right now, there is no clear process for innovation. We have some spraw ideas and people do have some checkpoints but it misses some basic elements of a process"

"Everyone is working with innovation, but no one is really responsible for the process"

Where the second cluster was about providing proper encouragement and support for innovation, this part has been mainly about missing structures and processes for doing so.
A process with people responsible for it, and not having everyone responsible for his own process. Shared responsibility is often seen as having no responsibility, which is mentioned as well. As a result, it could be that there is little control over basic elements when managing innovation. But is the issue resolved when all processes and structures are in place?

4. Introvert innovation culture - little sharing and talking about the 'new'

The fourth cluster is about little sharing and talking about innovation. As seen from the previous clusters, reasons that people give for this not happening are related to a lack of support. Even if they get support, the support is not structural in the sense of a process.
But is it really only about having structural support, or is there more?

I found that something else is happening in this context.
The interviews suggest that Norwegians are pretty introverted. One of them explained this in a beautiful way, as being part of the Norwegian culture.

"Norwegians have a house in the woods, there it is comfortable, and they do not get out of there"

"The culture here is a bit; all by myself. But if you ask, everyone wants to share".

"The people here are very open to listen and talk about what they mean, think or see. If you ask them about it."

As a result of this culture, I have seen that sharing and talking about innovation is rather limited. If you ask people about it in a 1 on 1 setting, they will talk.
But I observed that when something is new and strange it is not talked about or shared a lot. At least, I observed that the 'novelty of the topic' was the reason they do not talk about it.

But when I had a chat with one of my supervisors from Norway, he gave a different explanation for it. He mentioned that Norwegians, since the time of the Vikings, operate from a 'survival mode'.

"People here think of it as; I either fix it right now, or I die."
He illustrated this with two regular occurring situations.
"When Norwegian people are in the woods, or in the mountains and they pass other people they will always say 'Hi'.
"When Norwegian people are in the bus, they never say "Hi". Nor will they sit on the same spot or even stand in the same line"
The explanation for this, my supervisor said, is that people tend to act following the mindset of "I may have to rely on this person to survive in bad situations". He said that they do not experience this in a bus; this is perceived as a safer place, no or little risks.
This is the same for the working environment. When a situation is bad, or there is something bothering them, they go their own way. They do not go to their managers, they just think:
"What the hell am I going to do about it?"
They will then make up their own minds and go into survival mode. They will just fix it and therefore, do not need others to be directly involved or to share their thoughts with.
In that sense, they do not share possible solutions with either their bosses, or their colleagues.

The fourth observation of 'little talking and sharing about innovation' has cultural roots, back to the vikings. In the next paragraph, I will try to shed more light this 'viking culture' by means of a culture study.

C. Cultural Survey

In addition to the qualitative observations, a quantitative survey was held to gather more information about the perceived culture within Pon Equipment Norway. In this section the results will be briefly presented, after which the results will be interpreted in connection to the qualitative observations.

The results

- 103 of 464 employees filled in the questionnaire
- Of which 27 managers, 41 mechanics, 37 'other'.

	Mean focus organization	Rank	Mean feeling organization	Rank	Mean total score	Total rank
Caring	3,90	3	3,69	2	7,59	1
Purpose	4,06	1	3,41	4	7,47	3
Learning	3,78	5	3,54	3	7,32	4
Enjoyment	3,77	6	3,12	8	6,89	6
Results	3,94	2	3,30	5	7,24	5
Authority	3,83	4	3,70	1	7,52	2
Safety	3,27	8	3,22	6	6,49	8
Order	3,37	7	3,15	7	6,52	7

Figure 15: Culture stury mean scores and ranking; range 1-5

Looking at the table, people state that:
- Focus of the organization is mainly about 1) purpose, 2) results and 3) caring
- Least focus is on 7)safety and 8)order
- The organization feels most like 1) a competitive arena, 2) a big family and 3) a dynamic project
- The organization feels least as a 7) celebration and 8) a smoothly running machine
- In total, caring, authority and purpose are rated highest.
- In total, safety, order and enjoyment are rated lowest.

Interpret survey findings

Safety and order are rated lowest, meaning that people find that the organization is not a smoothly running machine in which everything is thought through and planned carefully.
"Because we lack a process, people are freestyling their way out of it"
On the other hand, caring is rated highest which means that they appreciate the trust, relationships and teamwork. This also means that they are loyal to their leaders. Besides this, people in the organization say they want to or are forced to work for a particular purpose. Whether they want to or not, they have no option:

"The government has a lot of influence here on where the market is going. For example, when a new school is built, a contractor has the deal and needs equipment. But the government says that the building of the school needs with 0% emission, so the contractor needs to and so the equipment needs to."

Reflecting on this from a qualitative view, this is interesting. I have seen that the people work hard and get results. On the other hand, I have seen and heard that they sometimes 'freestyle' their way out of it, as a result of having too little structured processes at place. However, it felt like the leaders have a plan, but they do not or rarely communicate this with all of their employees. So, it seems that the ingredients for improving safety and order are there, but these are not yet put together.
To place this kind of 'culture' in the most qualitative perspective possible, I like to share the story one of the employees told to me during my stay.

"People in Norway do not like instructions. They just think they know what to do, and how to do it. For example if this building would be on fire. There are a lot of instructions if there is a fire, a sort of 'steps to safety'. Well, you will not find anybody reading those instructions in order to get out of the building as safe as possible. They will tear the paper or instruction from the wall and make sure they get the heck outta here."

D. A wrap- The main challenges observed at Pon Equipment Norway

After a week in Oslo, I returned to the Netherlands with a very good feeling. The employees in Norway are working their asses off, they are not constantly bragging about their successes and (if asked) they are willing to listen and learn. Beneath the surface, they are doing a lot.
A lot that touches upon my and their (broad) definition of innovation. The thing is that most people, like the guy from the welding shop, are not aware of this. They feel that innovation is something big and some clarification and structured processes of handling with it, is not in place.
The people keep their ideas or suggestions to themselves, within their wooden cottages in the Norwegian mountains, safe where there is little to no chance of being harmed. The only moments they seem to share their ideas, they said, is during Christmas drinks when alcohol is consumed, and the end of the year is near. A context and place where they feel safe to share ideas.
What seems to be missing in Norway is a constant structure with support, that can help people and eventually allow them to share their knowledge and ideas.
The ingredients are there, but the road to the destination is not paved well enough. They need to pave their personal road to innovation, or In Norwegian terms; Baner veien for Innovasjon.

Pon Equipment Norway @ Skedsmokorset

Case 2: Pon Power Netherlands

Figure 16: Main observations Pon Equipment Norway

A. Introducting Pon Power Netherlands

Pon Power Netherlands, just as in Oslo, is located quite far from the big cities; in Papendrecht.
After a couple of visits, I gathered the insights and observations, and reduced them to 25 rather critical main findings. As I wanted to check whether the findings resonated with the view of the people concerned with innovation, I shared and discussed the findings with the managers. During one such session, one of the managers of innovation, justly asked me:
"Is there also something that we do well, over here?"
This got my attention. Indeed, I did see a lot of good things as well, to be honest. I had to think back to a statement from one of the employees I interviewed earlier.
"We all have such a passion for the job, for the business and for the cool Caterpillar technology. In that sense, everyone working here at PPNL has 'Yellow blood' in his or her veins."
Is there something they do well? Absolutely. They are really passionate about fixing 'something', with a shared goal of working towards getting results.
This resonates with the culture that they want to pursue; We take care of it.
And they don't only take care of the business and their jobs. The HR-manager gave an example of taking care outside of business context.
"One of the employees' had an accident during the job. He died. We knew that he was working on his personal boat docking stage in his backyard. With a team of mechanics, we went to his wife and finished this project for him."
They do care, and they do take care.
However, for me personally caring is inseparably connected to sharing.
Sharing means involving others with the things that you are working on, things that are in your mind, that you may be working on or just things that bother you. Sharing is also a means to start a discussion to eventually clarify what is meant by something, be it an idea or a strategic decision. This does not happen that much at Pon Power Netherlands. People feel that they are too busy in their daily operations to think about improving their jobs , let alone talk about it. The right support and structure to do this is missing, resulting in too little innovative involvement from all employees.

"What we are missing nowadays is creative thinking power and involvement from our employees, when it comes to feeding our innovation pipeline."

The next section will, just like the part about Norway, describe what observations were most striking, explained by quotes and interpretations. Firstly, I found that the choice to centralize innovation has quite an impactful result on the organization and the involvement with innovation from employees. Secondly, after finding that they do want to involve employees with thinking about innovation, they seem to lack capacity to structurally do this. Thirdly, in contrast to Norway, they do seem to have strategic goals per department. However, it is not clear for employees whether they are involved or not or what this means for them on a daily basis. What are the expectations and what responsibilities do they have? Although this seems to contradict the fact that they have centralized innovation, I found it is definitely perceived as an important issue. Lastly, according to them the investment in most important assets-employees and customers- is rather low. They do invest in both, but these investments stay on a product or service level, rather than investing in them to think or act differently towards an innovative mindset.

Back to the statement of taking care.
They do take care of their businesses and accordingly, their people. But it seems they don't take care of the full spectrum of an innovation culture.
How come?

5. Centralization of innovation

Innovation within Pon Power Netherlands (PPNL) has gained increased attention over the last years. It was not kept at a level of thinking, but analysis has been done in 2016 that should lead to actual changes " Since 2015, 'innovation' has been a constant and recognizable strategy of Pon Holdings and PEPP, with which the OpCo's have also been put to work. In the strategic reorientation of PPNL in 2016, we established,by way of an internal analysis, that the (innovation) strategy had no clear grip on the actions of PPNL. As the result of (mainly) an internal company analysis, a reorganization within Pon Power Netherlands has occurred. The strategic decision was made to centralize innovation and digitalisation at a so called 'Marketing & Technology-department'. The 'rest of the organization' would from then on only work on 'operational excellence' and 'brilliance in the basics'.

"Marketing kan leuke dingen verzinnen maar vaak een beetje een lege doos Technical support (R&D, product development) daar maken ze de mooiste dingen die super goed werken maar zijn dat nou ook de dingen waar onze klanten op zitten te wachten? Als je die twee gedachten zeg maar combineert dan zou dat ertoe moeten leiden dat we mooie dingen gaan maken die werken die ook nog eens onze klanten willen hebben. Toen op die manier ingericht in team M&T en met dat team zijn we verantwoordelijk voor het ontwikkelen en in de markt zetten van nieuwe proposities."

So, the marketing and technology department is currently the department at PPNL that is held responsible for innovation. Innovation has been taken from the drivers of the operation (sales and parts) and centralized at M & T. By doing this, innovative projects can be worked on in a centralized location, with a bunch of people. The goal for doing this was pretty clear, according to the interviewees; they work on innovation, while the rest works on their daily operational jobs, since they are busy enough doing just that.

"Iedereen is stampes vol met eigen taken, als iemand aan mij vraagt wat ga je eerst doen, je klanten of je lijstje met innovatieve ideeën, ja dan ga ik eerst met klanten. "
"Ja innovatie dat doen ze daar bij Marketing en Technology."
"Ja bij Marketing en Technology, zij moeten werken aan de dag na morgen, of misschien de dag van morgen. De andere medewerkers moeten bezig zijn met de dag van vandaag, of de dag van morgen en soms bezig zijn met hoe ze dit zouden kunnen verbeteren."

Personally, I was a bit stunned by the fact that they centralized innovation. I am great fan of making someone or some groups responsible for specific tasks; shared responsibility is no or too little responsibility.
Looking at my wall with drawings and quotes, my eye was caught by a quote that is striking here.

"Human beings are less likely to resist change while being part of it."

However, this is not about a specific responsibility. This implies a mindset, it implies future opportunities for the company that are not visible yet. I don't want to judge whether the centralisation is good or bad. My foremost question is, what will be the result of the centralization of innovation?

6. Low involvement from the 'other employees' - with innovation

Centralizing innovation serves two goals. On the one hand they want the M&T department to work very focussed on implementing new projects in the organization. On the other hand, they seem to explicitly want 'other' employees not to be distracted from their daily jobs, the operations that lead to financial results. Every employee should know their focus and know what he or she needs to do.

"Mensen zouden niet afgeleid moeten zijn uit hun dagelijkse werkzaamheden"

"ja dat en omdat we willen voorkomen dat er allerlei mensen in de operatie bezig zijn met projecten die niet de dag van vandaag dienen, maar voor 'morgen' relevant zijn. "

Or, as described in more extreme by one of the employees from Area52;

"If you work here, leave your brains at the gate."

Partly, as a result of the centralization of innovation, involvement in and a sense of the innovation culture/ community is rather low throughout the organization.
However, placing the execution of innovative projects within one department does not by definition mean that employees are not involved with innovation at all. According to some of the interviewees, (mostly) with a manager title, they do want employees to think about innovation, or innovative suggestions.

"...vind ik het wenselijk dat een zo'n groot mogelijke groep aangemoedigd zou worden 'mee te denken' hoe we onze producten, services, business modellen, processen en hulpmiddelen kunnen innoveren."

" Hoe krijgen en houden we de mensen in de opcos gemotiveerd. Daar komen de beste ideeën vandaan.."

What they basically agree upon, is that they want the whole organization (including 'the other employees') to have an innovative mindset; to constantly think about 'how can we improve our job, and hence our organization?', with the only requirement being that they are not actively distracted from their operational job. They want to involve employees with thinking about innovation.

"Ik denk dat je de spijker op z'n kop slaat als je stelt dat we vooral willen dat meer mensen met ideeën komen"

In practice, this doesn't happen enough. Employees outside the M&T department think that innovation is only happening at 'the other side'. As a result of this mindset, they don't feel involved and I have seen this as well- there is a very low level of innovative involvement, in form of an innovation movement or innovative mindset.

"Op dit moment is innovatie een clubje van mensen, die impulsen proberen te brengen in de organisatie. Op dit moment is het geen community of een movement."

Concluding the first two findings: PPNL centralized innovation some years ago to keep the drivers of the organization focussed on the daily operation. As a result, there is a single department working on implementing innovations, which sounds practical. However, as they state, they do want to involve employees with innovation sometimes. For me, it feels like they are talking to kids and the way they do this, is rather condescending. It feels like they say that the people that have knowledge of innovation (the "grown-ups"), are working on it, and the kids can come and have a look now and then and maybe, if they are grown-up, they can be involved as well.

7. No capacity for structural (involvement in) an innovation process

It seems like, although they centralized innovation, they do want to involve the employees with thinking about innovation, but a structured way of doing so, is missing. Students from the Hoge School Utrecht, also observed this phenomenon. In their conclusion they stated:

"Er is totaal geen ritme, geen process, geen drum beat"

"Dat we zo'n proces in onze organisatie kunnen hebben, zodat mensen die dagelijks tegen problemen aanlopen, als ze goede ideeen hebben om dat op te lossen dat ze die wel ergens kwijt kunnen en dat die ideeen ook opgepakt worden."

"Ja bijvoorbeeld als we dan bepaalde trends zien, we zien bepaalde dingen gebeuren daar ontstaat een idee of we zorgen dat we de juiste mensen uit de organisatie bij elkaar krijgen omdaar dan eens over na te denken volgens een bepaald proces. En dat gaan we vervolgens nou ja via klein simpel bouwen snel testen gaan we kijken of daar muziek in zit. "

The reason that this isn't happening at the moment, is that they say they don't have the capacity for it, whether it be a process or guiding new ideas.

"95% van de tijd zijn we bezig met het implementeren van projecten, 5% met nieuwe dingen zoals ik eerder al zei."

Employees working at the M&T department repeatedly state that the project funnel at Pon Power Netherlands is too full to have any more new, innovative projects. As a result, they say that at this moment they don't want an extra (innovation) process, since they are too busy with implementation. They cannot handle more projects with this occupation of the department.

Now it becomes interesting because one would expect that a department that is responsible for innovation is constantly looking for new innovations to work on, right?
Two questions inspired me to look further: are they actually creating/working with new innovations. In other words, are they used for their purpose? And if so, why don't they have the time/capacity to involve others?
Or is it something else, that maybe they might not be able to make choices?

They are having a hard time making these choices since in practice the Marketing and Technology department is mainly involved in the implementation of new projects that come from a large stakeholder, namely Caterpillar. This has been a strategic goal of the organization and therefore saying 'no' to these projects, is easier said than done.

"PPNL heeft gezegd dat ze samen met CAT voorop willen lopen, veel innovaties komen dan ook van CAT en worden door M&T geïmplementeerd."

"We moeten dicht tegen Cat aan blijven zitten om zo invloed te kunnen uitoefenen op het eindproduct waar wij en onze klanten uiteindelijk mee in aanraking komen."

Other than the projects that come from Caterpilar, they state that some of the other projects come from different parts of the PEPP organization as well.

"ja wat we nu eigenlijk zien is dat onze projecten voor 99% bepaald worden door dan wel projecten die vanuit de pepp organisatie komen, of van uit cat komen dus dat zijn meer ja dit project moet uitgevoerd worden en dat komt dan bij ons terecht."

"Die wil dat doen, die wil dat doen. Die vraagt dat, die vraagt dat."

"We hebben meer dan 600 projecten op de plank liggen, kijk maar naar deze smartsheet"

Members of the M&T department repeatedly state that they are too busy with implementing these kind of projects instead of innovating themselves.

"95% van de tijd zijn we hier bezig met het implementeren van projecten en zorgen dat ze van begin tot eind goed in de organisatie landen"

"Wat nog niet goed gaat, we hebben als team ook de opdracht gekregen om echt te innoveren. En eigenlijk is de realiteit dat we daar maar heel beperkt echt de tijd voor hebben. Dus we zijn voornamelijk bezig met het uitvoeren en implementeren van projecten en die komen van, ik denk dat maar 1/30 projecten door ons bedachte innovatie is."

"Van innoveren binnen M&T is weinig tot geen sprake."

The department that is supposedly organized to be working on innovation seems to be mostly busy with implementing projects. This is without saying that these projects are not innovation, but according to the interviewees, this is not always clear. When do these projects touch on their definition of innovation?
Looking at the three areas of innovation that Area52 uses and which is derived from the three horizons of McKinsey, I would say that the projects that M&T implements are Area1 (incremental) innovations. When asked, they agree upon this.

"Caterpilar heeft een webshop gebouwd voor onderdelen, ja die moet geïmplementeerd worden en geconnect met onze systemen moet allemaal processen voor komen om klanten daar op te zetten. "

"Ja, daarvan, ja kun je je dan afvragen of dat dan innovaties zijn.. ik denk het niet"

In that sense, they are working with innovation. However, within the department itself there is quite some discussion about this. Some feel that these Area1 implementations are not their innovations nor are they even innovations at all. If that is not innovation for the members of M&T, what is?

" kijk als je het echt, ik zie het persoonlijk meer als wat in Area3 gebeurt. Dus meer de echt de nieuwe dingen die nog niet bestaan, op een andere manier naar een markt kijken, met een ander verdien model eh, toepassing van nieuwe technologie die nieuwe dingen mogelijk maakt die er eerst nog niet waren waardoor je ook de rest van de markt dwingt te denken van 'shit, zo hadden we nog nooit bedacht dat dit ook zou kunnen'."

As the M&T department sees it, they are too busy working on implementing projects. They don't have the time and capacity to work on their own innovations, which they see as the only true innovations. As a result, they don't have the capacity for a new process for innovations that involves more people to increase innovative capacity. The reason being that they cannot handle more ideas or projects. But is this really the case?

Both on the record as well as off, I often heard them saying

'We don't want other employees to be actively involved with this because we simply cannot manage it. If we will involve them, and don't do anything with it, we will lose them forever."

"De reden dat we dat nu nog niet actief doen, is natuurlijk het riisco dat wanneer we die vraag stellen en er vervolgens niks gebeurt, kans groot dat je mensen verliest dus ja dat is wel iets wat we in de toekomst willen gaan doen, maar niet iets wat nu al actief gebeurt."

"Het meest demotiverende is natuurlijk als je voor jou gevoel met een goed idee komt, en er vervolgens niets van ziet of mee gebeurt."

From these statements, you can see that they are not really afraid of getting more ideas, but it looks like they are more afraid of following them up, to actually handle the ideas and keep employees involved.

Concluding this part, the M&T department at PPNL seems to have a forced priority on mostly implementing the projects they get from Caterpilar. Really inventing new things, more like Area2 or Area3 that could be implemented in the organization, doesn't happen all too often. According to the interviewees only 5% of their time. An unanswered question is whether this is a choice or are they truly forced this direction? What if they would reject a Caterpilar project and instead, work more on their own innovations? However, the situation as I have seen it results in actively not organizing a process or rhythm that enables other employees with thinking about innovation. They are afraid of losing them and eventually do more bad, than good. This feels like a leadership dilemma; what do you want your employees to do, and not to do? If this is true, are the employees well enough aware of this?

8. Unclear expectations about innovation

Strategic choices are made in terms of how (supposedly) innovation should be brought to practice in the organization of Pon Power Netherlands. This is clearly communicated: innovation is centralized at M&T. The result is clear: focus and less capacity to actively involve employees. However, it is questionable if this approach, the innovation strategy and projects are always clearly communicated.

"Wat je dan ziet, als je het op organisatieniveau bekijkt, dan zie je eigenlijk dat binnen afdelingen dat er redelijk gecommuniceerd wordt, ook goed samengewerkt wordt, maar met name in de transitie van afdeling naar afdeling, of ene procesdeel naar andere, daar zie je heel veel zaken fout gaan. Of daat is de meerste winst te behalen."
"Hoe krijg je het van zaadje naar karbonaatje he"

"Ja er is soms nog wel wat verwarring over wie wat moet doen"

"... het is vanuit boven niet altijd open en transparant wat ze doen of wat ze willen, waar ze heen willen etc."

If people are asked not to be part of something, or to be 'just a little' part, they might need to know this as well, and they might need to know what this means to them on a daily basis. When one of the employees showed me the strategic overview he helped create, he explained:

"Ja dit hebben we echt wel aan ze laten zien, hebben we echt wel laten weten. Ze willen het gewoon niet snappen."

"Als het goed is is iedereen hiervan op de hoogte binnen de organisatie"

This last quote is pretty important: 'They should be well aware of this in the organization.'
It is possible the employees don't want to get it, they don't want to be bothered with this innovation or these 'high-level-strategy-things'. It is also possible that it is just unclear, since different type of people, speak different languages in terms of business understanding.

"Ja een beetje als dat experiment waar je ergens een verhaal vertelt, die vertelt het weer door enzovoort. In een organisatie als PEPP, is er dan vaak veel ruis"

This has been shown with a practical experiment from Elizabeth Newton, a PhD in psychology at Stanford. In this experiment they set up a game with employees having two roles; either being a tapper or being a listener. The tapper was asked to tap a song that is in his or her head and the listener had to listen and guess the song. In the experiment, 120 songs were tapped, and listeners only guessed 2.5 percent of the songs. The most interesting part here is that before the listeners guessed the name of the song, Newton asked the tappers what they thought the odds would be that the listeners would guess correctly. They predicted the odds to be about 50 percent. Why?

When a tapper taps a song or tells a story, they hear this in their heads. But the listeners cannot hear that tune or story. Comparing this to the situation of Pon Power Netherlands; the tappers, the ones that in this case have created the innovation strategy, think that it is crystal clear. In practice, meanwhile it is not. (Heath and Heath, 2007).

"De uitdaging? Ja vooral gewoon het begrijpbaar maken richting elkaar. Je moet het 3x uitleggen totdat het duidelijk is. Daar gaat nogal eens wat mis en dan gaat het gewoon mis."

As a result, there seems to be misalignment in (innovative) expectations between the different layers of the organization. If something is rather unclear, and without too much obligations, people will automatically choose for the safe way out, which means just to stay in their daily routine.

This misalignment is very much linked to the definition of innovation and the organizational innovation goals. In contradiction to Norway, the organization has an innovation portfolio and an innovation agenda. At least the management team and the marketing & technology department know where they are heading to. However, other layers of the organization say that they don't always know what is expected of them. One of the employees stated that this is a result of 'how communication flows go within the organization.'

"Er is veel communicatie (horizontaal) tussen lagen, weinig communicatie (verticaal) tussen lagen"

There are expectations and responsibilities at PPNL. The organization expects, for example, that the employees stay busy with their daily routine, get results and be involved with thinking about innovations (sometimes) for Pon Power Netherlands. But I have seen, and the students from the HU as well, that it is not clear enough for the employees at all.

Take this example, from the book 'Stick'. (Heath and Heath, 2007).
What if John F. Kennedy had been a CEO, and he would have said
"Our mission is to become the international leader in the space industry through maximum team-centred innovation and strategically targeted aerospace initiatives."
Luckily for America back then, JFK was more intuitive than a modern-day CEO; he knew that blurred, abstract missions don't captivate and inspire people. The moon mission was a classic case of a communicator dodging the Curse of Knowledge. It was a brilliant and beautiful idea — a single idea with a crystal-clear expectation: we are going to the moon. This motivated the actions of millions of people for a decade.

Back to PPNL, I have seen that there is no such 'single idea' or a 'crystal clear expectation'.
At least, not something that is clear for all employees just like the shooting for the moon was for the American citizens.

9. Low investment in (knowledge from) employees and (-about) customers

Building up on the previous observation, I wondered:
"If there is a clear mission, with clear expectations, how would it be if people then have the capabilities to be involved?"
During my stay at Pon Equipment and Pon Power, I was told a lot about the most valuable assets the company has. They provide services for their clients and the customers seem to be very important to them.
Nothing new.

"I think that we say that we are highly dependent on our customers, but I think that our employees are also our customers, in a way."
"Our employees are our most valuable assets".

From articles, publications and so on you read it a lot; next to clients, people being your an important asset as well, is an understatement. (Bradley & McDonald, 2011) (Amabile & Kramer, 2011).
When my former relationship was about to be broken,
a good friend of mine told me that if you don't invest in something, it will automatically lose its value.

Or additionally stated by the VP innovation of Area52;

If you feed your employees peanuts, you will hire monkeys."

The question now is, how is the organization investing in their 'people' assets, being their customers or their employees?

Employees in the organization mostly get training on hard (product related) skills, very little on soft skills (managing people).

The people I have spoken to at Pon Power Netherlands are very passionate about the industry and technology they work with. Most of the employees are true technicians; they love to make sure that what they are working on works. If not, they love to fix it and if you are lucky, you run into a guy that is highly enthusiastic to share how he has fixed it.

During one of my visits I met the teacher at the training school for new mechanics. He gave me a tour explaining about all the different engines they have.

"Is toch schitterend dit? Kijk die oude kleppen nou.. Ik zou er uren over door kunnen blijven praten. Ja er stroomt gewoon geel bloed door mijn aderen, echt prachtig dit."

There is a lot of practical knowledge and experience on multiple levels of the organization. If there is a new product or service, there are training programs to ensure that the level of knowledge concerning the novelty being introduced is as high as possible.

"We doen training en development, we hebben een leerschool hier waarin we mensen met een eh MBO opleiding die soms ook MBO4 niveau hebben, leiden we op tot buitendienstmoneteur voor onszelf.
Als servicemonteur heb je eigenlijk een palet aan mogelijkheden. Van trainer, van in de verkoop, van adminstratie, planner, allemaal van dat soort jobs."

Besides practical trainings, there is also a high focus on managing people. They also provide training programs for managers, more on soft skills and how they can guide their mechanics etc. Only two employees interviewed mentioned that they would like some training on how to let mechanics share their ideas, or generate quick concepts that could be evolved to potential improvements.

"Ja hoe kunnen we nou meer naar de monteurs luisteren, verhalen bij elkaar gaan brengen. Je gaat niet vragen 'kom met een idee', maar je kunt wel leren op een andere manier naar ze te luisteren. "

Knowing the voice of the customer

So, they do invest in their people. However, some of the interviewees question whether they invest in the right skills for the employees. They would like to see more soft skills and training on creative encouragement. Besides this, they also mention that more skills are needed in investing more in the voice of the customer.

"Meer klant centraal, gebeurt veel te weinig TEGENOVER wie is de klant nu eigenlijk? Kennen we die wel?"

"Die mechanics, dat zijn de mensen die dagelijks in contact staan met de klant. Maar die zijn technisch en hebben ofwel niet de kennis en kunde om dit op een juiste manier te doen, of ze zijn er bang voor. In the end, durven en doen ze het niet."

They acknowledge the power of listening to the customer and speaking to them. This was confirmed by some of the district service managers spoken to.

"Vaak zijn het de klanten die iets op een andere manier willen en Pon staat hier niet direct mee in contact. Wel met binnenvaart, daar kennen ze de eigenaren van de schepen echt."
"Bij Pon zijn we heel passief. We acteren pas als de werf wat vraagt. Heel erg reactief totaal niet pro-actief."

The product or service training programs for the mechanics are taken care off, since they are the closest to the service/customer and they need to be able to help them. But training programs for listening and talking to the customers, to gather rich information that could have innovative value, seems to still be on the list of 'nice to have'.

Why is this important? Well, there seems to be a lot of (hidden) knowledge in the organization. As repeatedly mentioned, some employees have worked here for a very long time. They don't know better than working on Cat machines. If they are asked to use a new way of thinking, or to start gathering information from customers out of the blue, how would they know how to do this without proper guidance? It feels like the employees are not at all ready to be involved with innovation, since they are not taught how to do this.

I used to have a small rhyme for this:

Like a tree cannot grow without having its roots properly nurtured,
a company cannot grow without having its roots nurtured.

They want to grow their company, and they feel the need to innovate. However, they don't seem to nurture the organization in the right way. The roots that make them grow- the employees and customers- are not nurtured in the right way.

C. Cultural Survey

The results

- 136 of the 654 finished the survey (21% response rate)
- Of which 67 mechanics, 40 managers, 29 other

	Mean focus organization	Rank	Mean feeling organization	Rank	Mean total score	Total rank
Caring	3,56	2	2,97	3	6,53	3
Purpose	3,44	3	2,67	5	6,11	5
Learning	3,24	6	3,44	1	6,68	2
Enjoyment	3,25	5	2,42	8	5,67	8
Results	4,08	1	2,78	4	6,85	1
Authority	3,44	4	3,09	2	6,53	4
Safety	3,18	7	2,65	6	5,83	6
Order	3,12	8	2,57	7	5,70	7

Figure 17: Culture stury mean scores and ranking; range 1-5

Looking at the table, people state that:
- The focus of the organization is mainly about 1) results, 2) caring and 3) purpose
- The least focus is on 7) safety and 8) order
- The organization feels most like 1) a dynamic project, 2) a competitive arena and 3) a big family
- Organization feels least as 7) a celebration and 8) a smoothly running machine
- In total, results, learning and caring are rated highest.
- In total, enjoyment, order and safety are rated lowest.

Interpret survey findings

From the survey, one can deduct that most important are results. From the qualitative research this can be categorized mostly as 'financial results'.

"Grootste kopzorg is om aantoonbare resultaten in financiële zin te zien. We hebben natuurlijk financieel succes nodig. Daar doen we het uiteindelijk ook voor. "

The second highest ranked is learning. The perception within the research is about discovery of new things, development of new skills. Within Pon Power Netherlands this is partly true. In the organization, learning is mostly about gaining more knowledge on new products. To get to know how a new machine works and to both fix and sell it. It is less about soft managerial skills, for example.

Perceived least 'in place' is enjoyment, order and safety. These are more or less 'means' to make the road to successful results as comfortable as possible. Interesting, since one of the core values of PPNL is to 'make it fun'. Apparently, this is not perceived in that way. Could it be because of high work pressure?

"De werkdruk denk ik dan, die is heel erg hoog. En dan gaan ze ook nog eens mensen ontslaan, ja mensen hebben of krijgen geen tijd voor innovatie. Van bovenaf horen ze dan ja dit en dit en dit moet gebeuren, behoorlijke druk erop ook; binnen deze en deze tijd."

"Successen worden niet gevierd; vaak is iets niet goed genoeg, is men terneergeslagen, glas is vaak halfvol."

Work pressure is kept out of scope for further research, but if you must constantly work to the fullest and rewards are kept to a minimum, I can imagine that this is not really 'fun' or 'motivating'.

Based on the culture study combined with the qualitative findings, we can carefully conclude that the goal, being financial result, is more important than the means. The destination seems more important than the road taken. This is confirmed several times. One last time, most extremely put:

"Ja die gasten zoals Janus, wil alleen maar geld geld geld, heel veel geld verdienen."

D. A wrap - The main challenges observed at Pon Power Netherlands

The introduction story of PPNL ended with the statement that the organization takes care of their business, but it seems they don't take care of the full spectrum of an innovation culture.
I have seen that they are aware of what is going on and that they feel the need for change. By means of a central innovation team, they think they have it organized but then they find out that in practice, this team is mostly implementing Caterpillar projects. This results in them being too busy to structurally involve or educate other employees in innovation. Something that they want, but choose not to do.

In my opinion, Pon Power Netherlands is a bit trapped.
In practice, they try to start something good, but just don't take the risk to finish it in a proper way.
Almost everything goes with a 'but...'

'We want people to be involved, but....'
'We want innovation, but....'
'We value our customers and employees, train them to become better, but...'

This makes the organization end up in not really getting the right expectations, the right support and the right people when it comes to innovation. They want to take care but they are not able to take care of innovation.

"Ik toch willen zeggen, gewoon 'risico nemen'. Gewoon doen. Aan de gang gaan, vallen en op staan."
"Innovatie is een enge term, we moeten daar niet constant over praten maar gewoon doen."

Pon Power Netherlands @ Papendrecht

Figure 18: Overview correlation findings PENO(left) and PPNL (right)

From the stories of PENO and PPNL, to overall findings

Until now, we have seen the main observations from two different cases. Two different operating companies within the group of Pon Equipment and Pon Power.
The observations were shown separate from each other. This has been done with a specific goal; the companies are located in different contexts and combining them would not show the full richness of information and data.

However, the challenge for this story has been to come up with a framework that could help all operating companies in setting up their own innovation process. To do this, the next step is to compare the observations found in both cases and see whether correlations can be found. Are the observations connected to each other? Are they possibly rooted in a common ground?

Findings Pon Equipment Norway	**Findings Pon Equipment Netherlands**
1. Unclear definition of innovation	8. Unclear innovation expectations
2. Little structured facilitation for innovation	5. Centralization of innovation 6. Low innovative involvement with innovation 9. Low investment in employee- and customer knowledge.
3. Lacking an innovation process	7. No capacity for structural (involvement in) innovation processes
4. Introvert innovation culture	5. Centralization of innovation

Figure 19: Correlating observations

The table in figure 19 provides an overview of the correlation between different findings.
The question is, what do they have in common? Or what don't they? Or maybe, did I see something that was not mentioned at all? To be clear, the goal for this section is to find common grounds that could be applicable for the whole group. The next section will explain the findings from both cases and the common ground that is found.

Differences per Operating Company have been found, but not taken into account for the latter reason.

1. Unclarity about innovation in Norway || Unclear innovation expectations in the Netherlands

The first observation discussed in the case of Pon Equipment Norway, was about unclarity about the total picture of innovation. Challenges found were about questions such as "What do we as an organization mean with innovation?" and "What are the goals we have with innovation?" and "How can we bring this into a practical innovation portfolio?".
One of the results of this unclarity has been that employees make up their own minds, and 'just do it in their own way'. Looking at Pon Power Netherlands, they more or less struggle with the same issues. Although they seem to have a clear definition of innovation and strategic planning for getting there, still the expectations for the employees are found to be unclear.

The common ground here seems to be rooted in unclarity about innovation and in this they complement each other. Firstly, the strategic objective of innovation should be made clear. Secondly, this should be translated into a concrete and imaginary portfolio with a range of different types of innovation. Lastly, the impact on the daily operations of all employees should be crystal clear, so they know what to expect. In the end, as seen from practice, if this is not the case nothing happens, and people stay in their daily jobs to achieve the regular results their managers expect from them.

The overall finding extracted from this correlation is that both companies have an unclear direction of innovation.

2. Facilitating room for innovation || Centralizing innovation / low innovation involvement / investment in people is rather low

The second observation from Pon Equipment Norway, showed that they are struggling to support their people in the right way to come up with ideas. This resonates with the observation in the Netherlands, where at first, employees are not actively involved with thinking about innovation. Second, it seems that the employees don't know how to do this, since they are mostly trained on product or service related knowledge.

Although both operating companies seem to struggle with the same issue, the reasons for this differ. In the Netherlands for example, they centralized innovation in a single department keeping it away from daily operations. In Norway, the feel as though they are missing structural processes to be able to do this.

They both want to involve employees with thinking about innovation and they both seem to have reasons for this not to happen. However, how I have seen it, the main reason is different. I have seen that they ask something (innovation) from their employees, but they are both not giving them anything in return. They are both not investing in the right individual or personal support for their employees, to be capable of being involved with innovation.

The overall finding extracted from this correlation is that both companies have a rather low individual investment in their employees.

3. No clear innovation process || No capacity for structural (involvement in) - innovation processes

The third common ground between both operating companies, correlating to the second, is stated. However, the observation mentioned above is about the individual support to come up with ideas and be involved with innovation. In addition to this,
both Pon Equipment Norway, as well as Pon Power Netherlands state that there is little structural support from an organizational point of view. By this they mean having an innovation process that structurally deals with the involvement of the employees.

In addition to having a process, of which both companies acknowledge the need, Pon Power Netherlands stated that such a process cannot stand on its own. It cannot succeed without people spending time on it and being responsible for it.

The overall finding extracted from this correlation is that both companies have little structural support to the people, to enable them with an innovative way of working.

4. A culture of little sharing and talking || Centralized place for innovation

Fourth common ground is that I have seen that a lot of good things are happening, but it seems to happen in silos. Sharing ideas or suggestions doesn't happen enough and if it happens, it mostly happens between the 'horizontal layers' or within (centralized) departments.

Looking from a holistic perspective, both companies have different cultures and therefore they might have different reasons for not sharing and talking about issues outside their daily jobs. As a result, a lot is happening under the surface. Hidden knowledge and assumptions are not shared or validated by others. This makes processes and handing-off ideas or projects, very difficult.

The overall finding extracted from this correlation is that both companies have a culture of little sharing and talking outside their silo's

5. Perceptions of 'results' are only linked to financial results

Looking at the survey done on the organizational culture, both companies are perceived to have a very high focus on results. From a qualitative point of view, this is completed with the observation that it is mostly about achieving 'financial results'.
This leads to having a culture in which the road to reach financial result is perceived as less important, both from a qualitative and a quantitative perspective. Having a result as being 'a lesson learned' or 'a failure' seems no option. This culture is one of the reasons people work at Pon; they like to work hard and like to work for results. However, it also leads to some negative aspects, as seen from both qualitative and quantitative observations.

People experience a high work pressure, this can causesome stress because of the extreme focus on results. This might be correlated to the low score on enjoyment in their jobs.
Secondly, as seen from the observations that structural (innovation) support is missing, this explains why people feel that there is little order or structures in the company. Third, having a clear purpose is experienced as rather low, in both companies. This might be linked to the first observation, which is about expectations of innovations and having a greater goal in mind.
Lastly, concerning the importance of the road to success, rather than the financial success; I have seen that people learn what needs to be learned in order to achieve the expected result of selling more, or repairing more. They learn a lot, within the paved road. From the survey, learning is perceived as having an important place at the organization.
Concluding the diffrent aspects discussed above, the cultural values are very much focussed on financial results.

The overall finding extracted from this correlation is that both companies have a culture of too much focus on financial results.

From overall findings, to main challenges for the PEPP group

The last part of the observations is about defining the main challenges.
All of them are derived from a common ground between the operating companies and can be seen in the overview. For the formulation of main challenges, I have assumed the overall findings to be applicable for other operating companies within the group as well.

In regard to the common grounds, I have split the first one about unclear innovation direction, into two seperate challenges. I heard a lot about processes not working when there are no people responsible for it. Don't expect innovation to work, without some strings attached to these expectations. For this reason, I have formulated this as a separate challenge for the innovation framework.

Main challenges for Pon Equipment and Pon Power

Figure 20: The six main challenges for both PENO and PPNL

Part 3

Design of a framework

David vs Goliath; the art of battling giants

“How can we make innovation thrive in a world of old fashioned habits?”

David versus Goliath - partly quoted from Fairchild (2016).

The story of David vs Goliath is an old bible story about a war between the Philistines and Israel. The two armies were camping on opposite sides of a steep valley, after weeks of scolding and challenging each other. A gigantic and experienced warrior, size over nine feet tall, wearing full armor, came out everyday to challenge the Israelites to fight. His name was Goliath. The whole israeli army were terrified of this titan, and they named him Goliath.

On one day, a young boy with the name 'David', was sent to the edge of the valley to bring back information of his brothers. While he stood there, David heard Goliath shouting and he saw the great fear that the men of Israel had. David responded,
"Who is this uncircumcised Philistine that he should defy the armies of God?"

Then, the young David volunteered to fight the gigantic Goliath. His father, King Saul, would not let him go, but after some persuasion of David, he agreed to let him fight Goliath.
Dressed in his simple clothes, carrying his sling, and a pouch full of stones, David approached Goliath.

David approached Goliath and said to Goliath:
"You come against me with sword and spear and javelin, but I come against you in the name of the Lord Almighty, the God of the armies of Israel, whom you have defied ... today I will give the carcasses of the Philistine army to the birds of the air ... and the whole world will know that there is a God in Israel ... it is not by sword or spear that the Lord saves; for the battle is the Lord's, and he will give all of you into our hands."

As Goliath moved in for the kill, David reached into his pouch and slung one of his stones at Goliath's head. It found a hole in the armor and sank into the giant's forehead. He fell face down on the ground. David then took Goliath's sword, killed him and cut off his head. When the Philistines saw that their hero was dead, they turned and ran. The Israelites pursued, chasing and killing them and plundering their camp.

The moral of this story is about the question of "who is the underdog" in this situation. It seems that David is the underdog, but in fact Goliath is. David has a belief and attacked Goliath in a way that the giant was never able to fight back. Next to this, the giant is too big to move, and is blind on one eye, so could not dodge the devastating attack of David's slingshot.

Why am I inspired by this story? Because it shows that what seems an impossible battle, is rather a search for your own power or belief, and the opponent's weaknesses. To that extent, forcing employees to constantly work on daily basis and get results, PEPP could be seen as an opponent of an innovative belief. But what if, by means of an innovation framework, there can be a person like David, who is capable and willing to stand up and fight the giants, in the world of Pon Equipment and Pon Power?

Can I design an innovation framework that has power like David's sling to defeat the challenges within the organization?

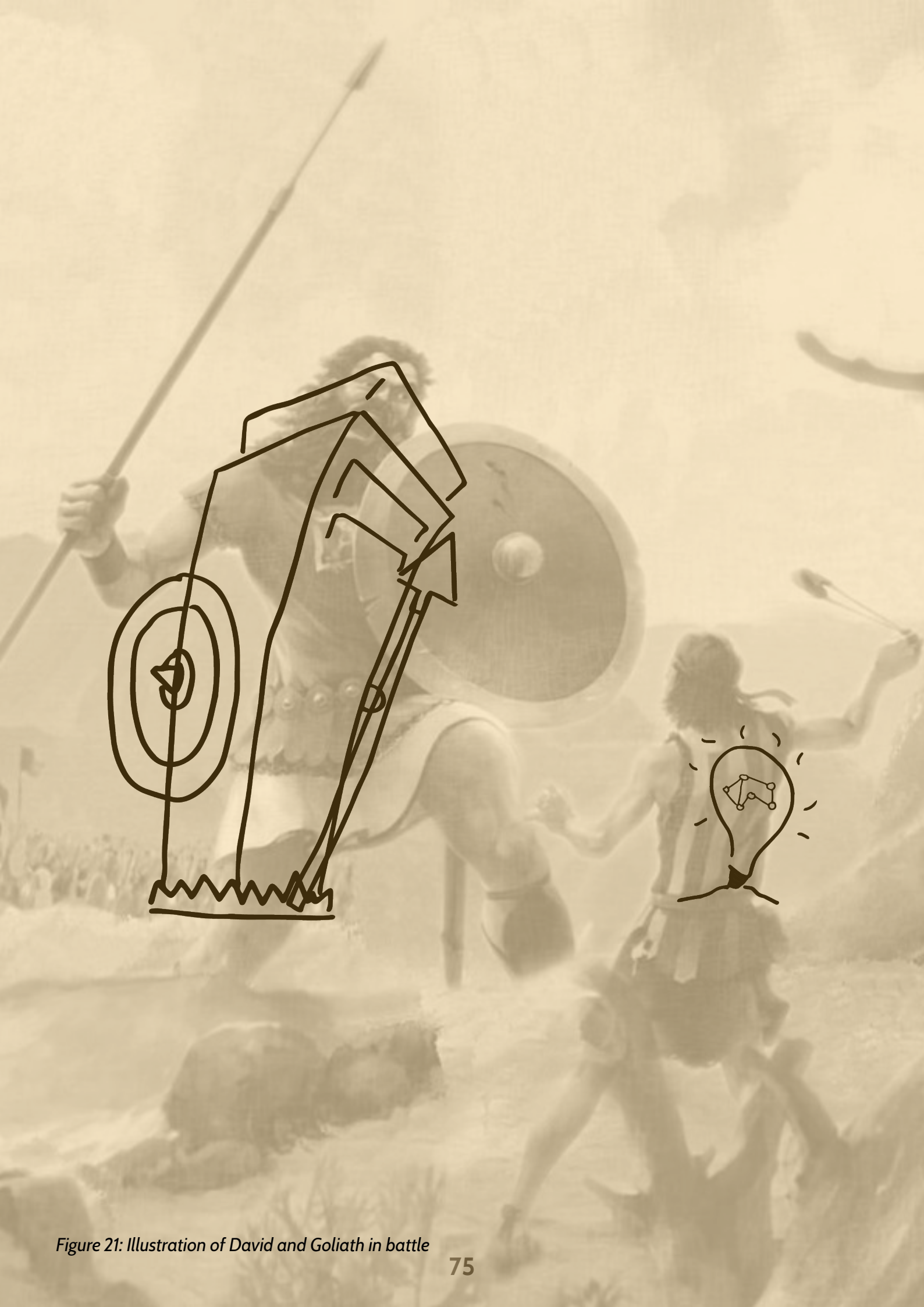


Figure 21: Illustration of David and Goliath in battle

A framework, why?

Before going directly into the framework, I want there to beno doubt on what is meant with 'a framework'. Second, I want to have it very clear in mind what the goal of the framework is.
Why is this important?
Because I have seen throughout this process that having an unclear definition of something that might have a significant impact, is not good.
Let's take a look at the dictionary. The least inspiring book for this story, but the most clarifying.

Framework [1]: a supporting structure around which something can be built
Framework [2]: a system of rules, ideas or beliefs that is used to plan or decide something

From these definitions, it is clear that a framework should provide strength so that what is built, won't collapse. The second definition all points to it being an underlying system or concept, that provides guidance. A scientific point of view also states two forms of a framework, that resonates with the definitions given in the dictionary. One can have a theoretical framework and/ or a practical framework. The first provides structure based on existing theories, the second provides practical systems. Therefore, the goal with this part is to not only have a practical framework, but also to have a grounded structure in the form of a theoretical framework.

First I will briefly repeat the main challenges from part 2 (figure 22).
These serve as starting points for finding theories that match the observations. Combining theory about managing innovation in organizations with observations will lead to a theoretical framework.
After this, a practical framework is formulated consisting of rules, ideas and beliefs that enable companies of Pon Equipment and Pon Power to plan their own innovation process and involve their organization with innovation.

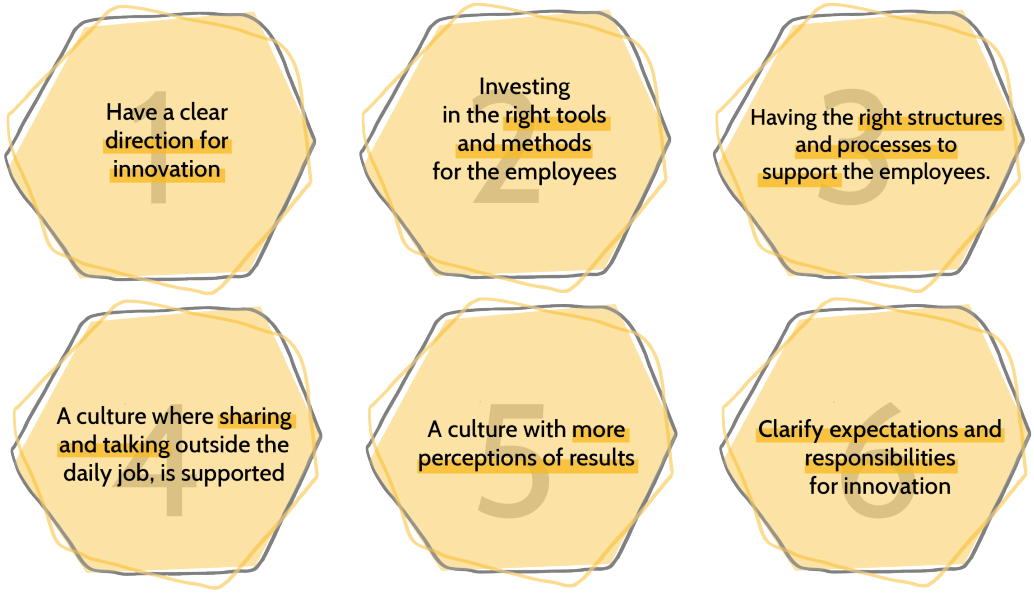


Figure 22: Main challenges from the observations in part 2

The triangle of innovation

With these observations, I am able to scope down and more specifically look for frameworks that somehow touch upon the observations or at least the foundational elements found.
In a paper of De Lille & Stoimenova (2016) they discuss three organizational challenges of design implementation, that are interconnected with each other (figure 23). The goal of the research has been to understand the role these factors have in achieving so called 'ambidexterity'.
In the easiest way of explaining, this means being able to work with both hands.
For an organization, being able to work on operations (daily business), while at the same working on innovation (future business).

The elements they mention:
1. Methods; design methods, ideation, prototyping, tools, models. -
2. Mindset; how people see issues, approach, way of 'how we do things here' -
3. Infrastructure; resources, processes, teams, routines, -

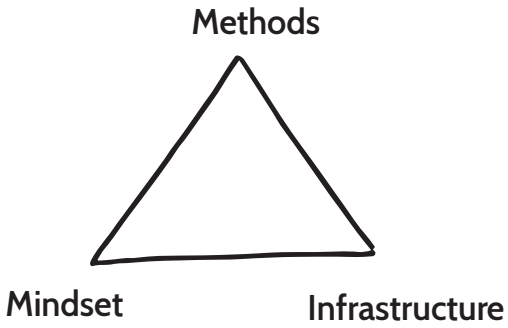


Figure 23: The triangle of innovation

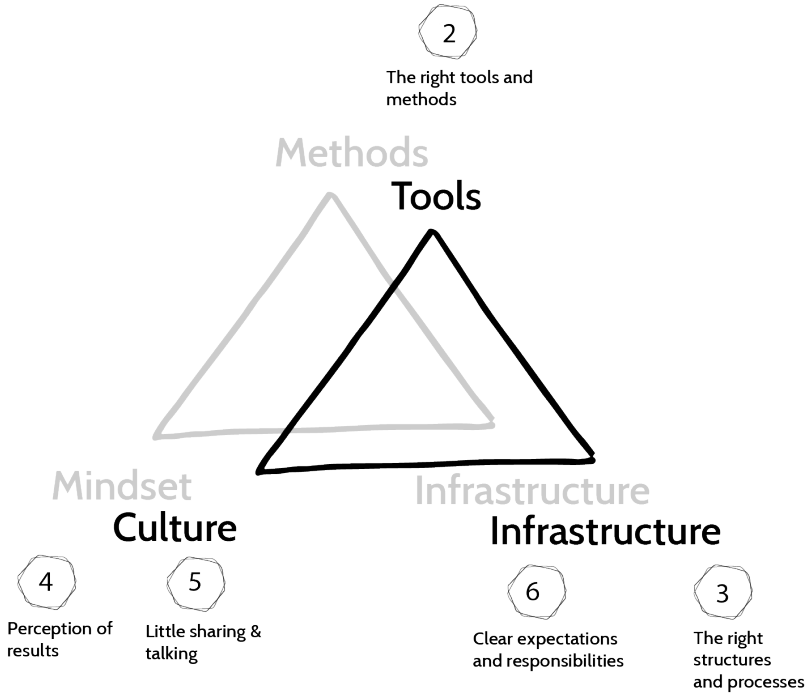


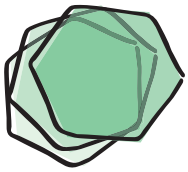
Figure 24: The triangle of innovation with 5 main challenges

The classification of methods, mindset and infrastructure inspired me to classify my main observations as well. Doing this, I discovered that they pretty much resemble the factors described by de Lille and Stoimenova (2016). Placing the observations that I found over the innovation triangle, I end up with a slightly adjusted triangle as can be seen from the figure 24. First, I adjusted methods into tools, since the observation was mainly about specific skills or tools. According to the Lean Enterprise Institute a method is more about a process by which a task is completed. (Tool vs Method - What's the difference?, 2018) Second, I changed mindset into culture, since a mindset is mostly regards individuals. Culture however, is in this context the belief of the whole organization. (Culture- Cambridge English Dictionary, 2018)

For the rest of this story, when talking about 'the innovation triangle', I am talking about the, adjusted triangle based on observations.

Uh Oh, what happened to the first observation?

As can be seen from figure 25, the first observation 'Clarification about the goal of innovation', has not been placed on the framework as presented above. Is there no clear rooted match or is it possible that this is not needed within a framework?



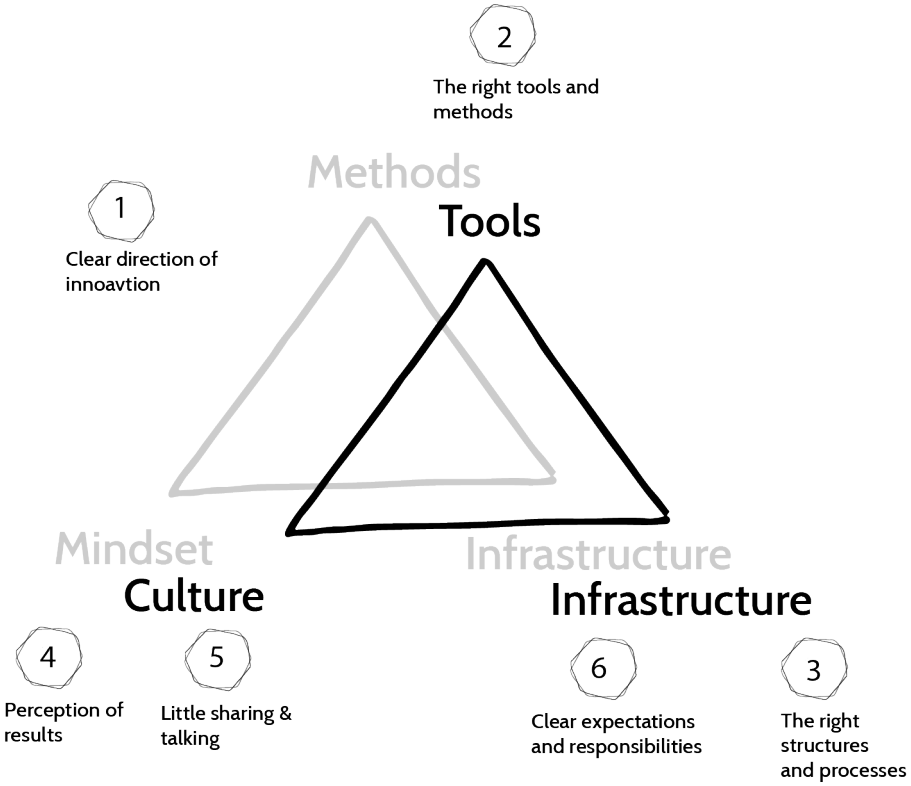


Figure 25: The innovation triangle with 6 main challenges

No road without a destination

From the observations it is apparent that a clear destination is needed for innovation. .In the book "7 habits of highly effective people", Covey (2014) states that the second habit is about *'Begin with the end in mind.'* (Covey, 2014). At the core of this habit, this means that people or organizations should have a target, a result or a destination prepared before they commit to something. In the book, he suggests having a so-called 'mission statement' which enables companies to come up with structural goals and strategies.

For me, this is pretty obvious. Also, Johan Cruijff had the same thought on this:
"You need a goal, to make goals and win the match."

But this still does not answer the question why a strategy should be part of an innovation framework. Should it be?

Going back to the definitions of a framework, it should give 'strength, structure & guidance' to something, in this case the organization of Pon Equipment and Pon Power. It could also be that the goal of the framework is to work towards a certain strategy. Why should it then be part of the framework, instead of it being the goal of the framework?

Pisano (2015) states in an article called 'You need an innovation strategy' published for the Harvard Business Review, that without having an innovation strategy in place, the innovation efforts can become just a grab bag of best practices; autonomous teams, corporate venture-capital arms, external alliances, embracing open innovation, collaboration with customers and implementing lean techniques as rapid prototyping.
He states that "A company without an innovation strategy won't be able to make trade-off decisions and choose all the elements of the innovation system". In addition, Pisano mentions that without an innovation strategy, different parts of the organization might end up having different areas of interest, hence having conflicting priorities as well. Without having a clear strategy to align those different views, around common priorities, the power of diversity is blunted or, worse, becomes self-defeating. (Pisano, 2015).

It seems like there needs to be some kind of strategy in place.

So, let's flip the question: why can I then create a strategic framework, instead of an innovation framework? And what is the difference? According to Teddar (2018) a strategic framework is a structured method that can be set up to define how an (innovation) project supports the key objectives of stakeholders. It entails a mission (why the organization exists), a vision (where the organization wants to go to) and goals (what needs to be achieved, and when).

Teddar additionally states that there needs to be support from the different stakeholders, which he states to be:
-The people
-The organization
-Customers

This could work as well, since it shows a clear destination and it touches upon the question 'who will be responsible for it, by means of which structures?'.
However, it does not address the 'how can we-' question, or in other words having some tools or capabilities. In that sense, it still remains rather abstract to grasp.

Nieminen (2018) writes in a blog about innovation, that proper innovation management includes having an element of 'strategy' into it. He describes managing innovation needs to have the following elements in place:

Culture: the shared belief within an organization; what drives the people, what values do they shared? What do they find important, and what don't they?
Strategy: the plan the organization has for achieving long term success. With a plan, you make choices, so a strategy does not only include saying 'we want to go there'. It also implies stating where you don't want to go, what you don't want to do.
Capabilities: different abilities and resources the organization has for creating and managing innovation. It is mainly revolving about people and can refer to abilities, know-how, practical skills, information capital and tacit knowledge.
Structures: this could be best explained by showing the difference with capabilities. Structures enable the best possible use of capabilities. This means organizational structures, processes, infrastructures of the organization and so on. Communication channels are a good example of a 'structure'.

Connecting the dots or destructing connections?

The innovation triangle has been used as underlay for the observations made during this story. A single observation, a form of strategy, did not match the triangle. From literature studies, I found that this element should be rooted in any kind of an innovation framework. So, at this moment, I have four elements that are of importance for creating an innovation framework.

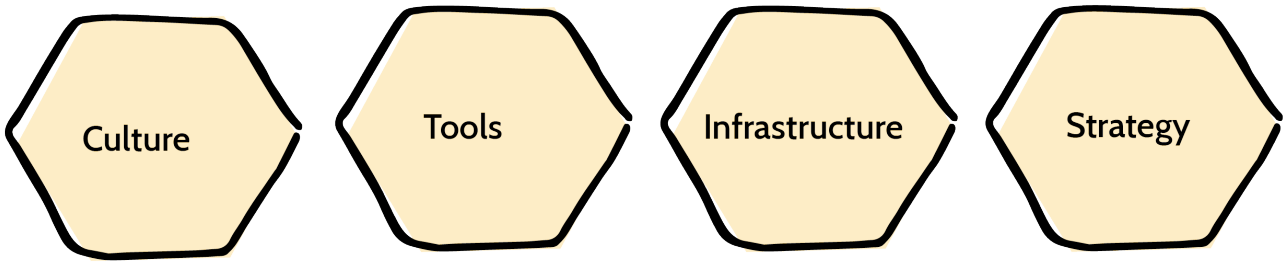


Figure 26: The four elements as starting point for the theoretical framework

Going back to the original triangle, the elements mindset, methods and infrastructure were interconnected to each other. The result is that every point is always connected to the other points; the mathematical characteristic of a triangle. Also, the shape of a pure triangle tends to tell that the connection between the different points is equally important or strong. With the addition of an extra element, the connections from the original triangle will be destructed and new connections will reveal.

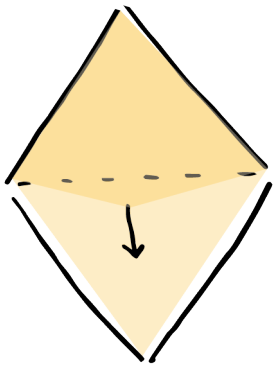


Figure 27: New element might mean a new shape

In order to create a framework with the fourth element, I could approach it from two ways:

A. The structure follows from the connections - the connections determine the structure
B. The connections follow from structure - the structure determines the connections

A nice case of which came first Luckily, in the world of architecture, the architect Louis Sullivan, states that "Form should follow function." (Guimera, Roger & Sales-Pardo and Marta, 2006).
So the structure of the framework comes from the connections between the different elements.

The meaning and strength of the interconnections -

It is clear that new connections are made, but why are these connections important?
In order to investigate this, I looked at a model that is comparable and has a triangular form as well. This is the model that describes how the elements business, people and technology all help to build a successful enterprise; this is the middle intersection of the three elements. (Chilicon, 2012). These elements are connected and the balance between these connections helps getting to the middle intersection: successful enterprises. (Figure 28).

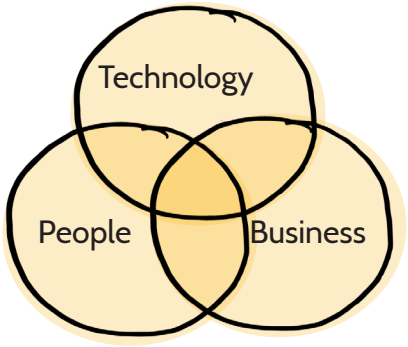


Figure 28: Three elements to building a successful enterprise

It is interesting to look at the tension between the connections in this context, regarding the goal of the framework. What kind of tensions can be revealed between the different elements? In the next section this will be briefly elaborated on. Next to describing these tensions, it is also interesting to look at the relative strength of them.

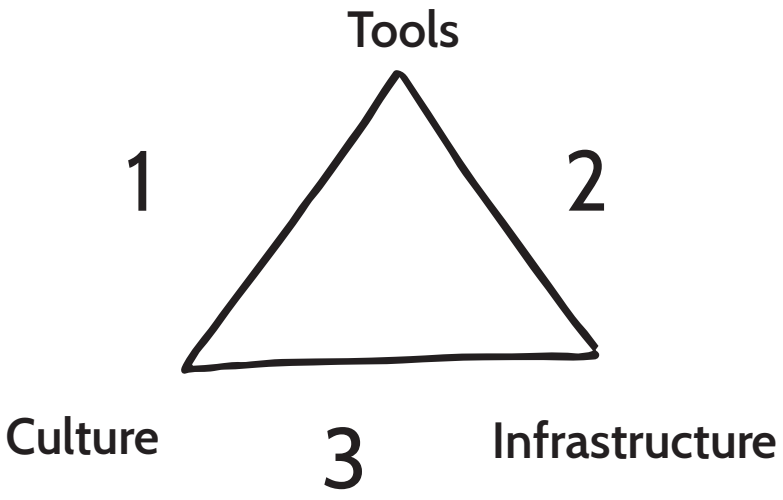
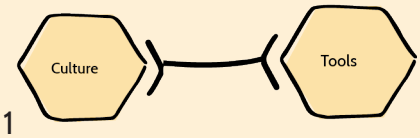
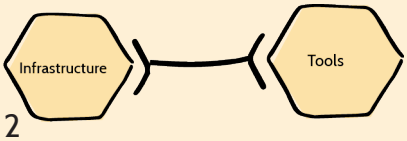


Figure 29: Innovation triangle with the first connections



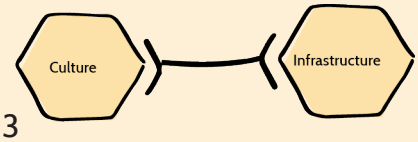
1

If your people have the right tools to- generate or share, for example ideas, this way of doing can be embedded in their daily behavior and hence you might end up with having the people Pon wants to bring their organization further. This basically implies that the field of tension between tools and culture, provides the 'right people', in terms of an innovative mindset.
Eliminating one of the elements is not an option at all, so this is a very strong connection.



2

As discussed earlier, the right infrastructure enables the use of capabilities. Therefore it provides a kind of structural support to be able to 'be creative', and 'do crazy'.
To use methods to come up with innovation, to use some money to prototype.
These sentences basically state that:
Know what method can be used to generate ideas, test them, prototype and execute.
Be supported to use these methods in a structural way

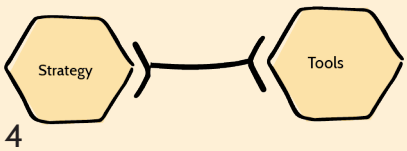


3

The third connection found is between culture and infrastructure. This one differs just a bit from the second one, in the sense that an infrastructure tends to be more about support from an organizational perspective, where the tools are more towards support from an individual perspective.

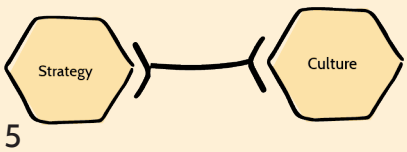
New connections

The connections between the original framework have been given a strength and explanation. Now, with the addition of the element 'strategy', new connections appear. Strategy here is used with the definition as explained earlier. At the moment, these connections don't have a meaning. However, with the observations considered, they can be given meaning in the following way;



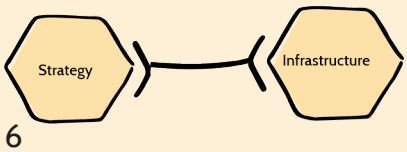
4

If there is a goal, can we then appoint certain tools to get to this goal? Is it possible to have certain tools, for certain goals? In general, you could argue that you choose tools to 'tackle the challenge faced'. However, the tools in this specific story are more or less general tools, that could be applied to every strategy. There need to be tools for achieving a strategy, but the question is if they are (in this case) directly linked to a strategy? The connection is there, but the connection appears not to be as strong as the other connections.



5

A culture implies having expectations of 'how we do it over here' and this mostly serves a greater purpose. If a strategy means 'where the company should head for the future' then combining strategy and culture, would bring 'the right expectations'.
From the observations, 'not having clear expectations' was heard a lot during the interviewees, so this interconnection is proven to be of importance.



6

The strategy part in this field is mostly the same as the previous. Choices are made, as a company, what they want to focus on and what not. Hence, they decided when something is the 'right thing' to do. Next step is to involve stakeholders and appoint responsibilities. A proper process revolves around teams and people having responsibilities. Someone is responsible for budget, someone is responsible for a team or a product and so on.

With the addition of the element 'strategy' a lot of interesting things happen. This makes us think about the original connections, how strong were they? It also makes us think about the new connections, do we need them to get to the goal of the framework?
In the end it turned out that all connections (to a certain extent) matter and are needed in order to have innovation within an organization.

From connections to a potential structure

With the connections between the four different elements taken into account, three possible structures can be thought of:

1. A triangular diamond
2. A triangle with a middle point
3. A flat diamond

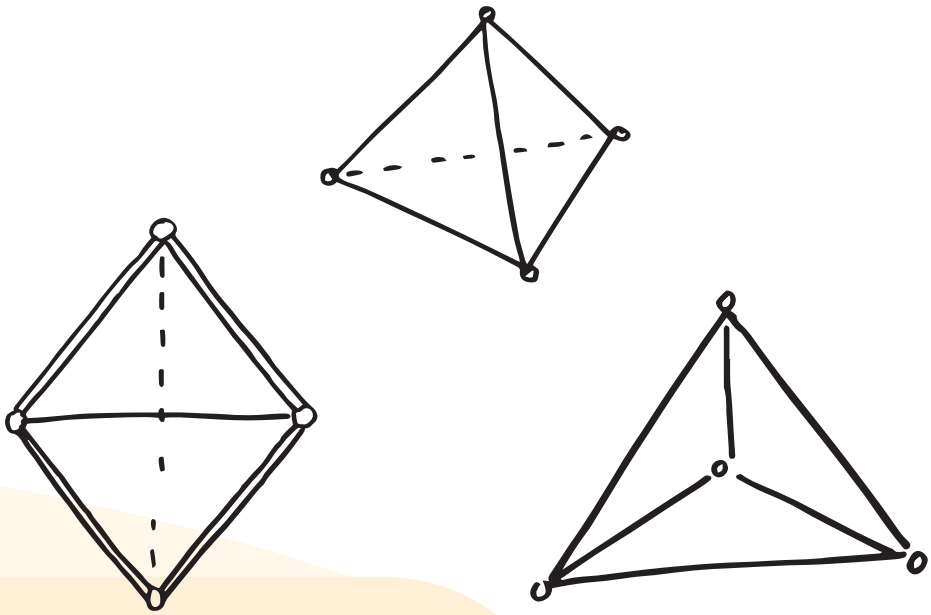


Figure 30: Potential structures for the framework

The different structures have different connections and interpretation (figure 30). An analysis has been made which can be found in **appendix D**. In the end I found that the easiest option, a flat diamond, serves the goal just as well as the other structures. In the end, the framework should be easy to understand, and should directly guide operating companies. If a three-dimensional diamond can be created, or a triangle with a middle point, there will be overlapping fields which can cause ambiguity.
For this reason, the theoretical framework used to design a practical framework will be a flat diamond. (left in figure 30)

From six connections, to the four fields of innovation

The only question remaining is how will this flat diamond look like, where do we need to place the different elements? This can, again, be done in multiple ways. Going back to the connections, we see that we have six possible connections between the elements.
As seen from the model in figure 28(p. 81) the intersections or connections, create new fields of tension that need to be in place, in this context, to have innovation in the organization.

The fourth connection, between tools and strategy is not a 'stand-alone-connection'. Meaning that this connection does not directly contribute to innovation.
(not as direct and unambiguous as other connections).
There needs to be a culture that believes in the strategy, and a culture that makes people want to use the tools. These are two different connections, already present in two separate fields.
1. Strategy and culture
2. Culture and tools
Therefore, the connection between tools and strategy, is less strong.

The third connection, between infrastructure and culture, neither is a 'stand-alone-connection' and can be explained in the same way. Culture (in this context) means the mindset and willingness to work for the company's purpose. However, they might lack skills or ability to do so. If culture is put directly in connection with an infrastructure, would they thrive? I don't think so and therefore it is set up by two other connections:
3. Tools and infrastructure
4. Infrastructure and strategy

This leaves me with only one possible option for a structure and placing the words accordingly:

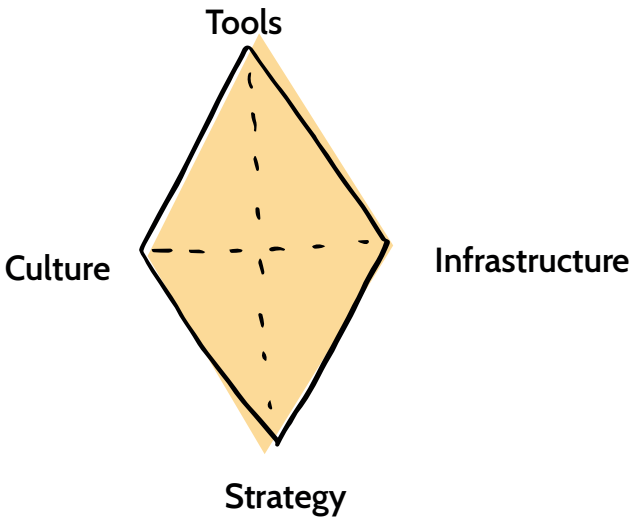


Figure 31: The flat diamond structure with six connections

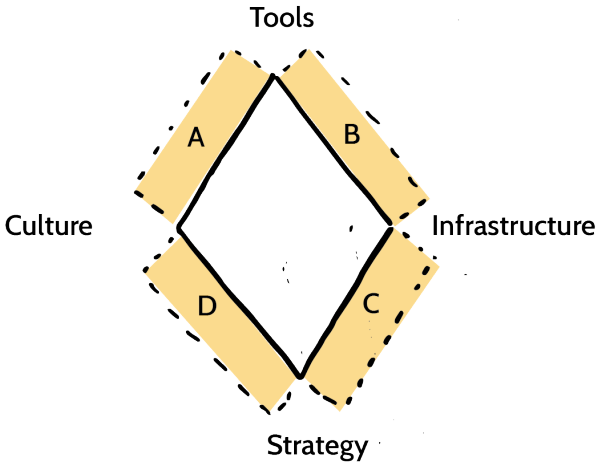


Figure 32: The flat diamond with four fields

Back to the observations and theory; do we have something here?

The starting point for investigating a theoretical framework has been the main challenges. From now on, we end up with four most important connections and a flat diamond structure. This leaves me with the challenge to formulate the fields that appear; the fields of innovation (figure 33). On page 79 a brief explanation was given about the interpretation of the four different elements. However, translating them to usable fields, this meaning might change. The four words have a too large range of interpretation to be directly used in the fields. Therefore, they are interpreted and formulated as 'meaning for the fields'.

1. Strategy and culture = **purpose** for the people
(The reason why something is done)
What is the vision, mission and ambition of the company?
What can the people expect from this?
What is the company's view on the future?
What is the 'why' from the company?
Where do they believe in?

2. Culture and tools = people with the needed **capabilities**
What organizational culture do we have/want?
What kind of 'people' work here?
What kind of skills do they have, or do we need to have?

3. Tools and infrastructure = the people get **support** to use the capabilities
4. Infrastructure and strategy = the structures and processes that are set up, have people responsible for it. In other words; **governance and responsibilities** to guide to the strategic goals.

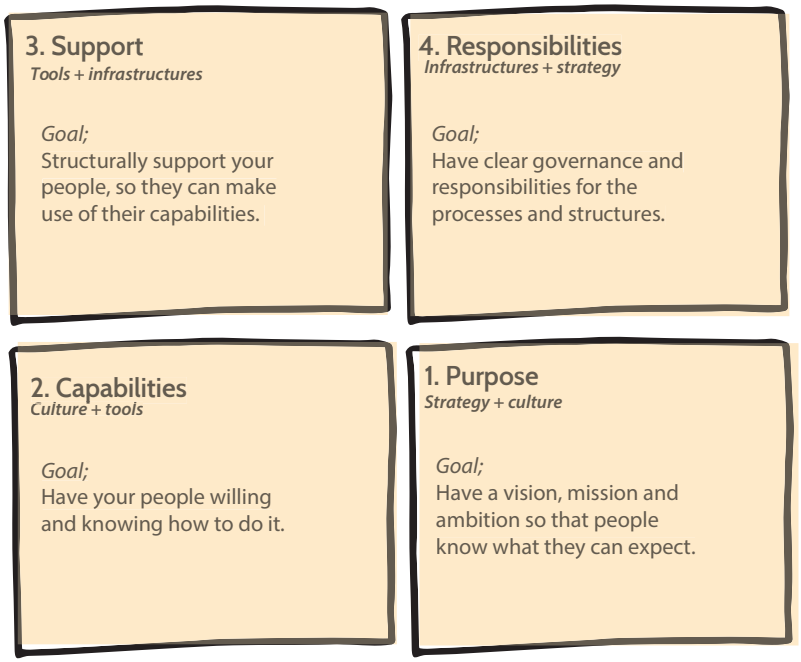


Figure 33: The four fields of innovation

The fields of innovation

We have seen that we can appoint four different fields to be in place, to get innovation within an operating company of Pon Equipment and Pon Power. However, these fields of innovation and the corresponding elements, have very little practical meaning.
It is still unclear what this could mean in the workplace, for every employee. If there is little meaning, it will just be 'one-off' and therefore it won't be able to support a lasting innovation process within the organization.

Each field has different elements that can make a field complete. These elements are shown in figure 34. Note that these elements are suggestive and might change to an operating company's preference. The elements are not directive, meaning that there are multiple options of filling them (figure 34). This can be done by means of explorative worksheets, which will be explained later on.

The goal of an innovation field is to understand what the operating company currently has, wants to have and needs to have, to innovate in the organization.

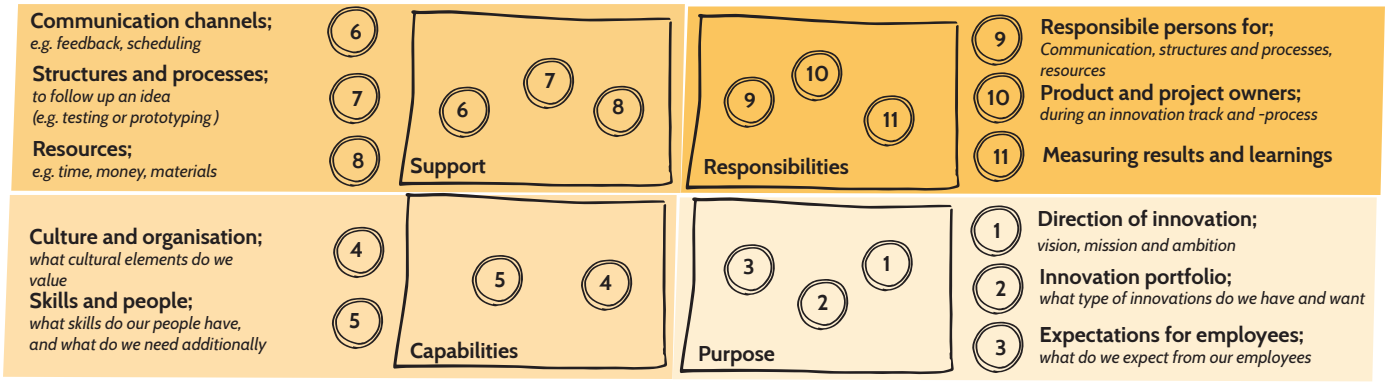


Figure 34: The fields of innovation

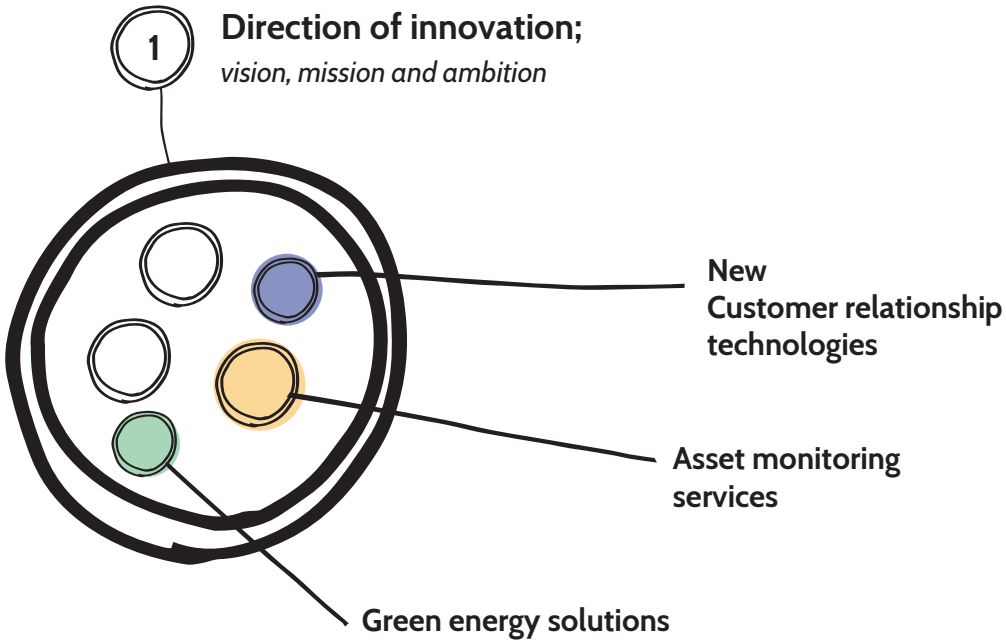


Figure 35: An element from the field 'Purpose' with multiple options

Half work is no work!

From the observations, and directly from Eva, it was made clear that the organization is very good at starting, but less good at finishing. The example below explains in a good way how this happens in practice.

In one of the operating companies, Topec, an enthusiastic HR-employee found that she needed to involve more people with thinking about innovation. She organized the so called 'Topec's idea cafe". The idea was simple; they organized a setting, a day-schedule with topics, and invited employees to join and think of possible solutions. This could have been a 'how' within the field of getting the right people, as mentioned above.
When I asked her about the outcome of the idea cafe, she responded enthusiastically.
"Ja het ging echt hartstikke goed, was echt een hele leuke dag!"
She continued and explained to me that there were two good ideas, from that day that really had the potential to be implemented. I asked her what happened to it.
"Ja een idee zijn we nu echt aan het doen, met name omdat ik er achteraan zit. Andere idee, ja uiteindelijk is daar niks mee gedaan, het is weer blijven liggen."
Without the time for me to ask her about the reasons, she continued:
"Je moet mensen blijven betrekken, blijven communiceren, feedback geven; doe je dit niet, dan verlies je al het initiatief. Ja opvolging, de aftermath, is misschien nog wel belangrijker dan dat ene evenement. Dat is namelijk de aanleiding voor een volgende versie. Die was er nu gewoon niet, zo lekker typisch weer.

This is a practical example of what goes wrong at the moment; they start a very good initiative, but don't finish it properly. They want to create the right people, but they don't give the right support or the right responsibilities to cause an 'aftermath'. This could be solved by connecting these fields, with no chance of them being separated. As mentioned above, the fields exist of different elements, so it should be easier to connect the fields by connecting the elements.

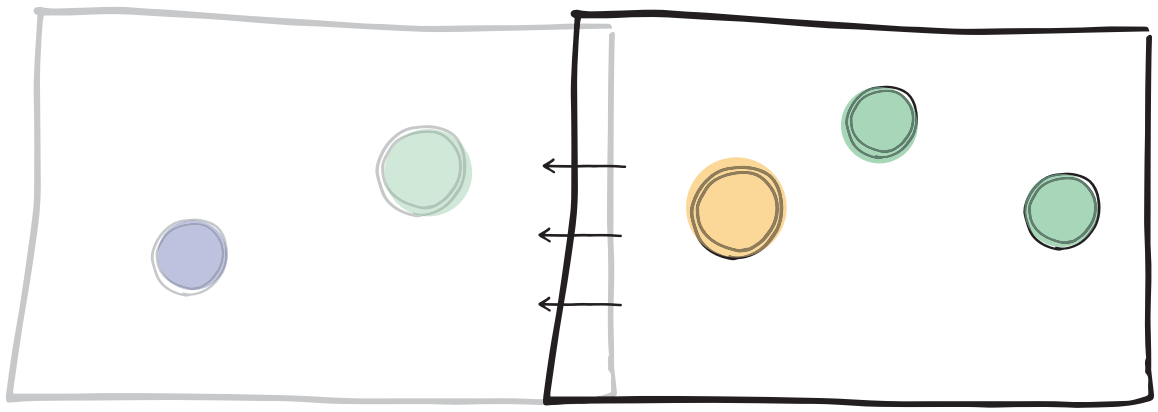
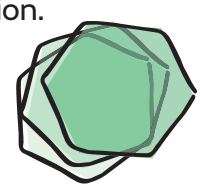


Figure 36: Connecting the fields of innovation

Tracks of innovation

Looking at the abstract picture right, by the connecting the elements the fields are connected. One can also look at it as if certain tracks appear! For example, there would a blue track, a yellow track or a green track. Besides the culture of starting and not finishing, there is also a culture of do the work that ou are required to do. In other words, work for the results your manager appointed to you. People are expected to work on daily business and when the fields are split in smaller segments, in this case 'tracks', the chance of success might increase, without losing a holistic view on the different areas of attention.



Click moment!

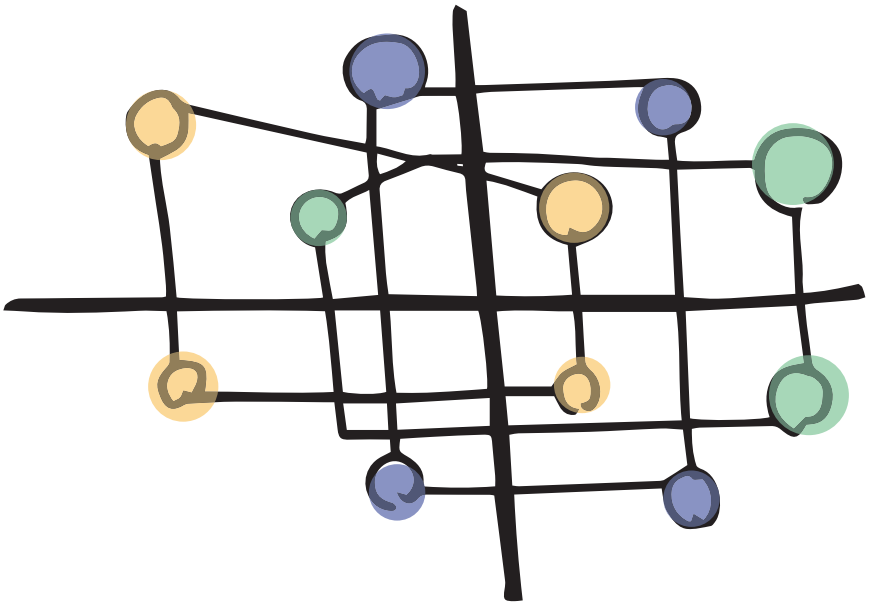


Figure 37: Simplified model of different tracks appearing, when connecting the fields of innovation

The tracks of innovation are nothing more than different approaches, paths or roads to bring (more) innovation within the organization of Pon Equipment and Pon Power. The tracks have different elements of every innovation field in place, so that when a track is finished, at least these elements have been considered.

An innovation track is metaphorically like climbing a mountain. You want to reach the summit (to have innovation), but you can do so by following different tracks, from different starting points.

To that extent, an innovation track is not an innovation process, nor an innovation project.
The difference is that a track is specifically formulated for an operating company. An innovation process is a generic process that can be followed to get from vision to idea, from testing to implementation.

An innovation track is a specific direction, that needs an innovation process with reoccuring elements, possibly resulting in an innovation project.

Before going to the next section in which the tracks will be further elaborated on, a quick recap on what I just explained.
You have seen that by complementing the theoretical framework with the observations, a new theoretical framework is constructed. This framework existed of four elements being culture, tools, infrastructure and strategy. These elements were placed in a flat diamond and with this structure, I revealed four different fields that should all be given attention in order to have innovation within a company. Every field has different elements with options how to best possibly achieve the goal of that specific field and in the end, it turned out that the fields should be connected, and this can be done by using tracks of innovation.

Understanding the fields

To define a track of innovation, a company needs to follow two sequential steps.
First, they need to **understand** the context of their fields of innovation, by looking at the different aspects in each field (Shown in figure 34, p. 86).
Two of the four fields have worksheets with questions to be answered.

1. Purpose

Worksheet 1: Direction of innovation
Worksheet 2: Innovation portfolio
Worksheet 3: Expectations of innovation

2. Capabilities

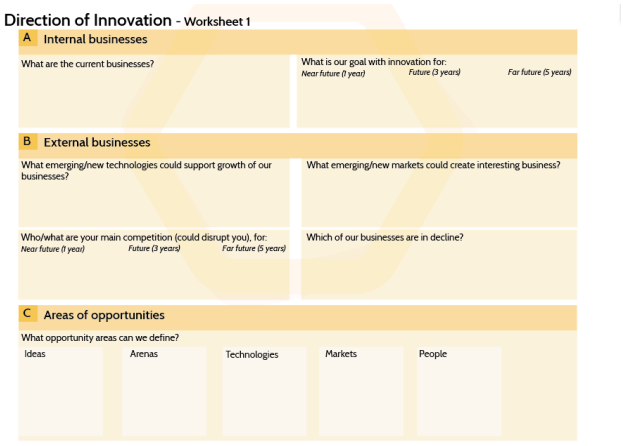
Worksheet 4: Organizational culture
Worksheet 5: Skills and people

The reason why the fields 3. Structures and 4. Responsiblities do not have worksheets, is because they are generic elements to think about within every track.

Example worksheet: Direction of innovation - worksheet 1

Goal of worksheet 1 to have a structured suggestion on possible directions of innovation, for your operating company. It has answers on current internal businesses, external businesses and areas of opportunity.

For example:
A textile company might find that space-textiles are the future and they want to get in that market early. Their innovation direction will be that they invest mostly in new ideas that bet on that future. So, the innovation direction basically sets boundaries or guard rails concerning the innovation projects the company will or will not consider.


Direction of Innovation - Worksheet 1

A Internal businesses

What are the current businesses?

What is our goal with innovation for:
Near future (1 year) Future (3 years) Far future (5 years)

B External businesses

What emerging/new technologies could support growth of our businesses?

What emerging/new markets could create interesting business?

Who/what are your main competition (could disrupt you), for:
Near future (1 year) Future (3 years) Far future (5 years)

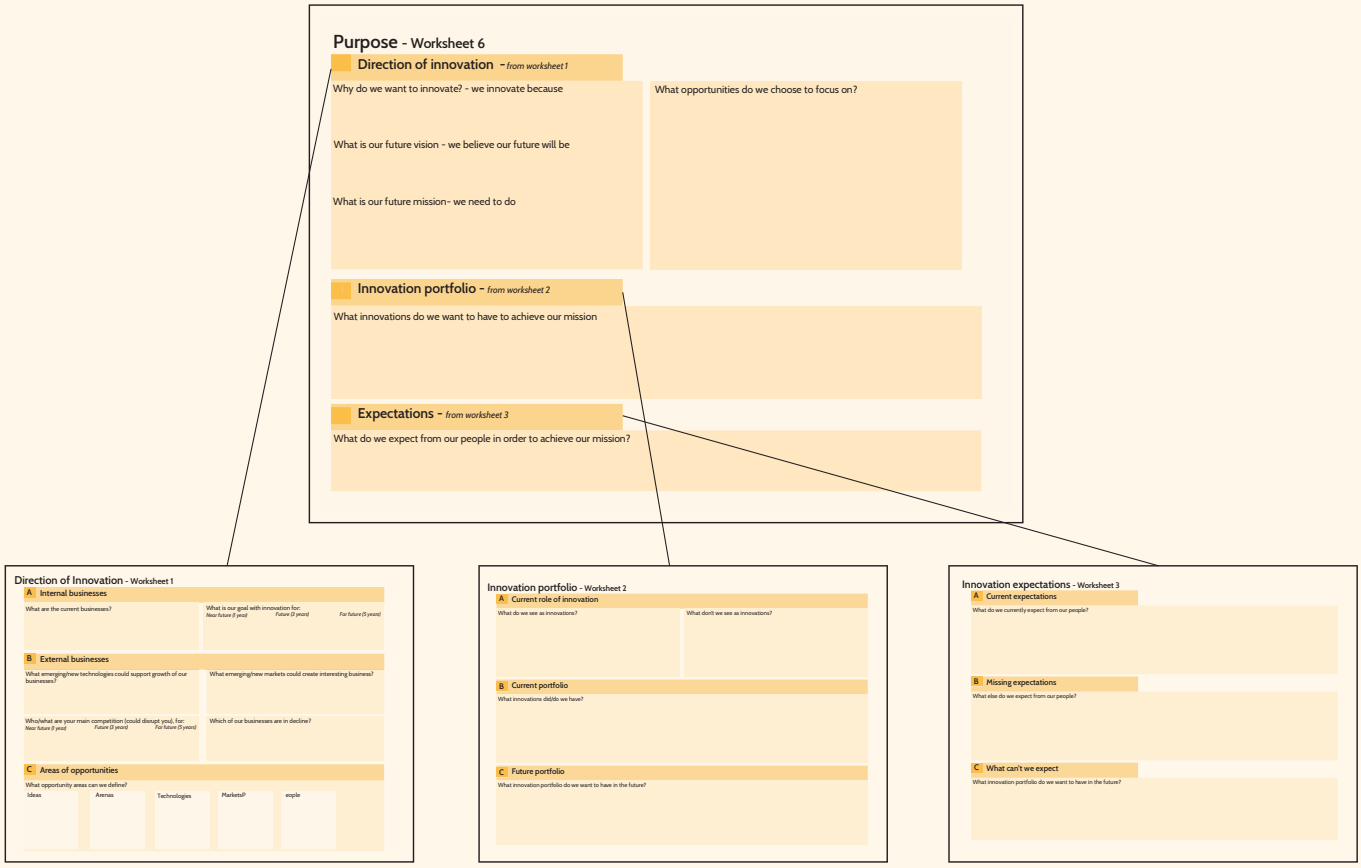
Which of our businesses are in decline?

C Areas of opportunities

What opportunity areas can we define?

Ideas | Arenas | Technologies | Markets | People

Figure 38: Example of a worksheet



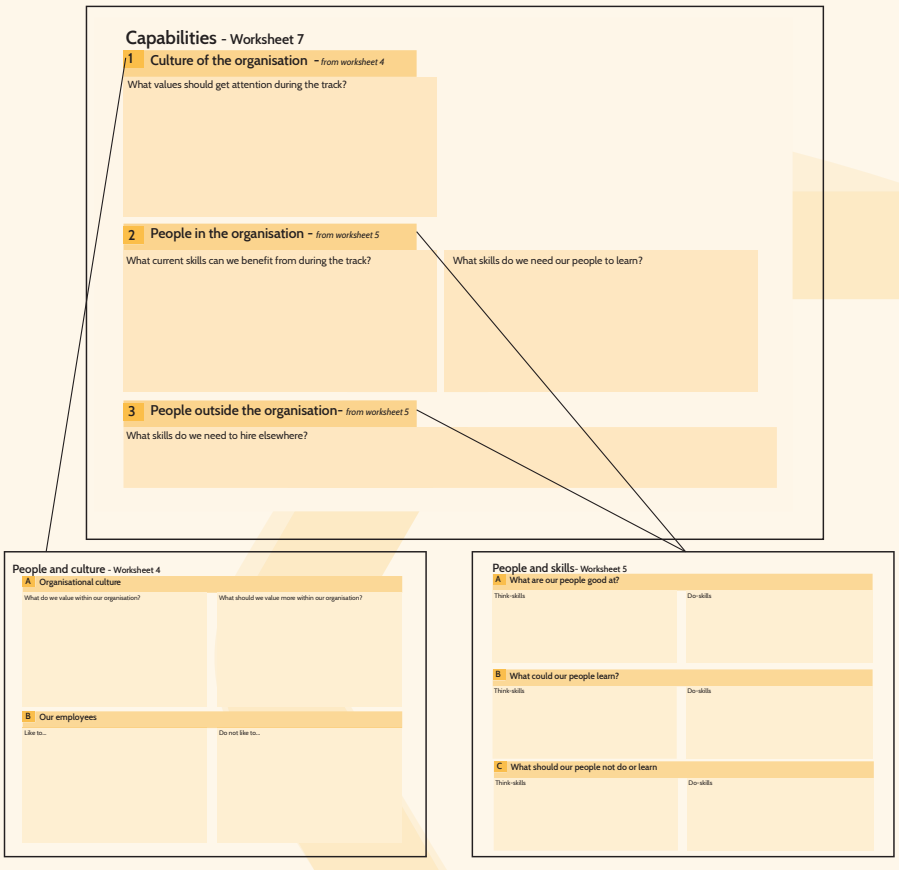


Figure 39: Overview of the worksheets

Defining the tracks

For a track to start, there needs to be at least one person responsible for it. This will be explained Part 4: Tipping point. By answering the questions for the different fields, multiple options will appear.
These options serve as input for defining the innovation tracks. By summarizing the choices made in field 1 and 2 in the coherent worksheets 6 and 7, an innovation track will appear (figure 41).

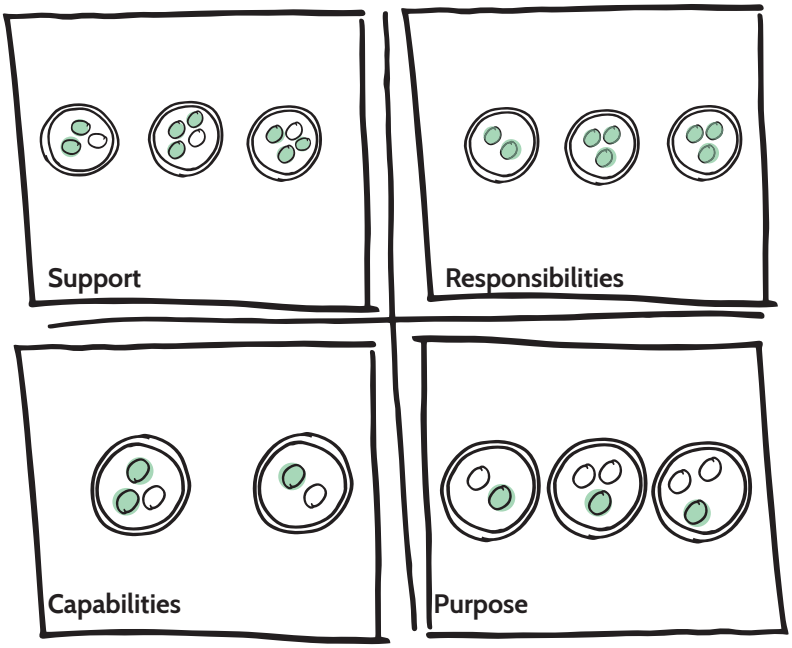


Figure 40: The fields after filling in the worksheets

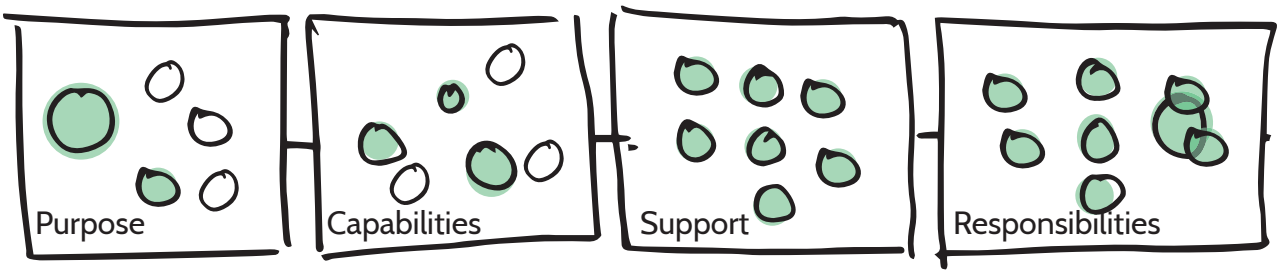
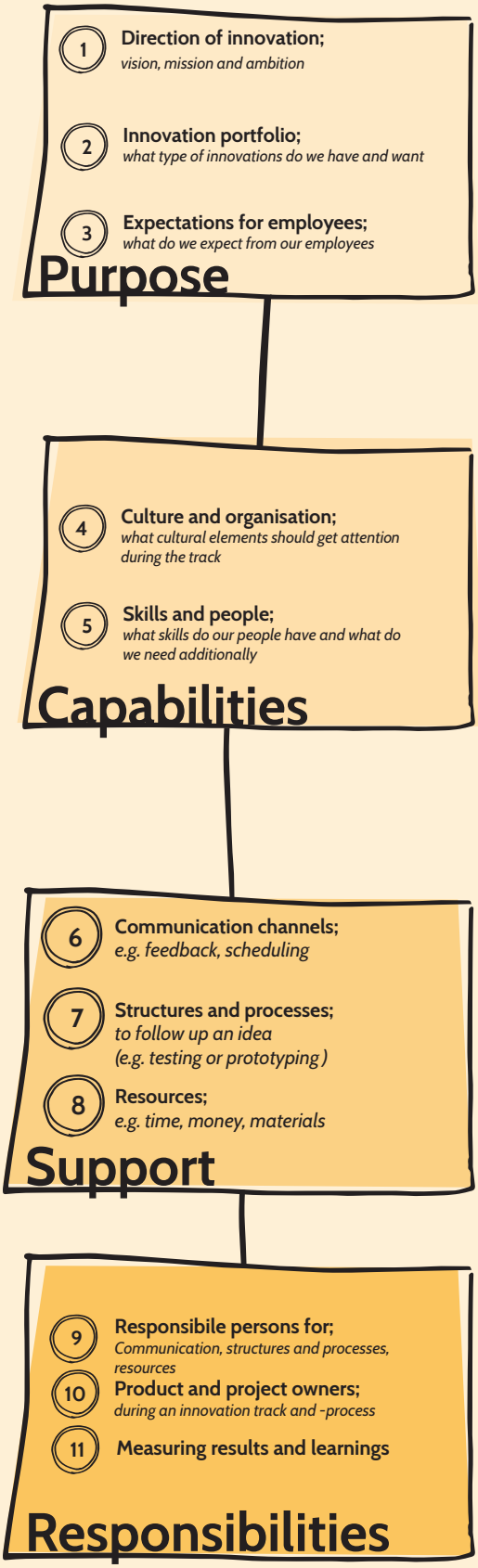


Figure 41: Simplified model of an innovation track

Demonstrator with Floris Hoogstraten -

Innovation Manager Pon Power Netherlands

In the previous section, I explained how to define a track. By the use of worksheets, the appointed employees responsible for defining a track, are able to do so.
I asked the innovation manager of Pon Power Netherlands, to fill in the worksheets and look what track he could come up with. As explained earlier, there are no worksheets for the third and fourth field. Goal of these fields is to be aware of the elements that need to be in place for every track that is chosen.
In this section I briefly present the track and his reaction on the worksheets and track.



1 *"We innovate because our current busness is declining and we want to compensate for it"*
"Our vision is to create value for our customers with core product related services"
"Our mission is to talk to our customer, learn from competitors and learn to fail quick and cheap."
"We want to focus on EAAS" (energy as a service)"

2 *"We want to have an innovation portfolio with customer intelligence services in Area 1 and Area2"*

3 *"We expect input and feedback from our employees on running innovation projects."*
"We expect from some employees, to be involved with implmentation of these projects."

4 *"We should value more* ***'daring to fail'***, ***'No as an option'***, *and* ***'looking outside current businesses and networks'."***

5 *"We can benefit from the practical approach our employees have. They get things done, in terms of technical problem solving."*
"People involved in the track will need to do some homework to investigate the industry of the track"
"People involved in the track will need a facilitator who helps them coming up with ideas or talking to customers."

Do you think these worksheets can help, to better understand the fields of innovation?
I think the fields are a very good structure for a facilitator, for example an Area2 coordinator or an opco innovation expert. He or she needs to know them by heart, to guide employees towards filling in the worksheets and the fields accordingly. Having a facilitator with these sheets is key in my opinion. Furthermore, we filled in these sheets within an afternoon, but I think it needs more time. Consider for example, if you want to have different sessions for different sheets. I can imagine when you are looking for future opportunities (trends, technologies) you might need to do some homework to validate whether this is actually relevant.

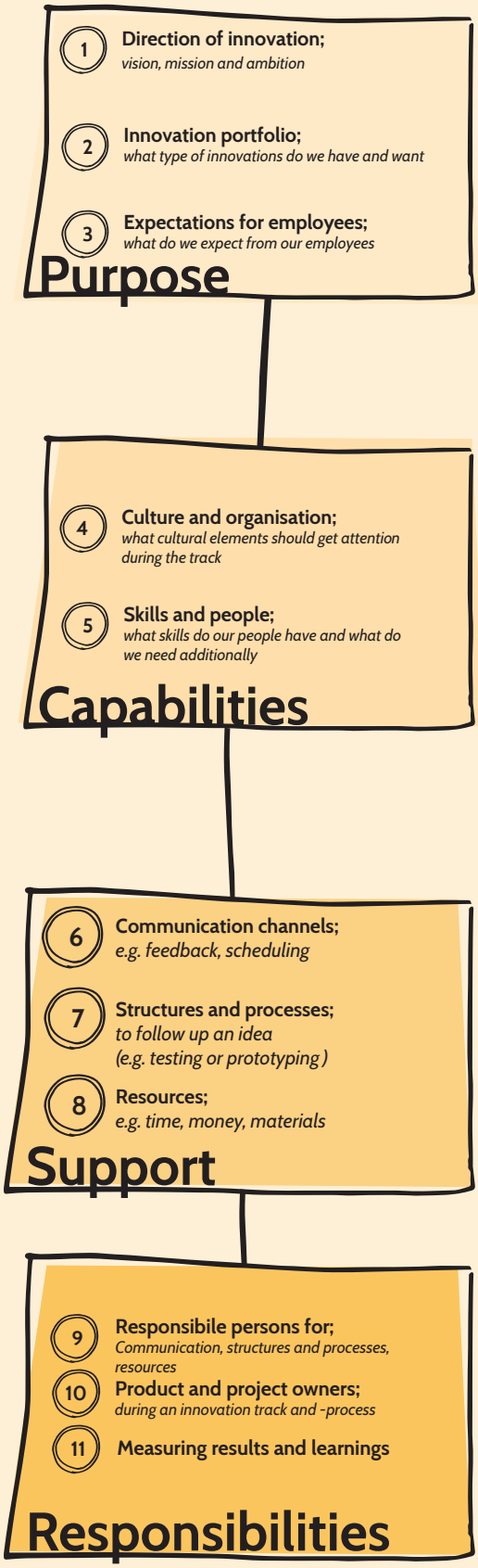
Do you think this can help you defining a track of innovation?
That depends, on the one hand on having a good facilitator. On the other hand, I think you must really think of who will be joining these sessions. You cannot do it with every employee and I think you would not want it. Some people simply can't think about the issues on the worksheets. However, you could gather their input on forehand.

Other thoughts or recommendations?
I think that it should not become too theoretical. Partly I believe the setting we just had was rather quick, but this could be a pitfall in real practices as well. Furthermore some recommendations for improving the sheets:
- You mentioned some time frames in terms of years. I think it would be better to just use 'short-term' and 'long-term'
- Maybe use business model canvasses to be more guided when filling in the field of future opportunities and trends?
- The sheet about innovation portfolio can be clearer. You explain it in a nice way, about what innovations you currently have, in the different areas. The same counts for what you want to have. Would be clarifying to have this visualized in the sheets as well.
- I might avoid the words 'vision' and 'mission'. Rather I would say:
- What do we want to be our future role in the market?
- How do we get there?
- I would think of a way on how to structure, validate and categorize future opportunities. Maybe by giving the participants some homework?

Demonstrator with Anders Roil

Business development manager Pon Equipment Norway

Next to Floris Hoogstraten, I asked Business Development Manager (basically the innovation manager), to fill in the worksheets as well, and look what track he could come up with. In this section I briefly present the track and his reaction on the worksheets and track. As explained earlier, there are no worksheets for the third and fourth field. Goal of these fields is to be aware of the elements that need to be in place for every track that is chosen.



1 *"We innovate because we need to improve our business proposals. Next to this, we need to improve our commercial strength and power. We need to become market leader."*
"We need to have smarter solutions; for ourselves, as well as for the customers."
"On a level of product innovation, our ambitions should be Z-line kind of products, however that might not be our core. I think small digital improvements are."

2 *"Any type of improvement, can be an innovation. As long as it is NOT the status quo, it is innovation." So we should mostly focus on small, incremental innovations in Area1 (more than 80%). that make us and the customer work smarter. (For example, AI or Google Home - things)*

3 *"We want them to have a mindset that 'No suggestion is too small'*
"We need them to understand that we might need a 1000 suggestions, to find one excellent innovation. In that sense, we expect from them to not give up. Just keep them coming!"

4 *"Our people could learn to get some more self-assessment on their own working situation. What are you doing, why are you doing it and can it be smarter?"*

5 *"We have been in business for a long time; hands-on knowledge is something we should keep cherishing in every process."*
"They need guidance with this process, they need to learn to reflect (and sometimes complain a bit more on how things are working out for them) and they need some education on how to properly **present** *an idea. "*

Do you think these worksheets can help, to better understand the fields of innovation?
The worksheets help a lot to give practical content to the meaning of the field. I think that filling in the sheets should not be rushed. This is very essential for the following steps in the framework as you presented them. Therefore I think that this takes at least one or two days, if not longer.
I do think the sheets could use some clarification; not specifically on the questioned, but just the names of the sheets. The overview helps a lot, however a single page that explains just a little bit more about every sheet would help. Now that you are here in Norway and you explain what every sheet is about, I understand it. But imagine when you are not here, and we still have to figure it out. The last thing we would want is to have your ideas being misinterpreted too much. Well, that will happen but with a bit more clarification you could reduce that to a minimum.
You could, for example, use different colors for the different worksheets. Doing so, there is no doubt on which sheet is linked to which field.

Do you think this can help you defining a track of innovation?
Definitely yes, I do think so. The only 'but..' that I have is; why haven't we done this before? What you explained about defining a track of innovation, we tried something similar before but it did not work out. Why not? I think defining a track with a clear purpose is very good and gives guidance to the employees. But keep in mind that somebody needs to be responsible for it. Here in Norway I am supposed to do that, but in practice I am bothered with a lot of practical issues.

Any other thoughts or recommendations?
No not really. Well, again I think that as I mentioned before, some clarification would help. I mean like; not only showing an overview, but also in written text explain something about the structure of the worksheets. I would recommend using color, for example. If I see this sheet is green, and these as well then I will automatically link them. I understand it might look worse for your thesis haha, but for us it works.
Furthermore I think that the purpose of clarification should not be to make it 'too simple'. If it would be too simple, people don't understand the necessity of filling in the worksheets in a good way. This is a major task for us, we should not rush it.
O last thing, not for you to do this but when we are going to use this, we need to translate it into Norwegian language. Not only directly, but also some of the words. For example 'purpose', if you directly translate it to Norwegian it would have a different meaning.

From a track to a process

As a result, the company defined a specific track of innovation by which they can now start an innovation proces. This process is inspired on the lean startup model (Ries, 2011) that describes that the new way of working should be followed by a lean ideology. (Figure 42).
Ries describes that it is about:
Get > Ideas > Build > Products (mvp) >Measure > Data > Learn from it

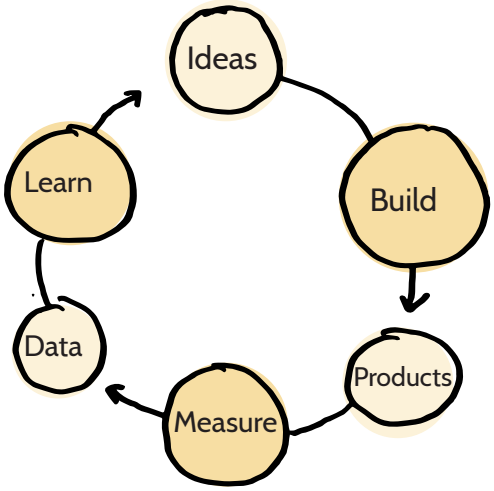


Figure 42: The lean startup ideology

Based on the observations and the framework, the loop as described in The Lean Start-up is complemented with two elements: Communicate and involve employees. Besides the first two parts of the process, 'communicate' and 'involve', all the separate elements have corresponding tools, methods and worksheets with suggestions on 'how' to do this.
In addition, an approach for triggering and activating different employees is formulated. This will be discussed in Part 4 - Implementation.

The innovationprocess in 6 stages

The process consists of the following six stages that are briefly explained below:

1. Communicate

Create good expectations for the people to be involved with innovation. Therefore it is necessary to communicate the track that has been chosen, consisting of the four fields; purpose, capabilities, supporting structures and responsibilities. This can be done by using the different types of triggers.

2. Involve employees

This stage of the process is about how to actively involve people. In other words, make sure that the people who need to be involved, want to be involved. This can be done by using the different types of triggers and according actions, found in figure [x].

3. Generate ideas

This stage seems obvious, however it has been forgotten a lot in the past, according to Viki et al.(2014). They state that a lot of innovation processes start with the assumption that an idea is already there. This part of the process exists of three steps
- Generate ideas
- Collect and select ideas
- Review ideas

The goal of this stage is to have ideas ready to be followed up; on other words, know enough about the idea and its potential, to choose what ideas to test.

4. Follow up on ideas

Following up on ideas is an extra stage in the process. It means to provide every idea with feedback. Be it a good idea, or a bad idea. After the phase of idea generation, an idea can potentially be followed up in several ways.
A. An idea is not relevant (in relation to the chosen track)
B. An idea can be tested

According to the interviewees, key in this stage is feedback all the time. If you involved people in an innovation process, they need feedback on their input otherwise you might loose them for next processes.

5. Test ideas / start project

The testing stage means that ideas are 'validated' in the market; are they viable, feasible? Is there a customer need, and so on?

When an idea is going to be tested, a specific innovation project is started.
(This differs form an innovation track since within a track, more projects can be started)
It is possible that this is short term, when it appears that there is no or too little response from the target group. This might mean that the idea will be 'killed', or needs an iteration or pivot and goes back into the third stage of the process.
Similarly, it can have a longer duration because the target group is hard to reach, or it takes time to prototype a product or service.

6. Measure and learn

The last stage of the process is about measuring outcomes of innovation projects. If a test failed for example, what were the results and what can we learn from it?
If a test succeeds the same questions apply, and the next question will be how to implement and scale innovation. Though this stage is placed at the end of the process, measure and learn should be ongoing during all stages of the process. This can be done by using a constant monitoring system, for example a KPI system.

According to some of the interviewees, this process is already used in some parts of the business. The process itself is not new to them, however some parts need extra explanation or tools. By using this innovation process that corresponds with the fields of innovation, an operating company can follow-up on their chosen track of innovation and generate ideas that can be put in an innovation project accordingly.

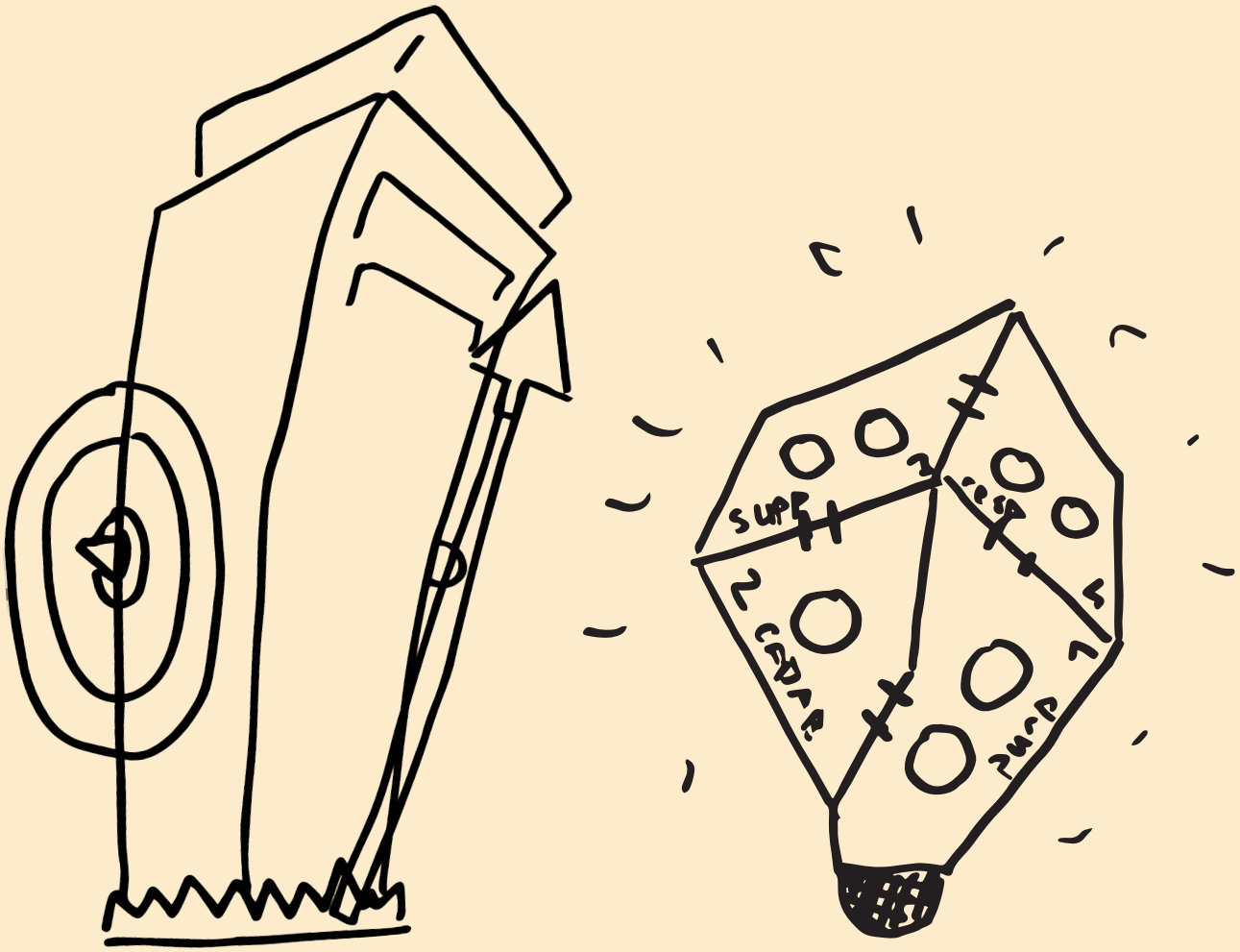
Wrap it up - are we there yet?

The challenge for this part has been to design a framework that could support every operating company with setting up their own innovation process. The goal of such a process would be to involve the people in the organization, with thinking about innovation.
From the main observations, a theoretical framework was built and this has been translated into a practical framework. This framework consists of fields of innovation, that are connected to each other by means of innovation tracks. By understanding the fields of innovation, and answering the questions on the worksheets, a company is able to choose their track of innovation. After this choice, the company can now start preparing for and follow an innovation process.

Back to the introduction of this part.
With the framework each operating company has, just like David, his own weapon for battling the giants of the organization, to gain attention and power for innovation. However, in contradiction with the old bible tale, there are more giants.
And in contradiction with David being familiar with his weapon, people in the organization are not familiar with the framework.

David had a sling.
I designed a framework.
David knows how to optimally use the sling.
The employees don't know this, yet.

The next section will, by means of different validations and tests, evaluate the framework with employees from both PPNL and PENO, to see if they can use it in their benefit or if it might need some improvements.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Testing and validating

The framework is based on the observations and literature. The consequential steps are similarly based on observations and literature. However, some parts of the practical framework are based on assumptions. These assumptions need to be 'tested' in order to see if what I thought of, is true.
This section will:
- Formulate assumptions on the different parts of the framework
- Test them by means of a quantitative survey
- Select the most unclear themes of the framework
- Translate these assumptions into questions in an interview guide
- Qualitatively discusses the interviews

Assumptions for the framework - a quantitative validation

Based on observations and literature, I found that they should do the job. However, that is if everything I thought of is 'true' and 'understood' properly. Therefore, each of these aspects have some assumptions. The numbers are the topics, followed by the assumptions I made.

1,Goal of the innovation framework
A. The relevance of this graduation challenge is clear
B. The relevance for designing a framework is clear
C. The relevance for designing a framework instead of a process is clear

2. The fields of innovation
D. The fields of innovation are clear
E. The fields can (if well organized) stimulate innovation

3. The tracks of innovation
F. It is clear what the tracks of innovation mean
G. Interviewees see it as added value, to formulate tracks of innovation

4. Innovation process
H. Interviewees think this is a clear innovation process
I. Interviewees think, assuming that they receive sufficient explanation and guidance, that they are able to follow this process themselves
J. The difference between a field of innovation, an innovation path and an innovation process is clear

5. Innovation project
K. The difference between an innovation process and an innovation project is clear

These assumptions have been tested on their relevance, by using a quantitative survey. This helped me to see what elements needed qualitative (explanatory) questioning. A summary of the results can be found on the next page. The survey and full results can be found in **appendix H.**

Results of the survey

The survey was set out in both cases; Pon Power Netherlands and Pon Equipment Norway. In total, 38 employees filled in the survey. In the survey they were asked to what extent they find either something relevant, or clear. The employees could rate this on a scale from

1= not relevant/ -clear at all
5= very relevant / -clear

Figure 43: Legenda of the grading scale.

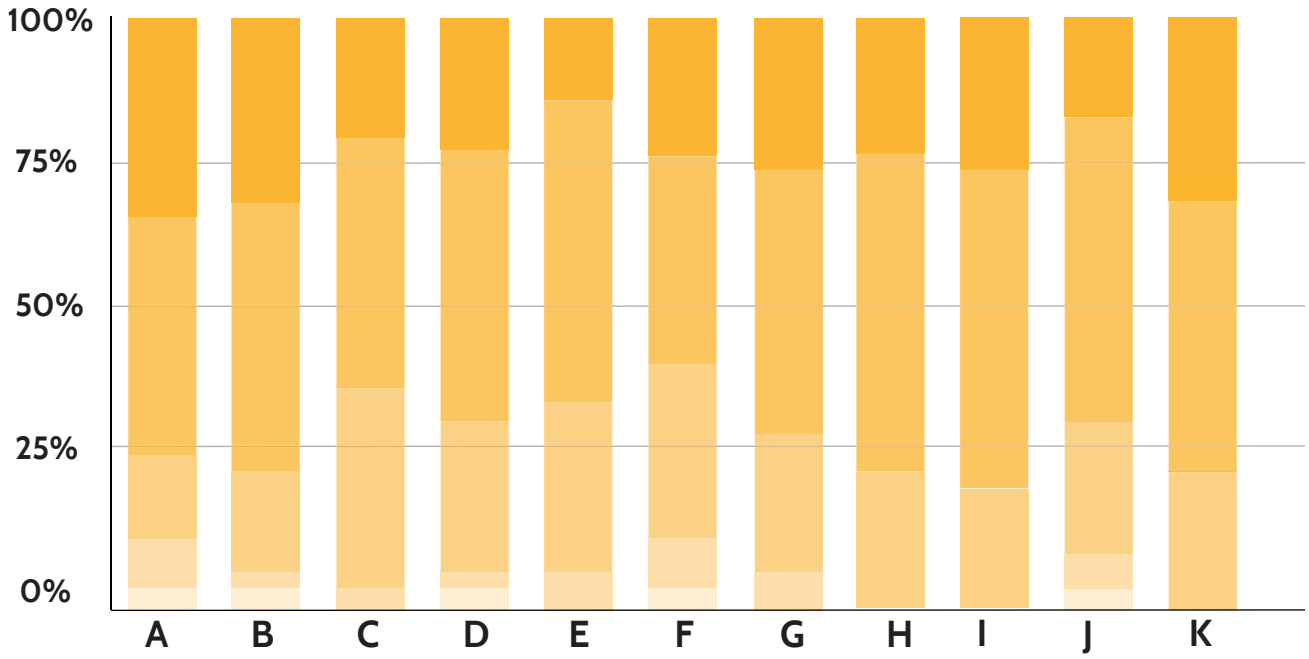


Figure 44: Results of the quantitative survey. Letters correspond to the assumptions on p. 100.

To conclude, the survey showed that the relevance for having a framework instead of a process as starting point, is relevant.(C). In addition the results show that the innovation process is clear enough (H). However, the additional note 'with enough explanation and guidance', implies that the process needs to be complemented with answer on 'how to'.
The interviewees see the added value of the fields- and tracks of innovation. (E & G)
However, there is some unclarity about the content of the fields. This can be clearer and needs further qualitative questioning to better understand what could be clarified. (D & F)
Lowest scored in this survey has been the relevance of the graduation challenge. (A&B)
In order to explain the reasoning behind the framework, I will try to investigate more specifically what people think of this in the next section.

Assumptions for the framework - a qualitative validation

From the quantitative survey, I retrieved four themes to be tested more in depth. The themes have been guiding to test different assumptions by means of interviews in both Pon Power Netherlands, and Pon Equipment Norway. The outcomes will be briefly presented in the following section, in which the quotes are presented in the way that I received them (Dutch for PPNL and English for PENO).
After this, I will summarize the things learned to take into account for the final design of the framework. An overview with interviewees can be found in appendix G.

The section will be split in different elements:
- The overall story that links quotes and interpretations to each other
- The raw quotes as presented will have a light-yellow box around them
- The learnings for each assumption will have a darker yellow box around them.

This section is nice to read and shows the richness and complete picture of the validation. Therefore, this has not been placed in the appendix. Most important are the learnings for each assumption. The main learnings will be summarized in the end of the section.

1 The goal of the framework is clear

The first theme that I wanted to validate, was the relevance of designing an innovation framework. This turned out to consist of two assumptions;

A. The relevance to have a process or framework for innovation

To start, everyone agreed that innovation is essential in the organization, to stay up to business. I have seen a difference in answering this question, between Pon Equipment Norway and Pon Power Netherlands. At Pon Equipment Norway, they did not mention specific areas in which they found the organization needed to innovate. They all agreed without hesitating that innovation is essential.

"If you don't innovate you stop. And if you stop you are out of the business."
"If you think you cannot do anything better than you are already doing, you are lost."

However, at Pon Power Netherlands some interviewees answered with a bit more hesitation about the need to innovate. They mentioned that the operating companies are all (to a certain extent) dealerships.

"Ja, we moeten zeker blijven innoveren maar we blijven een dealer, afhankelijk van Caterpilar. Technisch moeten we niet te veel gaan kloten. Echter, processen en digitale services of toepassingen wel."
"We blijven een dealer, dus we moeten ons niet te veel laten verleiden om technische innovaties te gaan uitwerken, dat doet Cat wel. Wil niet zeggen, dat we niet mee kunnen denken en wellicht wat prototypes kunnen presenteren, zoals de Z-line."

B. The relevance of switching to designing a framework, instead of a process.
More than the quantitative survey showed, people see the relevance of me designing a framework instead of an innovation process.

"Het leuke is dat het niet directief is zoals een proces, maar juist suggestief."
"Het is inderdaad relevanter om een framework te ontwerpen, dan een process"
" Een framework is een stuk minder directief, wat denk ik wenselijk is om mensen mee te krijgen. Ze willen wat vrijheid."
" Ja, een process is te veel opleggen. Dan gaan mensen vragen 'waarom dan?'"
"Opleggen is afleggen."
"Het is eigenlijk een soort kapstok die je gemaakt hebt, goede keus om een framework te ontwerpen en niet alleen een proces.

In Norway I got the same feedback on this question; the quotes resemble the quotes from the Dutch employees and are not presented here.

What did I learn?
- The relevance to innovate is clear enough, however it depends per company on what to innovate
- In the explanation of the framework there could be more emphasis on the goal of the framework in terms of innovation; not to focus on new technologies, but more on new services.
- Guided freedom is appreciated within the organization. To that extent, a framework helps.

2. The fields of innovation are clear and relevant

A. The fields are clear and can add value in understanding innovation practice
In general, the interviewees agreed that the fields are clear and they agree that the elements should all be there. The fields 'support' and 'infrastructure' were perceived as most clear.
The fields that were perceived as less clear, are the fields that have the elements 'culture' and 'purpose/goal' in the fields.

"Cultuur stukje vind ik heel belangrijk; als het niet past bij de cultuur, is de motivatie lager en gebeurt het gewoon niet."
"Je hebt altijd een route nodig, met een begin en eindbestemming. Dat zie ik een beetje in die velden."

As explained earlier, both in Pon Equipment Norway and Pon Power Netherlands the interviewees mentioned that the terminology of some fields could be clarified more.

"De velden en wat ze kunnen betekenen, de termen, dat kan net wat scherper. Wat valt er binnen en wat valt er niet binnen?"
"Het stukje over strategie is wellicht wat breed, misschien kun je dit in zo'n veld specificeren?"
"The story about the fields is clear, but maybe you could fill in the fields by yourself with suggestions on what you mean with it?"
"I think they are clear. As long as you can pinpoint them to this context, or this company so you can make them your own. Not show some generic boxes which could be anything. I think if every company creates concrete examples for their context they are clear, yeah."

One of the interviewees partly disagreed with this, when asking about the terminology I used.

"I think that the words as they are right now, are just on the right level. You know, we have four branches, in four different languages; so we need to adjust it anyway, for them to understand it. Right now there is some level of freedom for interpretation (not too much) and I like that."

B. The addition of 'strategy' is relevant for me

This has been an important validation for me, since I did not find a lot about it in literature.
The interviewees basically all agreed that having a goal, purpose within the fields is very relevant.

"Een doel is nodig, anders doen we het niet. Simpel."
"Ik denk dat met name het communiceren van die strategie of purpose belangrijk onderdeel moet zijn binnen dat veld."
"I think you can't expect anything from your people, without them being aware of their role for the goal."
"I think that your fields of innovation gives a very good overview. It all starts with a purpose and a goal. If the team don't understand or see where it fits in, it is harder to ask them to be involved."

What did I learn?

- If I want the fields of innovation to be self-explanatory, I need to be very clear with the terminology I use in the fields. This can be optimized by explaining it with a concrete example.
- Not only terminology is important, but also the interpretation of words in different languages/contexts should not be forgotten.
- The idea of having 'an element of strategy' in the fields is relevant. However strategy is very broad. This is least self explanatory of all fields.
- Presenting a strategy as being a purpose or a goal, has been more clarifying; in Norway I did not get questions and they directly understood what I meant with it.
- I should be very clear on 'Who is going to use the fields of innovation, and the worksheets.'
- It is essential to have a facilitator (like me) who knows all the 'ins and outs' of the fields of innovation and the worksheets.

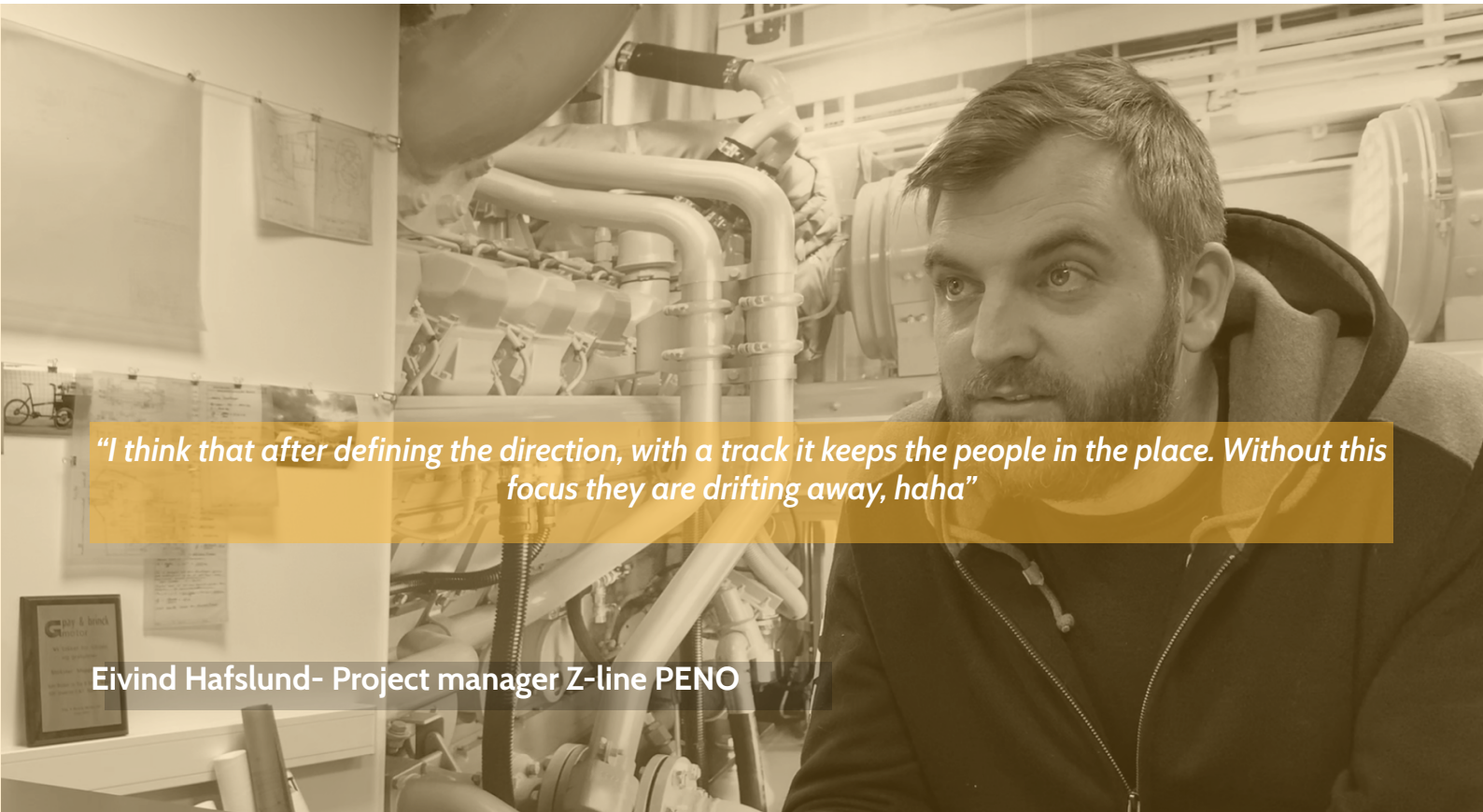
3. The tracks of innovation

This has been a theme about which I got the most questions; from my supervisory team as well as from the quantitative survey. It consists of two assumptions.

A. The concept of using tracks of innovation and their goal, is clear

More than I expected, the interviewees found the idea of having specific tracks very clear.
After explaining about the tracks, I asked them if they could explain it with their own words.

"I think that after defining the direction, with a track it keeps the people in the place. With this focus they are drifting away, haha"
"Ik zie de tracks eigenlijk als een aanvalsplan, wat gaan we nou echt concreet doen?"
"Ja dus waar die velden inzicht geven en een beetje hoog over zijn, zijn die tracks dus eigenlijk gewoon een concrete invulling"
"Voor mij is het een soort leidraad waar we aan vast kunnen houden wat we zouden kunnen doen, met voldoende vrijheid om in te kleuren."



B. The employees see it as added value to define tracks of innovation
In addition, I asked them if they think these tracks can actually add value.
They did see the added value of the tracks, mostly because it has the aspects of 'choosing what to focus on' and 'an element of freedom'.

"Ik denk dat zo'n pad onmisbaar is eigenlijk. Het geeft heel erg aan van wie we zijn, wat onze right to play is en de rollen."
"It is I think. But the value depends on the purpose; that needs to be valid in order to make it work."
" An innovation track throughout all the business here in Norway, will ensure that we put the right priorities, where the money is."
"I do see the added value, but only when we are really using and doing this."
"Die paden zijn goed, zo'n gekozen richting (en die communiceren) hebben we nodig hier. Ik vind het vooral mooi dat het impliciet ook aangeeft wat we dan niet gaan doen. De 0-optie wordt hier vaak vergeten te vermelden."
"We hebben die paden nodig om van de containerbegrippen in de velden, weg te gaan en echt aan de slag te gaan."

Next to the assumptions that I prepared to discuss, based on the outcome of the survey, one of the employees had an interesting thought.

"Je krijgt de kans dat meerdere werkmaatschappijen hetzelfde onderwerp kiezen (inefficiënt gebruik van resources) en werkt het mogelijke onderlinge concurrentie in de hand."

This is a relevant and interesting question. The interviewees partly agreed on this, however they did not see it as a problem but more as a challenge that is needed.

"Als iedereen met hetzelfde bezig is, dan is het dus blijkbaar goed waar ze mee bezig zijn toch?"
" Having one track for the branches in Norway, helps to put different ideas in the same funnel, and get the same assessment on criteria. "
"Ik denk dat het inderdaad een risico is, maar dit is een kwestie van coördineren als je het mij vraagt."
"Ja, maar laten we nou eens delen met zijn allen. Veel te veel willen we ons eigen hachie redden. We moeten ervoor waken dat niet iedereen hetzelfde doet, dat zou inefficiënt zijn inderdaad, maar ik hoop echt dat we nou eindelijk eens met elkaar gaan praten en van elkaar kunnen gaan leren."

What did I learn

- A track is not only a route where to go, but implicitly names where not to go. Something I can mention more in the explanation, since people apparently feel that this is an important aspect.
- Think of how to manage different tracks / outcomes, between different operating companies. How can they use it as an opportunity, instead of seeing it as a threat?
- Just like the feedback about the fields of innovation; clarity can be achieved by explaining a track with a concrete example.

"We hebben die paden nodig om van de containerbegrippen in de velden, weg te komen en echt aan de slag te gaan."

Kees-Jan Mes - Managing Director PPNL

"Een doel is nodig, anders doen we het niet. Simpel."

Michel de Bruin- District Service Manager PPNL

"This process exactly tells me; 'Ok, so now I need to do this, and then this.' That is what we need on a workfloor level."

Andreas Walnum - Technical Communicator PENO

4. The innovation process

As seen in the results from the quantitative survey, the innovation process was perceived as very clear. For that reason, I did not give it too much attention on this during the qualitative validation. I showed the process and asked if they had any questions.
Mostly, they did not.

"Ja dit ken ik wel, zijn logische stappen en deels doen we dit ook al wel."

In addition, one of the employees in Norway said that the steps as shown in the innovation process are an example of how he would like the fields of innovation and the tracks to be explained as well.

"The innovation process is very clear, clear steps and I know 'hey yeah i need to communicate the direction, okat I do that...' clear steps and I think if you would do that for the fields and tracks as well, it would help a lot."

Some of the interviewees had some extra questions about the process that are interesting for me to take into consideration for the final design of the framework, with the corresponding processes and structures.

"Proces is helder, alleen per stap 'hoe' we dat dan daadwerkelijk kunnen gaan doen zou nog wel een goede toevoeging zijn"

"I think there are more iterative loops possible in the process, maybe it is good to add these as well?"

What did I learn

- The process itself is clear, and the people appreciate the 'stepwise' approach that is used.
- They would like to see some 'how-to' suggestions for every step
- As I presented the process, it only had two iteration moments. In the final design there should be more iterations. I learned that in my head this is obvious, but for a lot of people this should be explicitly mentioned.

Qualitative validation - a final summary

To conclude, this last section summarizes all main learnings from the observations.
The overall feedback that I got from 12 validation sessions/interviews in both Pon Power Netherlands and Pon Equipment Norway, was that they think the steps to using the framework are clear.
They see the added value of having a framework as starting point, that could end up in an innovation process for different operating companies. The fields are clear; it is perceived as being an enabler to understand different aspects that need to be put in place in order to have innovation practices within each operating company. After this, the tracks of innovation are perceived as being a good guideline for making the fields concrete. Foremost, they mentioned that an important added value of the track is that it states what to focus on and what not to focus on.
The innovation process is perceived as most clear; concrete steps.
"Ok, now I need to do this, and then this, and then this"

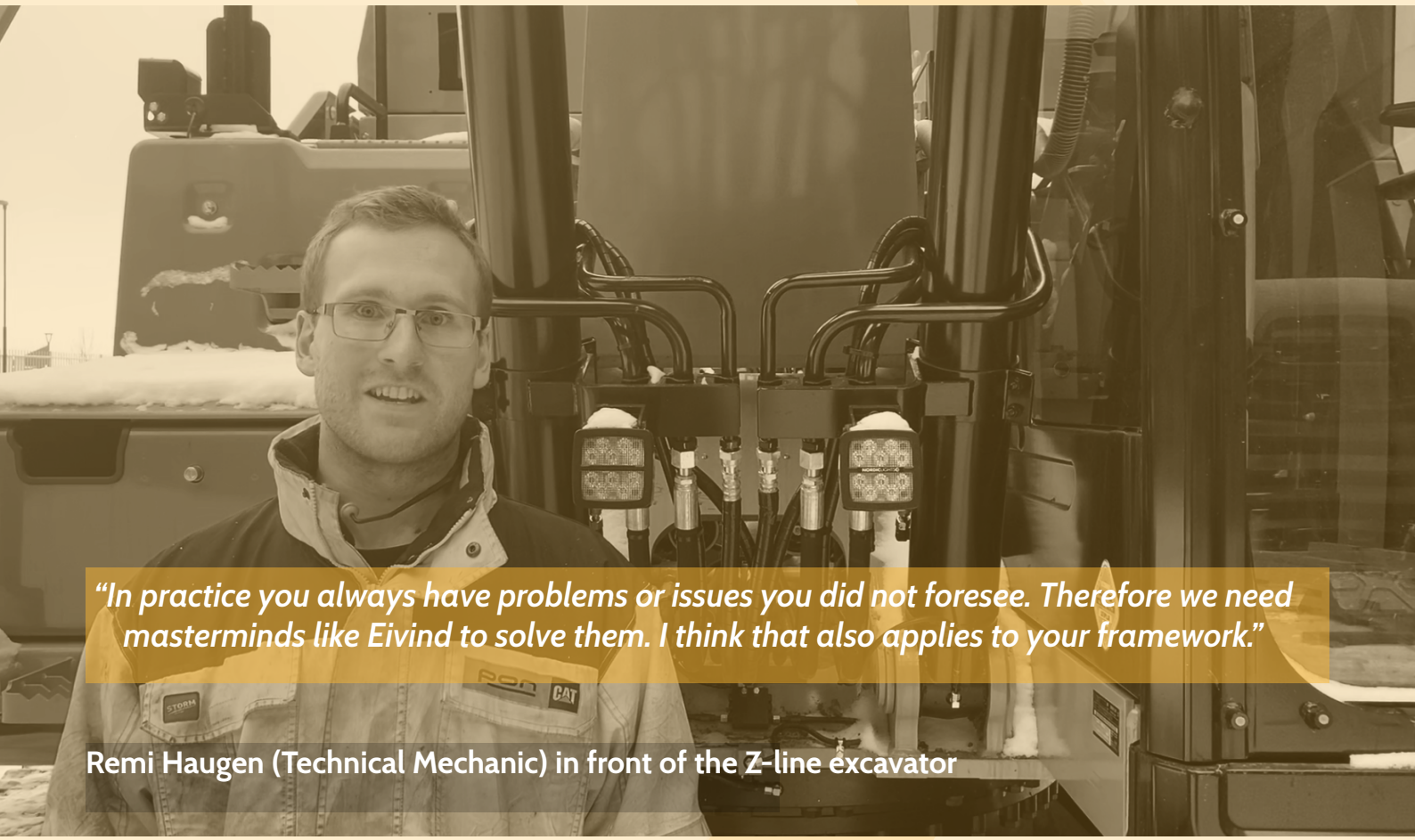
Bottom line of the validation: They think it is clear, but they mostly agreed that they want to see it happen in the organization. They challenged me on two main aspects:

1. Translating the fields of innovation from high-level, to the workfloor
Most feedback I got on the fields of innovation is it being a bit too much on a higher level for the whole organization to understand. When I showed them the worksheets which have concrete questions, they agreed that these sheets could very much help in understanding the fields.
They recommended to add some more reference to these worksheets, when explaining the fields of innovation. Both by showing the worksheets and by showing how they are linked to concrete business. Furthermore, they mentioned that it is important to know 'who' should be involved in filling in the worksheets. For whom did you design these worksheets?
Lastly, they recommended me to have an overview for both the fields of innovation and the innovation tracks, with concrete steps (just as the innovation process have these steps).

2. Importance of having the right facilitator (opco expert)
Second point has been the importance of having the right facilitator, or in other words, the OpCo expert. They mentioned that this should be someone who knows the company and the business.
"It is better to educate people from the business with these sheets and framework, than to hire someone without (or too little) knowledge of the business."

My most important lesson from the validation has been that on paper, the framework is clear enough to work with. To truly validate its potential, it should be used in practice.
In the car back to the airport of Oslo, the commercial director from Pon Equipment Norway summarized it nicely:

"I think it looks very promising what you have created. However, you only know if you are able to swim, if you get in the water. You did get in the water, but the water wasn't too wild I think. So, we will see, at least we need someone fully responsible for implementing and doing this."



Remi Haugen (Technical Mechanic) in front of the Z-line excavator

Final design - an overview of the framework

After validation of the framework in both Pon Power Netherlands, and Pon Equipment Norway, this last section of the design part, is the final design.
By means the overview as shown on the next two pages, every step of the framework is explained. It might be that I repeat some aspects from the previous sections. I did this to have a clear as possible overview.

Step 1: Understand your fields of innovation -

Why do this:

A company needs to understand their current and desired (business) context for every field of innovation.

Who and How:

- The Area2 coordinator facilitates 'the exploration worksheets' sessions
- The OpCo innovation expert is responsible for filling the fields
- Some employees can be involved with filling the fields

What will it result in:

Different options in every element shown in the fields of innovation.

Purpose: this field is about why you need to innovate, what you perceive as being innovative and what type of innovations you want to focus on. Do you want to focus on small steps or improvements, or do you want to focus on big inventions?
In response, what do you expect from your employees? Do you want them to only give feedback on ideas, or do you want them to come up with ideas as well? Or in other words: who should be involved?

Capabilities: this field is in the first place about what type of people you currently have and need. People who are more thinkers, or more hands on? Second it is about what kind of skills you need, from the people you want to be involved. For example, do you need them to learn interpreting the voice of the customer?

Support: how could you support the different capabilities, is the main question for this field to understand. First, in terms of resources as time and money, different communication channels, organizational structures that might need some adjustments and practical support on how to follow up on ideas.
Second, appreciative support. Feedback on every idea or acknowledgement from higher levels in the organization (management or directors).

Step 2: Choose your track of innovation -

Why do this:

To make- and communicate concrete decisions about what innovation direction to focus on.

Who and How:

The OpCo expert and some employees, with help of the 'track worksheets'

What will it result in:

A track of innovation: a chosen direction or path, innovation.

Step 3: Follow the innovation process -

Why do this:

To have a structured way of dealing with the innovation track in practice.

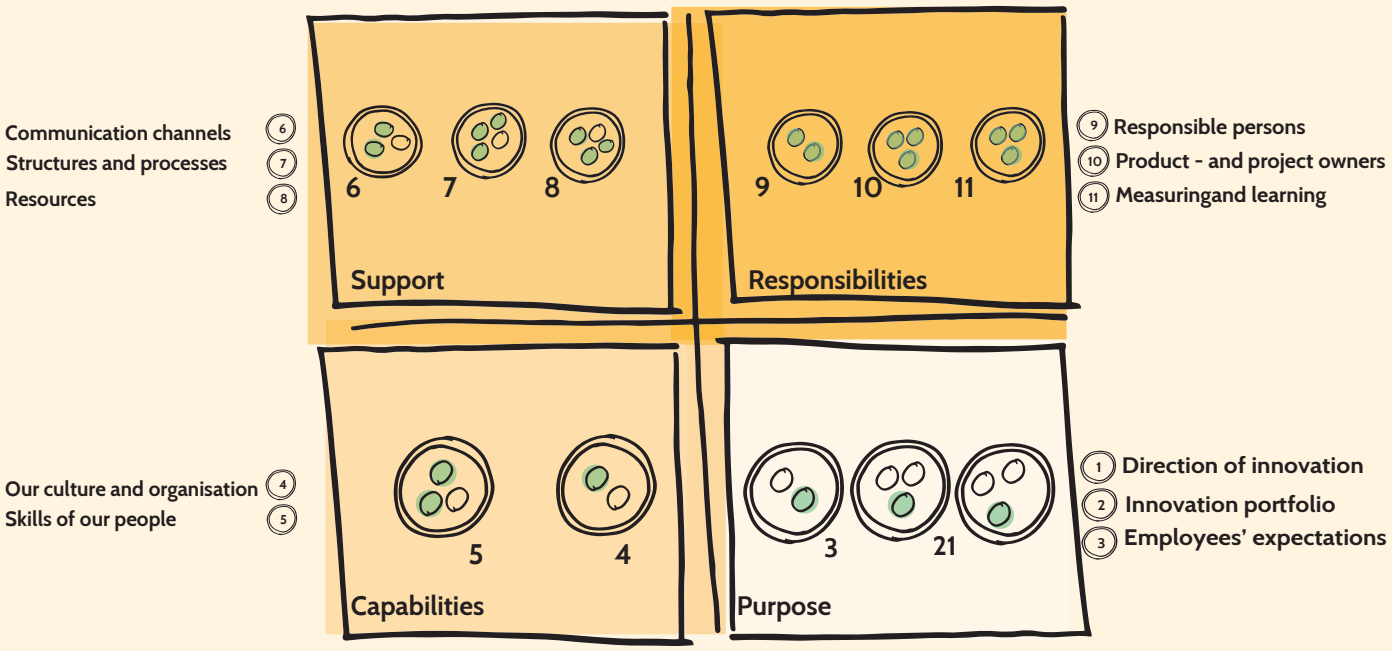
Who and How:

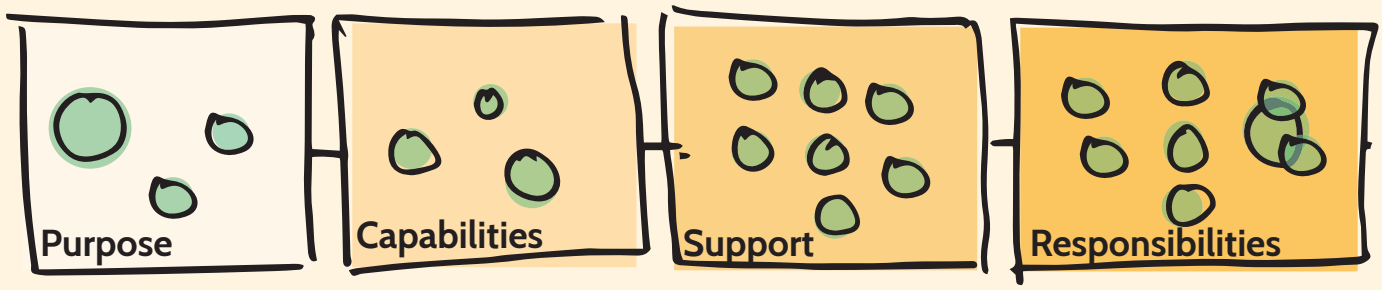
The OpCo innovation expert will guide the overall process, anyone can join based on the expectations in the OpCo's.

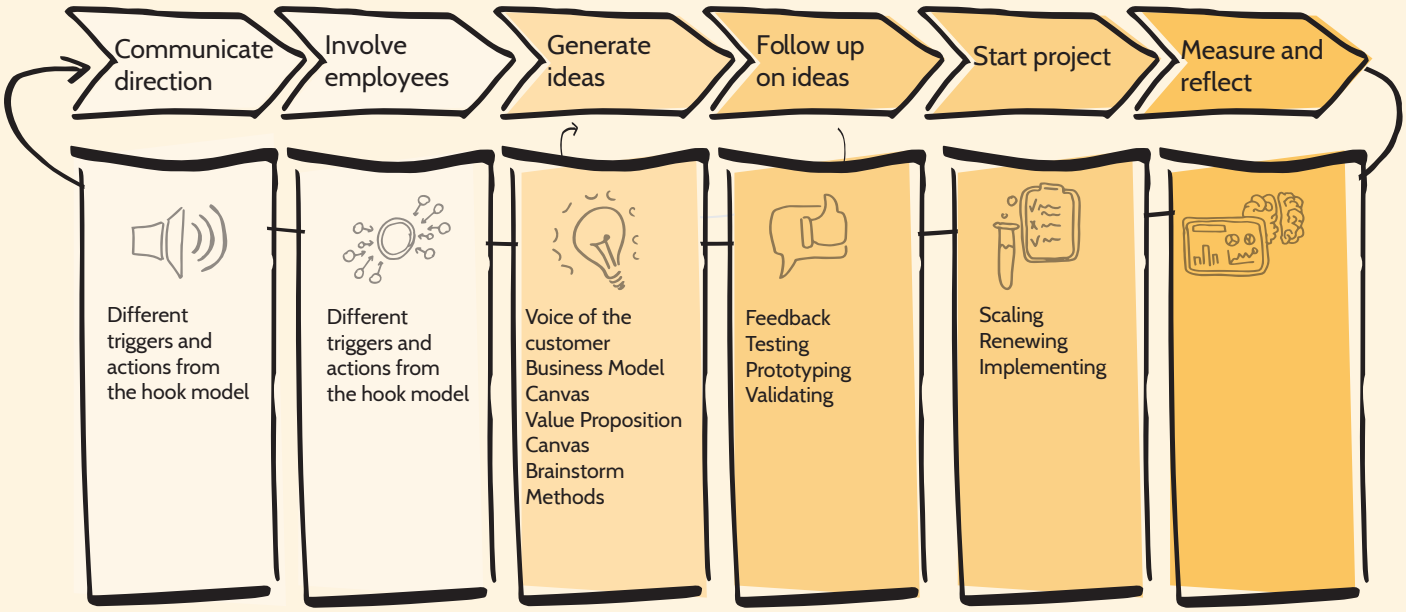
What will it result in:

Multiple options:

- From very good ideas to less good ideas.
- From prototyping and testing, to implementing and scaling.
- From measuring, to learning and reflecting


Communication channels
Structures and processes
Resources
6
7
8
6
7
8
Support
9
10
11
Responsible persons
Product - and project owners
Measuringand learning
Responsibilities
Our culture and organisation
Skills of our people
4
5
5
4
Capabilities
3
21
Direction of innovation
Innovation portfolio
Employees' expectations
Purpose


Purpose
Capabilities
Support
Responsibilities


Communicate direction
Involve employees
Generate ideas
Follow up on ideas
Start project
Measure and reflect
Different triggers and actions from the hook model
Different triggers and actions from the hook model
Voice of the customer
Business Model Canvas
Value Proposition Canvas
Brainstorm
Methods
Feedback
Testing
Prototyping
Validating
Scaling
Renewing
Implementing

Part 4

Implementation

The tipping point

"How little things can make a big difference"

Partly quoted from the book of Malcolm Gladwell - Tipping Point (2000)

For Hush Puppies, the Tipping Point - that single moment during an epidemic, when everything can change all at once - arrived somewhere between late 1994 and early 1995.

The brand had been doing good business until that point. Sales of the classic American brushed-suede shoes were down to 30,000 pairs a year, mostly to backwoods outlets and small-town family stores. Wolverine, the company that makes Hush Puppies, was thinking of phasing out the shoes that made them famous. At a certain moment, something strange happened. During a fashion shoot, Owen Baxter and Geoffrey Lewis, two Hush Puppies executives - ran into a stylist from New York. He told them that the classic Hush Puppies-shoes had suddenly become hip in the clubs and bars of downtown Manhattan.
"We were being told," Baxter recalls, "that there were resale shops in the Village, in Soho, where the shoes were being sold. People were going to the little stores that still carried them." Baxter and Lewis were baffled at first. It made no sense to them that shoes that were so obviously out of fashion could make a comeback.
By the autumn of 1995, things began to happen in a rush. First, the designer John Bartlett called. He wanted to use Hush Puppies in his spring collection. Then another Manhattan designer, Anna Sui, called, wanting shoes for her show. In Los Angeles, the designer Joel Fitzgerald put a 25ft inflatable basset hound - the symbol of the Hush Puppies brand - on the roof of his Hollywood store and gutted an adjoining art gallery to turn it into a Hush Puppies boutique.

In 1995, the company sold 430,000 pairs, and the next year it sold four times that, and the year after that still more, until Hush Puppies were once again a staple of the wardrobe of the young American male. In 1996, Hush Puppies won the prize for best accessory at the Council of Fashion Designers awards dinner, and the president of the firm stood up on the stage with Calvin Klein and Donna Karan and accepted an award for an achievement that - as he would be the first to admit - his company had almost nothing to do with.

How did this all happen? Those first few kids, whoever they were, weren't deliberately trying to promote Hush Puppies. They were wearing them precisely because no one else would wear them. Then the fad spread to two designers, who used the shoes to peddle something else - high fashion. The shoes were an incidental touch. No one was trying to make Hush Puppies a trend. Yet, somehow, that's exactly what happened. The shoes passed a certain point in popularity and they tipped. How does a $30 pair of shoes go from a handful of downtown Manhattan hipsters and designers to every mall in America in the space of two years?

To best understand the Hush Puppy boom, or the transformation of unknown books into bestsellers, or the decrease of crime in New York, or any number of the other mysterious changes that mark everyday life, is to think of them as epidemics. Ideas, products, messages and behaviors spread just like viruses do. This is because of three characteristics. One, they are contagious. Second, little causes can have a big effect. Third, change happens not gradually but at one dramatic moment.
These are the same principles as how, for example, measles moves through a school or flu attacks every winter.

Implementation can be seen as causing an epidemic. Eva had said it earlier, how can we make it like a virus, how can we make it spread throughout the organizations?
Is it possible for the framework to be a tipping point that leads to sudden change?
Or will the framework only be a carrier of the virus, and do we need a person to spread it? This part is just about these questions; how can we force that tipping point to happen; how can we get the mass of the organization to be involved with innovation?

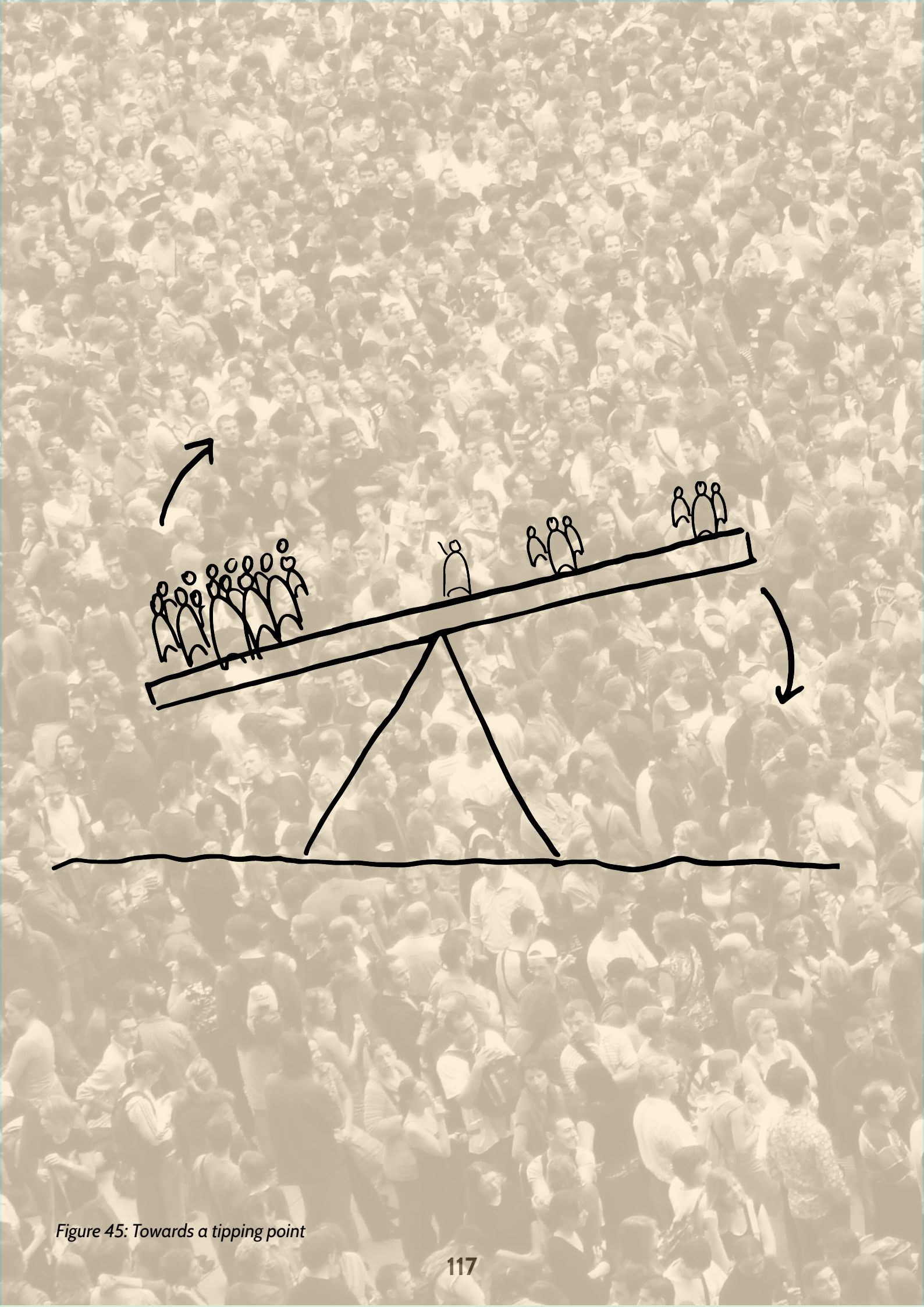


Figure 45: Towards a tipping point

Forcing a tipping point

This is, in my opinion, the most important question that designers have to answer and it is given too little attention. How can we, if we designed a solution, make sure that it will spark a reaction or behavioral change that is durable and sticks within an organization?

Moreover, how can someone, or some people, within the organization do this? Although most of the designed framework has been made up of inputs from the organizations, I will be gone after this story. As Malcolm Gladwell also describes, there is always someone; be it an individual or a team, responsible for making the first step. This step has been taken, but specific for the framework, there should be a spark that is followed up by a chain of reactions.
Or in the words of Eva, who introduces the virus to the operating companies?

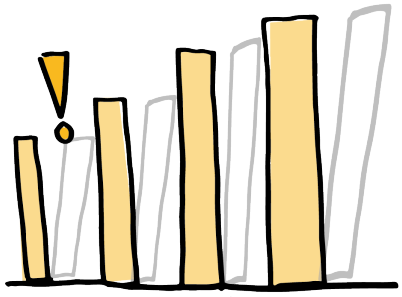


Figure 46: Forcing a tipping point

When I'm gone- the end and the start

Introducing a framework and coherent tracks will be new for the organization. For some employees it will be less of an impact than for others. The goal is not to have the whole framework be crystal-clear for every employee. Some people don't want or have to know why it works in the way it was designed. Some people just want to know what they need to do. However, in the end, to make sure the framework is handed off well, there needs to be people who understand the framework very thoroughly and are responsible for creating the initial sparks. Brown (2018) states in the Harvard Business Review that the easiest way to do this is by making an owner's manual. Easiest, but ask yourself when did you last read an owner's manual? Exactly! He examines different models for a good handoff, and interestingly, he names mentions an architect and ambassador model. Can it be possible to have both? Can we force a proper handoff by appointing a new architect and ambassadors?

A new architect

The team of Area52 has thought of this as well and they got permission from the board to create an extra vacancy in the form of an Area2 coordinator. This basically means someone who is responsible for helping the operating companies with their innovation processes. This person is, to that extent, supervisor or co-architect of the framework. He or she knows every detail of the structure, the framework and is capable of explaining it to others if needed. This person is probably going to be someone with a design-background as well, so this makes the process of handing-off my framework a lot easier.

Next to this story (including appendices) being the owner's manual, there seems to be an architect for the handoff of the framework. From here, I can think of a couple of options for using the framework within the operating companies.
1. The Area2 coordinator will be responsible for every track that is followed by every operating company.
2.The Area2 coordinator will educate a team innovation experts within every OpCo, who are from there on out responsible for the track. Here, the Area2 coordinator will only function as a supervisor.
3. The Area2 coordinator will collaborate with an external partner who is responsible for executing the different parts of the tracks. This can be done inter or intra OpCo.

From a sustainable point of view, option 2 would be best since this enables operating companies to be fully self-responsible for their own innovation process, which was the given challenge. Next to this, this option includes having local knowledge of the business context.
Appointing an innovation expert in every OpCo might cost more time and money and as seen from the observations can be challenging, but this has most potential for spreading the 'innovation virus'.

The OpCo innovation experts

As the Area2 coordinator is responsible for educating the experts from every operating company, the next questions are; who are these people, what do they have to learn and how is the Area2 coordinator going to do this?

The first question is whether to hire an individual or a small team of experts. This depends on each of the operating companies, but I would recommend starting with an individual. Here's a short overview of some of their tasks and-or knowledge. More recommendations for what they should do can be found in part 5.

What do they need to know or do?

The innovation experts aims to involve employees from the operating company with innovation. They should (amongst others) at least:
- Supervise the track that the operating company has chosen
- Communicate the track and involve the people who need to be involved
- Organise and facilitate the workshops
- Coordinate the innovation process
- Delegate other responsibilities where needed
- Measure the output in the form of KPI's
- Responsible for feedback and rewards
- Report to the A2 coordinator

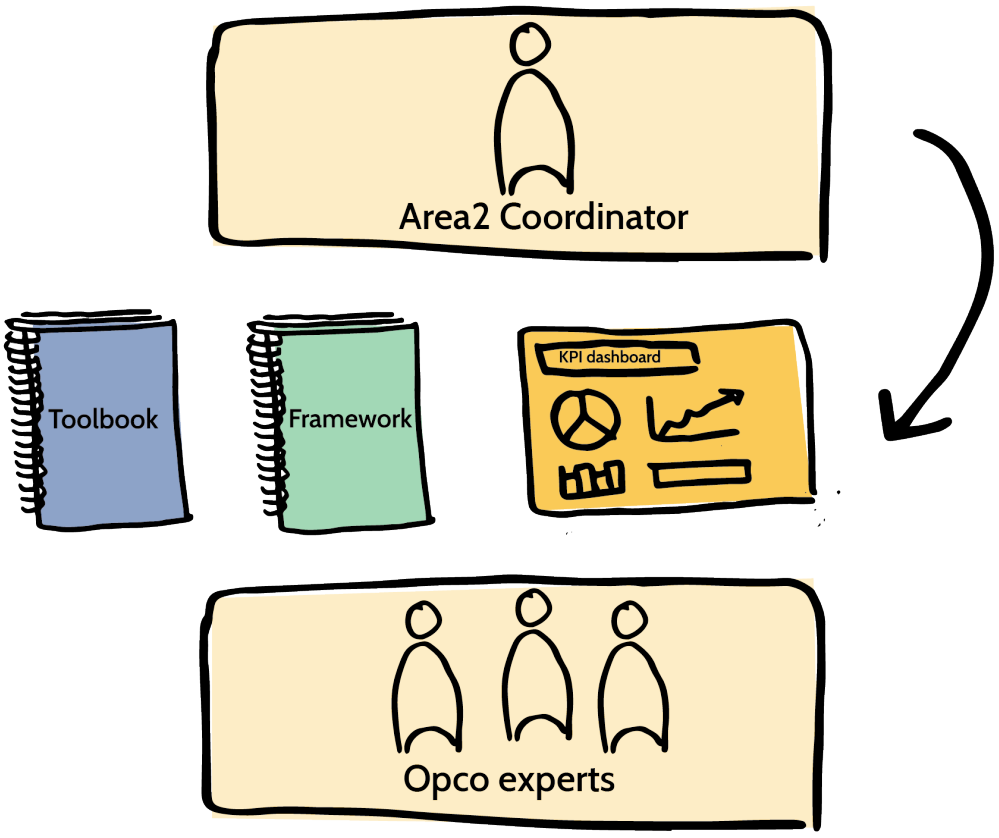


Figure 47: The Area2 coordinator educates Opco experts

How will the A2 coordinator do this?

About a year ago I did an internship at a company called 'Innovation Booster'. They have a framework or process for helping organizations with innovation. They try to 'boost innovation'. They do so, by using boosters; people who are energetic, enthusiastic and know the framework and coherent tools by heart. When these boosters are hired, the first or second week they come to the office, they have a so-called 'Booster-class'. A full-time week in which all elements of the framework are explained and practiced. I believe such an approach would be very beneficial for this case as well.

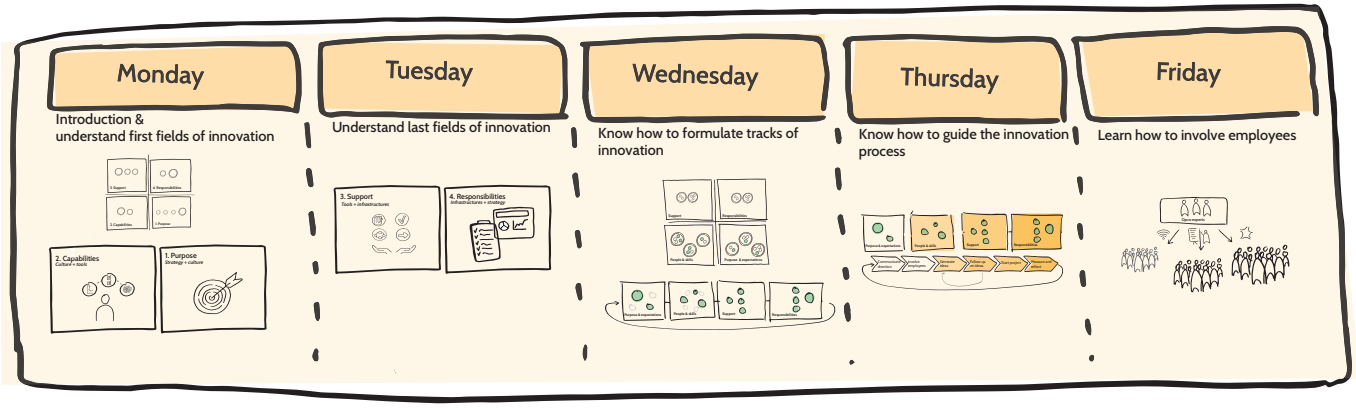


Figure 48: Overview of the trainingweek

Ok, so now what? - the framework when the A2 coordinator is not always there

From here, the operating companies that have started with the framework should have a team or an individual who knows everything of the framework. He or she is now capable of implementing the tracks within the operating companies. Also, the goal of this person is clear: to involve employees from their organization with innovation.
Just as in the previous section, the next question is: how are they going implement this. What do they need to do in order to spread the virus?

The (to be appoined OpCo experts) showed willingness and motivation to change their organization and learn new things. Now, they have to motivate and activate different kinds of people. They want the whole organization to show behavior of involvement with innovation. Since this is lacking at all of the operating companies, they need to be able to change the current behavior, towards the desired behavior.
Easier said than done.

Misconceptions about changing behavior

From a paper written by BJ. Fogg (2009), he states that there are quite some misconceptions about changing behavior. This is interesting to mention, because with my framework I was falling for these misconceptions as well. I was about to just present the abstract framework as designed in part 3. Therefore, without being aware of these misconceptions, the experts might fall for them either. (Fogg, 2009).

- Attempt big leaps instead of baby steps -
- Trying to stop old behavior -
- Believing that information leads to action -
- Focus too much on abstract goals -
- Trying to change behavior forever -

From these misconceptions, we learn that the experts should mind taking small steps when it comes to innovation. They should not try to stop old behavior but try to find anchor points in old behavior that are suitable for change. And last but not least, it should be concrete instead of abstract. Don't tell the employees to come up with ideas. Ask them to think about a specific problem with a technology, for example.

Changing behavior?

The framework is not about changing the whole behavior of people. However, it does imply some ways of working that is new to people. As made clear from the introduction, the organization has different types of people. The willingness for people to show the desired behavior, is explained in the model of B.J. Fogg. (Figure 46) He explains that the elements motivation, ability and prompt/trigger should converge at the same moment, in order to achieve the desired behavior. He states that if the behavior doesn't occur, one of the elements is missing. Or, to put it in a formula, he states:

Figure 49: Desired Behavior is about having motivation, ability and prompts at the same time..

Motivation - how willing are the employees to participate?
Ability - how skilled are people to participate?
or in other words; how easy is it for people to get to the desired behavior?
Prompts - triggers or cues to start actions for the desired behavior.
Sometimes a Prompt can be external, like an alarm sounding. Other times, the Prompt can come from our daily routine: Walking through the kitchen may trigger us to open the fridge.

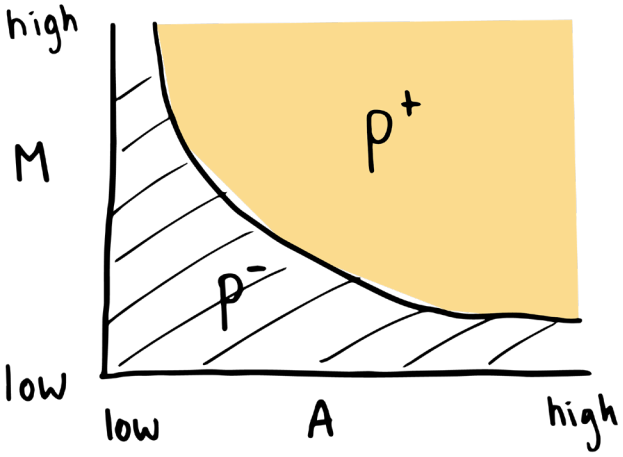


Figure 50: The behavioral model of Fogg

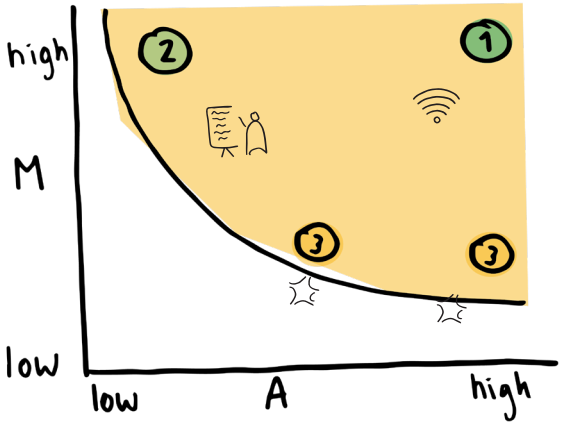


Figure 51: The model with different triggers

Fogg's model shows that there are multiple ways to trigger employees to change towards the desired behavior. In that sense, it helps to investigate different ways of triggering, for different people. This will be something that is of great relevance for the experts, in order to force the tipping point towards innovation. (Figure 51).

In addition, Fogg describes three categories of prompts:
1. Signal; high motivation, high ability; just a signal, or a reminder for them to do it.
2. Facilitator; high motivation, low ability; helps people to make it a bit easier
3. Spark; high ability, low motivation; inspire the people to be motivated

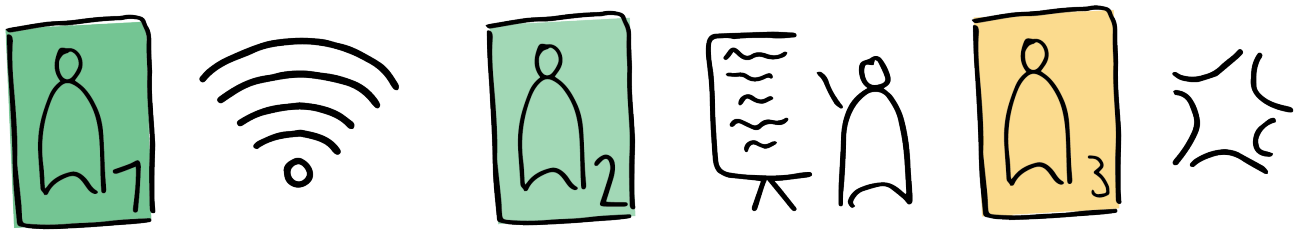


Figure 52: Different people, different triggers

Figure 53: Different people, different triggers

Concluding - what about 'old' or 'current' behavior

By understanding the model of Fogg, some of the misconceptions about changing behavior are taken into account. The model shows that there are multiple ways to trigger employees to show desired behavior of being involved with innovation.
In that sense, it helps to investigate different ways of triggering, for different people. However, the model as discussed was mostly about desired behavior.

The second misconception about trying to stop old behavior, was not taken into account. Old behavior should be valued as well, according to the Fogg. This starts with understanding of what this old or current behavior is and can be done by using the model of Fogg.

When I explained the model of Fogg to the managing director of Pon Power Netherlands, he explained to me that some employees are very good at what they do.
He added to this, that he thinks that, for the ongoing operations, a lot of 'old behavior should not be changed. Instead, it could be used as benefit for an ongoing innovation.
"For example Z-line", he continued.
"There are a lot of technical issues that have to be taken into account and some of our technicians are really good at what they do; they know everything about a certain element of this electric excavator.
When they are challenged to give feedback on the new battery pack, they love to do it.
Indeed, their ability or motivation to be actively involved with innovation is low.
However, their ability and motivation to give feedback on innovations is very high. I would like to keep it that way, again; we need those guys."

This example shows that these types of employees are highly motivated, and have (certain) abilities or skillst that makes them behave as they do; eager to give their thoughts on a specific part of a new excavator. Ozenc (2008) states that this behavior is rooted in both routines and rituals. Routines and rituals happen with little awareness or attention. (Figure 54).
In the example as explained above, the technician probably has routines for checking machines; he knows all about it, every single step that needs to be taken into account.

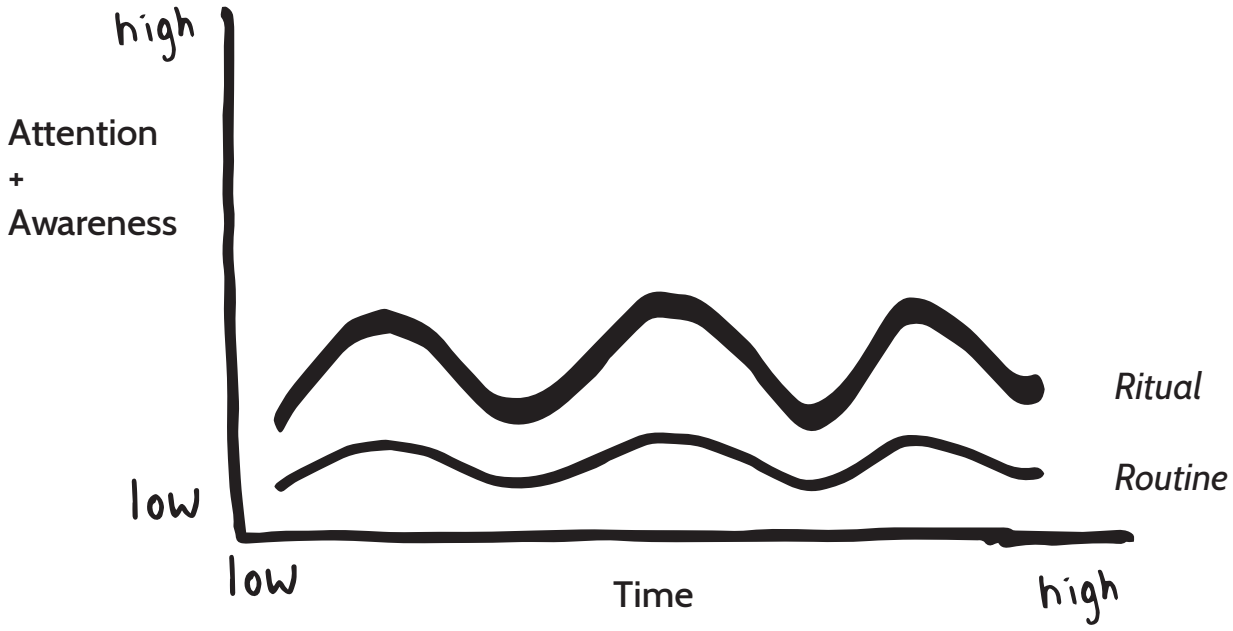


Figure 54: Rituals and routines in behavior

The example and explanation shows that an employee's behavior is not singular, but dependent on different situations. If the technician is asked to think about innovation, his ability and motivation is low. However, if he is asked to give feedback on a new electrical excavator, the opposite is true.

The misconception about trying to stop old behavior, was mentioned for a reason. Behavior should be viewed from more than a single perspective. To that extent, the model of Fogg, could be used for different purposes. Understanding current context and behavior or trying to understand how to create a desired behavior.

Every time the innovation experts in each operating company reach the point at which they need to involve people, they should think of the different 'profiles' (kinds of behavior) they need, for an innovation track. Understanding the contextual dynamics of different types of behavior and the Fogg model, will be something that can help them increasing the mutual involvement of employees. The goal is not to create groups of people. Neither should their goal be to change behavior, as stated in the beginning of this section.
Their goal should be to understand different people and their behavior, and act accordingly.

Remi (technical mechanic) explaining about the technical issues of the Z-line. (Zero-line, an electric excavator).

Different people, different triggers.

Looking at the model of Fogg and the different triggers, it is possible to distinguish different groups of people, in this context the desired behavior of being involved with innovation. It is not the intention to appoint these people in practice and put them in boxes. It is only to recognize that there are different groups to be triggered and different ways to do so.

High ability - high motivation
These people are potentially experts. Meaning that the target behavior is easy for them and they are highly motivated. They don't need to learn it, they mostly know it already.
These people know how it works and they just need some reminding signals to start.
Trigger: Signal
Example: Newsletter, notification, money etc.

Low(er) ability - high motivation
People who are very eager and motivated, but the target behavior of being involved with innovation, is rather new for them. These people are typically enthusiastic to think of new stuff or question the status quo. This can be people like Anders Roil or more general, people who have been pitching ideas to Area52 in the past.
They are motivated to learn new stuff, they just need some help.
Trigger: Facilitator
Example: Pitchtop, workshops, Digital Innovation Lab

Low ability - low motivation
People who are not motivated to learn new things. Rather, they want to keep it simple and easy. If it is easy, and close to their habits, their ability is potentially high(er).
Don't necessarily want to learn new stuff, but rather do based on their rhythm and habits.
Key in this is trying to trigger or inspire them, with something that is close to their habits and usual way of doing.
Triggers: Spark
Examples: Specific challenge, industry-related trends,

From a people perspective the goals for the experts would be to:
Make sure the motivated and skilled employees get the space to just do it.
Teach the motivated employees so that they can become skilled and motivated [2 > 1]
Motivate the non-motivated employees [3 > 2]

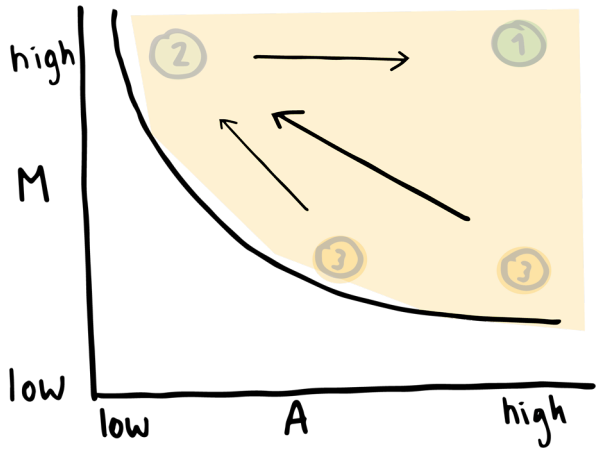


Figure 55; The shift of behavior within Fogg's model

What does it look like in §?

At this moment we have ambassadors that are experts in all aspects/fields of both the framework and an innovation track. They are well aware of their job and they are aware of the fact that they have different groups within the organization, that eash individual needs a different kind of trigger to act to the desired behavior of being involved with innovation.

However, there are some variables that are too abstract and need to be made concrete. The different triggers cause an action, but does it end there? In their book Hooked, Nir Eyal and Ryan Hoover (2014) created a theory which they call the hook-model. (Figure 56). They state that to either create habit forming products, or habit forming behavior, there should be four elements followed up, sequentially.

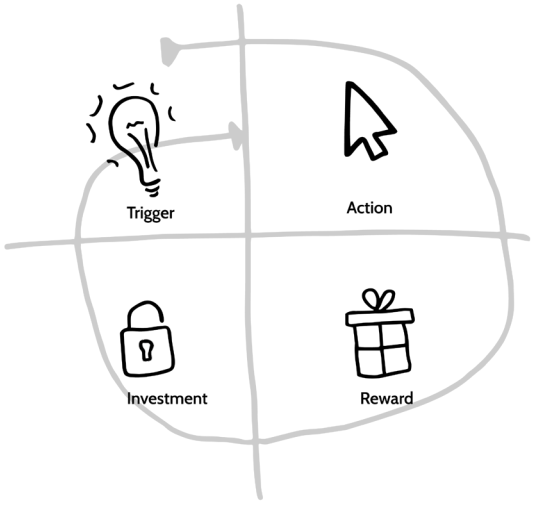


Figure 56: Hook model

First, as seen from the Fogg model, people can be triggered to act, the desired behavior. Second, this trigger creates an action. This action is the simplest form of desired behavior possible.. Third, to make this behavior stick and lasting, there needs to be a variable reward, that can come in three different ways. Lastly, there needs to be an investment. This is basically an investment in a new hook cycle, an investment in a new trigger.
The different triggers, actions, rewards and investments are placed in an overview on page 122.
Note that different triggers are just suggestions. The triggers are not meant to send to specific employees, by specific mail groups for example.
The triggers can be shared with everyone in the organization, but are different so they increase the chance of properly reaching out to the whole spectrum of employees within the organization.

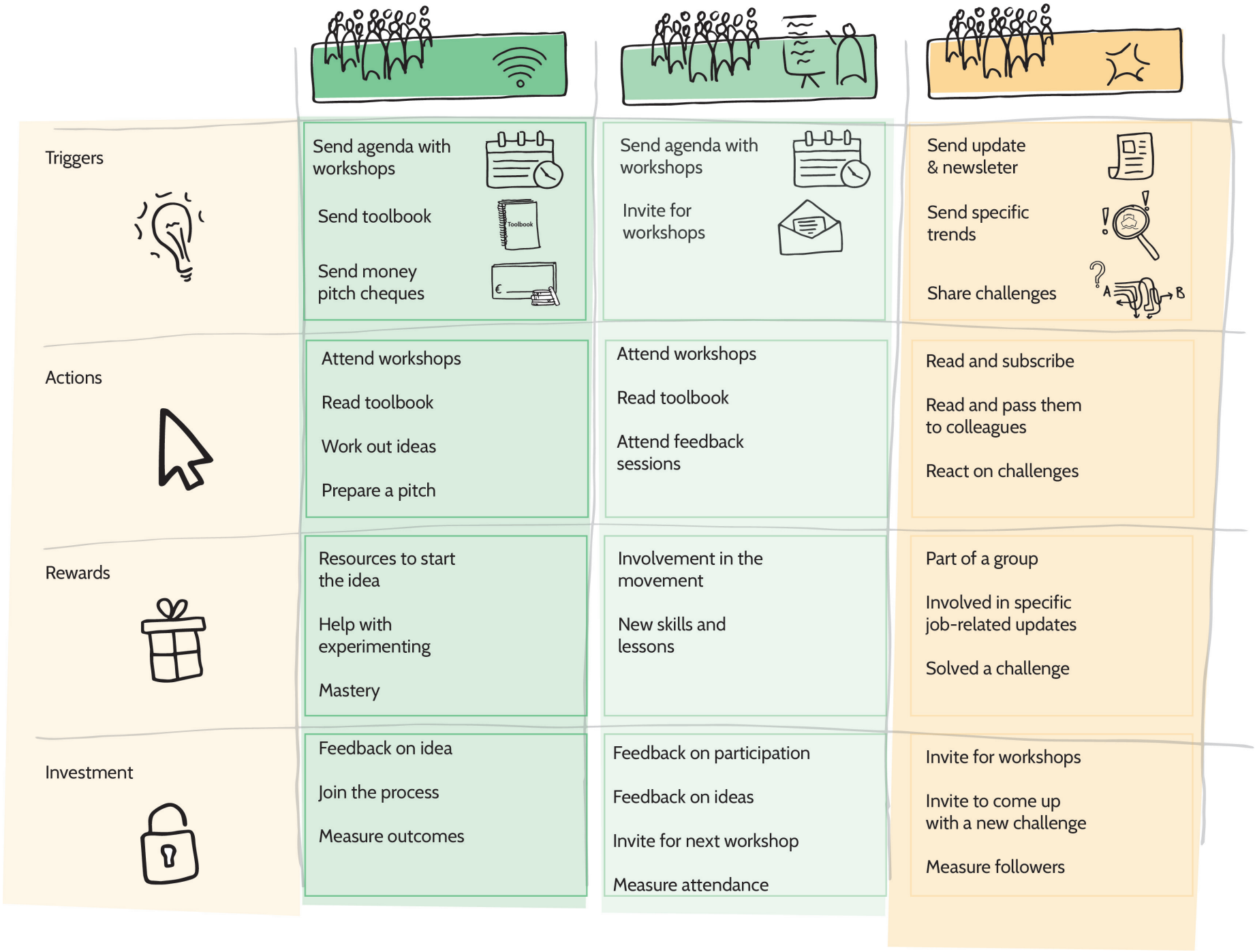


Figure 57; Overview of triggers, actions, rewards and investments

Putting it all together

Last section of this part is about putting everything together. The framework, the tracks, the different roles (Area2 coordinator, ambassadors), the triggers and actions.

This is done by means of the flowchart shown beneath. The steps are described briefly afterwards. First, the Area2 coordinator needs to have a full understanding of the framework as presented so far. This will happen together with the members of Area52 and is part of the 'onboarding' process. Not everything needs to be taken into consideration. Most important is a thorough understanding of the different fields, the potential tracks and the coherent tools provided per track.

Second, the Area2 coordinator, together with the MD from the operating companies, needs to investigate who is best suitable for being the ambassador of innovation. After selecting, they need to plan the meetings and trainings.

The first meeting will be with Area52, the Area2 coordinator the OpCo's innovation expert. In this meeting they should agree on the plan for understanding the fields of innovation, choosing a track and preparing for an innovation process to start. The people attending this meeting can vary, according to the preferences of each OpCo.

Expectations between different levels are aligned, and the Area2 coordinator will now start educating the expert. This is done by means of a training week, as explained in the previous section. At the end of this week, the ambassador should have a clear understanding of the different tracks of innovation, and how to translate this into practice.

After the week of training, the ambassador needs to prepare to start the track. He or she knows about the need of having different triggers. Homework for the ambassador is to

A. Define a plan for the coming year, in which different parts of the track are scheduled.
The plan should at least provide answers on;
- The purpose and expectations; communicate the innovation direction to the employees
- The needed capabilities and people; schedule workshops, sessions, focus groups
- Structural upport; have a feedback system ready, have a system ready for prototyping ideas, have a system ready for testing ideas
- Responsibilities; answer the question; 'how are you going create the right responsibilities?
What outcomes do you want to have?

B. Define the different triggers that will be used to cause action in the organization.

This document will be shared with the Area2 coordinator, and during a meeting they discuss whether the plan is a go or needs some adjustments.
If the planis a go, the ambassador is ready to start the track. First, he needs to measure the status quo; how many people are involved with innovation at this moment?
From here on, with some help of the tool book and his plan, the OpCo expert can start doing it!

Ho stop, what did you learn about abstractness? - What is 'it'?

Imagine that all the previous steps have been taken and the ambassador is about to start, now take a look in Remi's, the Innovation Expert of Pon Power Netherlands, schedule.

25-03, 2019. Today Remi officially starts as the ambassador of innovation, at Pon Power Netherlands. The first thing he will be doing, is organize a campaign that constantly communicates the innovation direction of the company. What does his organization mean with it, where do they want to go and what do his colleagues need to know about it?
He needs to do this first, so that he can launch the innovation track afterwards.
After lunch, he decides to speak to some of his colleagues to ask if they made some improvements upon last year. This helps him to clarify the innovation portfolio of the company, so that it can become as concrete as possible.

1-05-2019. The launch of the track, workshops and sessions. A big day, after he has launched the campaign about the direction of innovation, Remi works on getting people involved with the tracks. Today, he starts triggering people to be involved. He creates different triggers, for different people. He creates a challenge for the employees of the SOS-lab, about what if they were not able to use a computer. He also creates several invitations for sessions that are about to begin in June.

07-06-2019. Pitch workshop. One part of the track he and the Area2 coordinator chose, is about 'sharing an idea'. Today, Remi organizs a pitch workshop for employees. He knows people are busy, so he plans it around lunch-time. The people don't have to have an idea to pitch, as this might withhold them from joining.
After the workshop, Remi rewards the people who joined the workshop with a present, and he schedules individual feedback sessions with people interested.

25-09-2019. Half-year evaluation. Remi has been working as ambassador for half a year now, and today he has an evaluation with Area52. He explains that the track is running and how he has set out a campaign for the innovation direction.
His KPI system tells Area52 what his results are; he organizes three workshops/sessions and from the thirty ideas, three ideas are validated and two ideas are killed. They discuss the data and make some adjustments to the initial plan accordingly.

Afterwards, Remi is asked together with the Area2 coordinator, to write down his lessons learned and share this with the other ambassadors during their quarterly meetings.

Do we have enough, to make the organization tip?

The fourth part started with the story about Hush Puppies, and how at a certain moment the situation of not selling too much, tipped into a situation in which the shoe went literally and figuratively 'viral'. It tipped. This has been the last challenge for the framework as well; appoint some people responsible for- and make them capable of- involving the mass with the tracks of innovation.
By means of an Area2 coordinator, a second architect for the tracks is created. He or she knows the structures and detailed processes of the framework.
After this, the Area2 coordinator needs to involve OpCo experts for practical implementation of the tracks. By means of different triggers, he or she is able to cause actions within the organization.
In the end, by using the framework and coherent tracks, the expert should involve more and more people within the organization. Make them go from not really motivated to join, to inspired and willing to learn a new way of working.

Part 5

End and start

“You will only win
if you never quit. ”

The end of this story - a conclusion

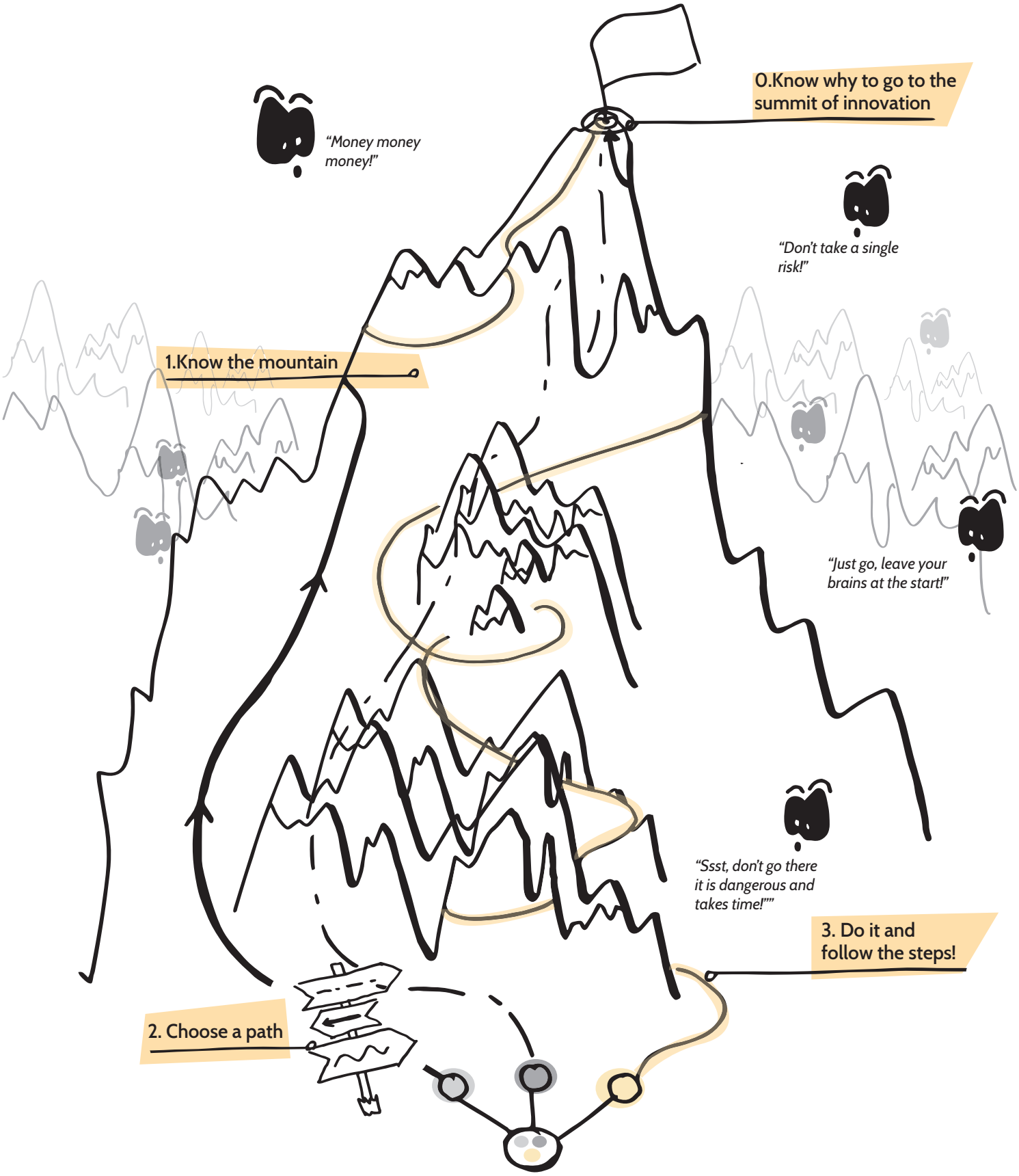
As I am writing the final words of this story, I am thinking back to the beginning.
Not the challenge I was given by Area52, but quite some months before that. The conversation I had with Christine about the challenge of changing organizations into High Performance Organizations. At time, I was not able to solve it in a holistic way.

Luckily, things happened as they happened, and I got the challenge to design a framework that would enable operating companies within Pon Equipment and Pon Power, to set up their own innovation process. A process that would support employees to be involved with innovation. It has been quite an adventure. I have spoken to so many people and their feelings and insights opened my eyes. By constantly thinking and reflecting on stories, in the end I was confident enough to translate all the findings into main challenges for a theoretical framework, consisting of the four elements; strategy, culture, tools and infrastructures.

The framework enables, in three steps, operating companies to support their employees to be involved with innovation. First it is about understanding the fields of innovation. Second, these fields can be connected and made concrete by choosing innovation tracks. Lastly, after a track is defined, an innovation process can start. These steps were validated by employees from both Pon Power Netherlands, and Pon Equipment Norway. They see the added value of the different parts of the framework. However, the last challenge is to keep people involved, to get the mass of the organization tipping towards involvement with innovation.
There are several types of employees in the organization. Every operating company has to appoint an innovation expert. He or she should understand different types of people; their current behavior and the desired behavior. By looking at different triggers, they can all be activated in a different way. The innovation expert has all the knowledge about the framework and has complementing tools and processes ready to start a track of innovation.
When enough people are involved in a track, and stay involved in new tracks, the mass might tip towards an innovative mindset within the operating companies.

With the framework every OpCo can start with setting its mind to innovation. If it gets local adjustments for better understanding and a motivated OpCo expert to get in te water and do it, this framework will make the organization tip towards a culture that sets its mind to innovation.

MOUNTAIN OF INNOVATION



In Norway, I explained my final result often by using this metaphor.
They thought this was the most clear explanation given to them.

The mountain of innovation

The mountain of innvation
is calling
I grab my toolbox,
ready for a new journey
the summit is calling

During my way up
on the track I chose
I don't hear the top
Don't see the top
Don't feel the top
all I sense are echo's
around me
it frightens me
as if they see me
as if they hold me
they test me
but now
on this track
I cannot go back

The top is calling
I add another track
to my bag
ready for another journey
to test myself to the fullest
to fall and raise

the mountain of innovation
is calling

-

Luc van Wanroij

Limitations and recommendations

My story for Pon Equipment and Pon Power ended in the previous section with a final conclusion. However, the organization must continue implementing the framework and work towards innovative results.
I think there are some important aspects or limitations for this project, that need further investigation or attention. This section will first briefly deal with some limitations within my research. After each limitation, I will address some recommendations for both Operating Companies, as well as Area52.

Join forces more often

First, I did not extensively look at the opportunities to set up collaborations. I have seen that the operating companies, as well as their employees, work in silos a lot.
From the validation, I got the same feedback; employees need to get out of their silos. Be it to cross-pollinate, or to collaborate and learn from each other.

Cross-pollination between Operating Companies

Something that might be interesting is to look at the potential of sharing a track of innovation with another Operating Company.
This has not only been my personal observation after finishing the framework, but also that of the interviewees spoken to. They mentioned this as being essential for future efficiency.
Will this be possible?
How will this look like? Can we have some sort of 'network of innovation'?
I wrote a paper about networked innovations and trading zones, and I know this area is interesting to look into. At this moment, it is mostly designed for separate operating companies, but it has the potential to grow bigger and connect other OpCo's in terms of innovation.

Recommendations
- Look for means how to, sequentially, organize 'cross'-OpCo innovation sessions.
- Organize a 'field-trip' with Area52 and visit all of the operating companies
- Organize an innovation day/trip with the OpCo experts, let them get to know each other so cross-pollination might happen more naturally.

Collaboration with external stakeholders

For this story, I mostly used internal employees as either architects of the framework or as experts of innovation. In practice however, it is likely that these people are not designers and it might be hard to educate them from scratch, with a designer mindset.
It could be, that there is a need for external stakeholders as well; professional designers who could collaborate with ambassadors, to fulfil the tracks.

Recommendation
- When OpCO-experts are going to be trained, it might be good to have some professional facilitators doing this, instead of only the Area2 coordinator.

Collaboration with Digital Innovation Lab

On a holding level, there is a so-called 'Digital Innovation Lab'. This is a team of people who mostly work on tools and methods, to enable employees from Pon to change their way of working. From what I have seen, they have an interesting program that could be implemented in the framework as well, to educate the OpCo innovation experts. Unfortunately, it has not been within my scope to ask them more about 'how they do things'.

Recommendation
Referring to the previous part about 'collaboration with external stakeholders', this could very much be done together with Digital Innovation Lab. They already have partners for doing, for example, design thinking workshops or educational sessions.

Benchmark, other (operating) companies
Lastly, I mentioned that employees need to get out their silos. Looking back, this has been a limitation within my project as well. I have only been talking to people within the Pon Equipment and Pon Power group. (Except the Chief Innovation Officer of Pon)
It is a big silo, and it has been the scope of my research. However, it would have been nice if I talked to operating companies from other groups, to see their way of working.
Not only other companies within the holding of Pon, but also other big companies like KLM, IBM or Philips, that are a bit more progressed in terms of innovation practices.

Recommendation
I would say that it would be interesting for Area52 or the Area2 coordinator to visit or have talks with other companies having more progressed innovation practices implemented.

Collaborate with students
I know that Area52 is working on it, but I think it could be done more actively with more contact persons within the faculty of design engineering.
- Try to have a one-day case, at 'IDE Academy'.
- Design Roadmapping would be an interesting course to have a collaboration with
- The Design Strategy Project would be a really good collaboration for Area52. They could do a more holistic project, for Area52. Or a more specific project at one of the operating companies.

Next to this, I did some research (just because I was curious) on how to attract more students for doing a project or internship for Area52. Knowing what they value within an internship was the goal, and in Appendix I you can see the results for some aspects to focus on.

Set up a full tool book
During my process, I mentioned a couple of times that I would create a tool book for the different stages of the innovation process. With tools I mean nothing more than suggestions on how to best ideate, test, prototype and so on. In other words; design thinking methods. At the end, I chose to focus on other aspects of the project, like the part in which my framework is validated. I found it more important that the people in the organization understood the main elements of the framework, rather than paying attention to copying and collecting different design tools, into a 'toolbook.'

Recommendations:
- Together with Digital Innovation Lab, co-create a toolbook. They have got the tools and knowledge, Area52 knows the industry. A perfect match.
- If not necessary, an Area2 coordinator is able to create a toolbook looking at my framework, the different steps of the innovation process and suggestions given in the report.

Aftermath of the processes and track
During my project I mostly focussed on 'starting'; an innovation track, an innovation process. Less attention was given to finishing. The framework covers everything that needs to be in place, as well as the process linked to an innovation track. However, what is done when an innovation is ready to be implemented, scaled or showcased, was not within the scope of this project.

Recommendation
For the Area2 coordinator, think of ways how to showcase an innovation; how do you let the organization know there is another innovation implemented?

Measuring results
I have thought of a way to measure results, but I was not able to finish this. Therefore this should be something for the Area2 coordinator to work with.

Recommendation:
There should be an overall system that is able to indicate how the operating companies are doing. I would recommend measuring the status both on a holistic level, and on more specific levels.
Specific levels can be;
- Measuring the status/results for every field
- Measuring the status/results for an innovation track
- Measuring the status/results during an innovation process.

Adjusting worksheets to local needs
When I was making two demonstrators of potential tracks, I got feedback from both PENO and PPNL on the worksheets. This feedback is not yet adjusted to the worksheets. I think the basis for the worksheets has proven to be good, however it needs to be adapted for every operating company to work. Not only on language, but also on the different questions.

Recommendation:
Use the worksheets as attached in the appendix, as underlayer. Together with the Area2 coordinator, translate them to the context and needs for every operating company.

A reflection - looking back and forward

One of the most interesting parts of a process, for me, is the reflection. Looking back, to look forward, or in other words; an investment in yourself. During the last week I had a discussion with Eva, in which she asked me what I have learned, what I liked and what I disliked.
At the starting point of this graduation project, I formulated some learning objectives that give me a good support to reflect upon.

Asking the right questions

The first objective was about better learn to observe and ask the right questions. Throughout this project, this has been a continuous learning. At first, I learned that it is best to just go for it; don't be afraid to ask a question. However, I had to talk to a large range of different people and I found that every individual spoken to, had a different approach for the interviews. Looking back, the people I spoke to helped me a lot. They were willing to listen to me, and give me their insights or feelings. Sometimes I asked myself, how did I manage this?

As taught at university, it started with some preparation in the form of an interview guide, strong communication before the appointment. But this is something basic, I did not specifically learn. But why did they want to talk to me, sometimes about sensitive subjects.
I think that I learned that people give you something, if you show deeper interest. I did not approach the interviews on a typical western way, as Hofstede (date) mentions; direct to the point and afterwards have some laughter. First, I invested quite some time on empathizing with the people, ask for example about what they are doing at the moment. Making them comfortable with the setting. Second, I did not experience the talks as strict 'interviews'. They were just talks, chats and laughter in which I was able to ask questions in between the lines. Lastly, after each of the chats I had with an employee, I directly sent a personal email to them. To thank them for their time, and to personally recap some of the interesting things discussed.

I learned that people are not just books; get one and look for the right information. They want to be heard, want to be given attention to and afterwards they appreciate some personal feedback. That is how I learned to observe and enable myself not only to ask the right questions, but mostly to get valuable insights.

A deep dive in the unknown

My second objective was about a dive in the unknown; an industry that has nothing to do with my personal interests, at forehand. I wanted to test myself, if I would thrive in a total strange industry. I can reflect pretty short on this.
I learned that it does not, until a certain extent of not doing something 'bad', matter to me what the industry is. I have experienced that I am triggered by the eagerness of people to solve problems; either an excavator or to help a customer. That is what connected me with this organization and more holisticaly: what I find important.
Critically reflecting, I must say that this objective is not yet completed. Did I really dive, for a longer time, in an unknown industry or place? Looking back, I had some luck with the office and people of Area52. It was in Delft, a place I know. The people I had contact with daily, were also people that I was used to. Next to this 'familiarity', they gave me a lot of freedom to just do what I thought I needed to do. This is not a reflection of reality and hence a true dive in the unknown was not been taken. However, this sparked the eagerness of still doing this. I only wonder if I can thrive on my own in a totally new place, if I do it.

Structure the brain

The last objective was to learn to structure my brain. Translating my, mostly, fuzzy thoughts into concrete practice. This has been the most difficult objective for this graduation project, and I am not sure if I managed to do this.
What I learned quite soon, is that 'fuzziness' is a defining characteristic of me. During interviews and talks, I often looked away for some time. At a moment, Eva noticed this and asked what I was doing. If I was thinking, or just being disinterested. It was the first, mostly when I look away, I am thinking about something:fuzziness. This is not bad, but I learned that it is better to tell people (who don't know me yet) at forehand. I did this, and it gave me the peace to sometimes be quiet, or sometimes not directly respond to people.

Other lessons learned

Next to the learning objectives, that are easier to reflect on, I learned a lot about myself during this project. Sometimes, without realizing, a lesson was just there.
During the 8th week of this project, I had to talk with the marketing and technology department of PPNL about my findings. In Norway, the approach I used had been a success and I wanted to do just the same in the Netherlands. However, this did not go the way I planned it. The findings were too directly presented, and the discussion was quite intimidating from both sides.
Afterwards, Eva asked me how I felt about the discussion. I explained to her that it did not feel good, at all. The reason for this was that I thought I knew the answer and because they criticized it, I felt it as being a personal attack.
After thinking, and looking for comparable situations when I was younger, I learned that in some cases I was raised pretty spoiled. Everything I asked for, or did, or wanted to do; I would manage to make it work. If I did not succeed, I would mostly become angry, stop or sometimes change my approach to achieve the result I wanted.
Now, however, this context and place forced me to find a way to solve it and this was rather new to me. Similar situations happened more than once, during this project and along the road I learned that my ideas and my person can be separated.
This 'mindset' resulted in an approach, in which I was able to take a step back and with honesty look at what they were saying, without directly feeling attacked.

Another lesson that was 'just there', I gained at the end of the project, again during a talk with Eva. The evening I was thinking back on the conversation and I thought: do I always have to learn something? Is it possible that I did not learn something, but found something that was always there, but hidden for a while?

I found that one of the reasons I was so energized during this project, was that I was constantly curious about what's happening around me. What are you doing, why are you doing this, and why are you not doing this the other way? To that extent, I felt like a child again; constantly asking questions or posing suggestions on how it could be done.
I felt like a child again, but how did I behave as a child?
I was curious all the time, according to my mom. This also explains the fact that I had 1000 hobbies, and wanted to do a 'spreekbeurt' every week if possible.
During my bachelor and my master courses, I think that this curiosity has been a bit hidden.

During this project, I created places to write down questions that were born out of this curiosity. I started translating these questions into poems. With this project, I retrieved my curiosity and realized it is something that gives me a lot of energy to do what I do.
A shorter lesson, but I do want to state it; I learned the value of investing in relationships with people. There is no 'one-direction' relation, that is impossible. I learned the value of always being willing to help people, if they need it.

Last but most important lesson that needs increased attention is about taking care of myself.

When I saw the movie about Freddy Mercury, Bohemian Rhapsody, I got a rough confrontation with myself. He played a song in which he sings about the love of his live.
“Love of my life, you’ve hurt me”.
It honestly brought tears to my eyes, because one of my main challenges in life is to pay more attention to my diabetes, my body. I should be the love of my life, and during this project I did hurt the love of my life, myself. Not literally!
But as you know, I have been ill quite a few times, and as you may not know, my diabetes has been a disaster the last months. I did not take care of this; it has never been a priority to first look after myself and then the rest. I tried it, but just for a few days and then it weakened again.
During my masters, and this project I invested in people, in knowledge, in everything except my body. I can try to analyse and explain how this came to be, but that is not important for now.
This realisation is a first step and luckily, I have learned to talk about it and express it in a clear way. The next step is to formulate the smallest step possible, to change this behavior of not taking care of my body, to a taking care of it a lot more.

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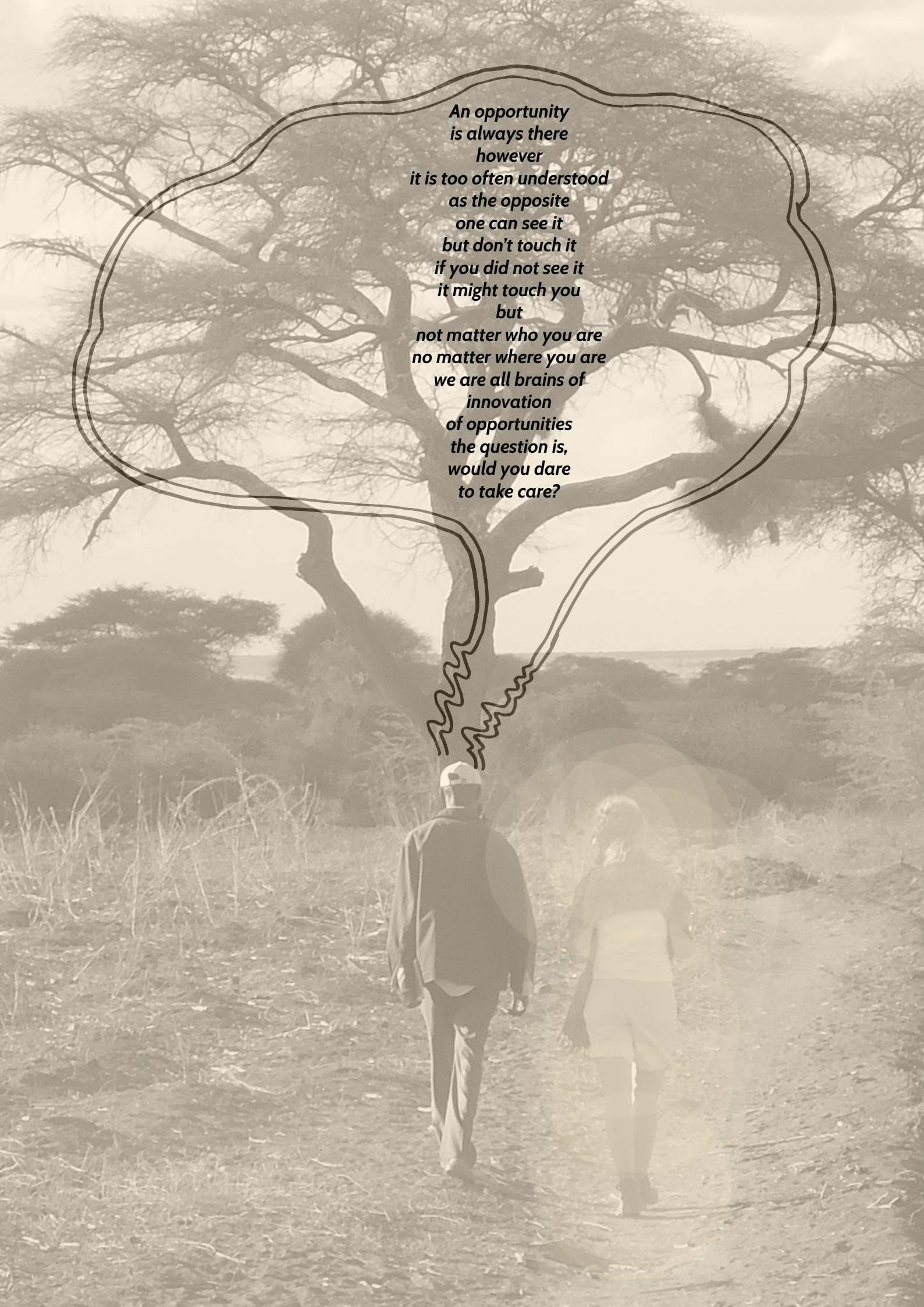
An opportunity
is always there
however
it is too often understood
as the opposite
one can see it
but don't touch it
if you did not see it
it might touch you
but
not matter who you are
no matter where you are
we are all brains of
innovation
of opportunities
the question is,
would you dare
to take care?