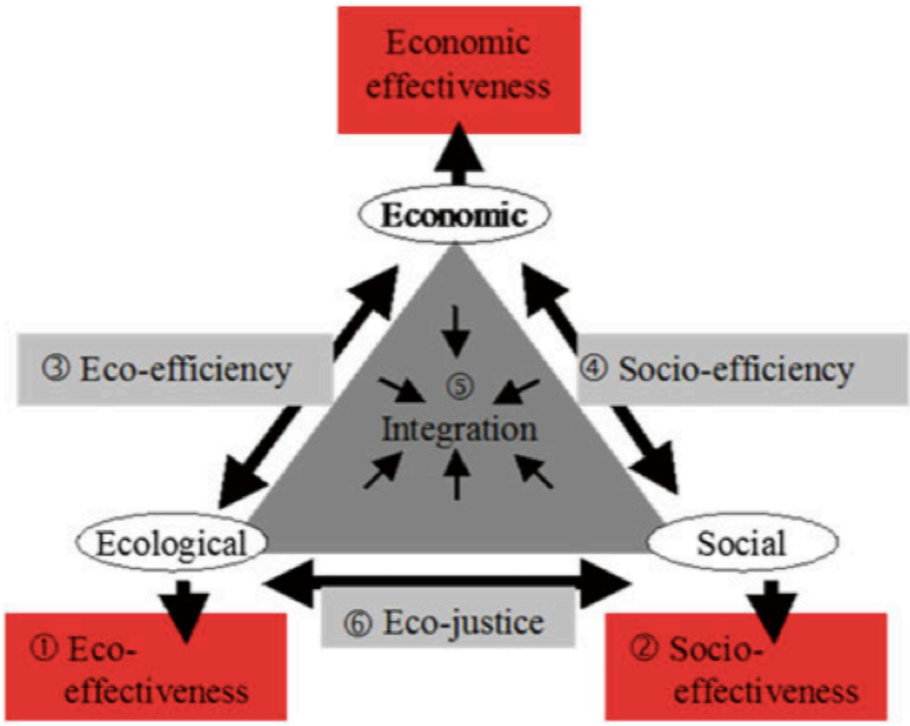
TABLE OF APPENDICES

Appendix 1 – The three types of SI processes and activities

	Operational Optimization: doing more with less	Organizational Transformation: doing good by doing new things	Systems Building: doing good by doing new things with others
Strategy	• Comply with regulations or pursue efficiency gains	• Embed sustainability as a cultural and strategic norm in a shaping logic that goes beyond greening	• Logic of wide collaborations and investing in systems solutions to derive new, co-created value propositions
Process	• Focus on internal and incremental innovation facilitated by use of tools	• Adopt new values and platforms (e.g. reverse innovation) and new ideation practices (e.g. biomimicry)	• Adopt new collaborative process platforms with diverse stakeholders
Learning	• Exploit existing knowledge management capabilities to identify and access relevant knowledge	• Engage with key stakeholders of the firm – internal and external	• Develop ambidextrous skills enabling 'shadow tracking' and learning from experimentation with multiple new approaches
Linkages	• Recruit external domain experts for new knowledge	• Shift focus from intra-firm linkages to collaborations with immediate stakeholders	• Get the whole system in the room to diagnose problems, understand system complexity, build trust and identify levers for change
Innovative organization	• Exploit existing innovation capabilities	• Embed SOI culture through the organization	• Adopt new business paradigms (e.g. B-Corps)

Source : Adams et al., 2016, p. 195

Appendix 2 – The sustainability triangle of perspectives of CSM



Source : Schaltegger et al., 2016, p.89

Appendix 3 – Examples of risks leading to sustainable risk management

Human rights risks: prevention of violations, freedom of association, non-discrimination and child labour/forced labour
Human resources risks: labour relations, employee participation, restructurings, career management and employability, remuneration systems, safety and respect for working hours
Environmental risks: ecodesign, pollution, green products, biodiversity, water resources, impacts of energy use, atmospheric emissions, waste management, environmental nuisances, impacts of transport and product disposals
Risks related to business behaviour: product safety, customer info, contractual agreements, environmental and social factors in supply chains, corruption and anticompetitive practices
Community relations risks: socio-economic development, social impacts of products and contribution to good causes
Corporate governance risks: board performance, audits/internal controls, shareholder rights and executive remuneration

Source : Lenssen & Smith, 2019, p. 18

Appendix 4 – Interview guide example

First of all, I would like to thank you again for accepting to do this interview and clearing up your agenda for me, all the data I will collect today will be very useful for my thesis.

So just to remind you, I am a master student at Louvain School of Management, I did a major in corporate sustainable management last year. I am writing a thesis on the sustainable innovation management processes and my objective is to understand and find out the components that can lead to effective sustainable innovation in terms of business management and what are the managerial implications to innovate in a sustainable way.

For the theoretical part, I first defined sustainable innovation, compared it to traditional innovation, talked about the reasons why sustainable innovation is a great business strategy but also explaining the barriers that companies could encounter when implementing SI. Then I talked about the importance of managing SI by detailing elements of innovation management like portfolio or project management, and also elements of corporate sustainability management like stakeholders or risk management. And finally, I looked at a few models that are dominant in the literature regarding some aspects of SI management like the model of dynamic capabilities or the design thinking. But to me, it appeared in my research, that there wasn't one unique model that explains every element of SI management and how they interact with the outcome being SI. And that will be my objective at the end of this thesis, to create a clear model while taking into account every relevant aspect.

So, the interview will be in four parts: first I will ask you more general questions about you and your company. Then, I will ask you to discuss about the different components of SI management that I have found and their relevance in your model of SI management. Then we will talk about the challenges and ways to improve your model based on your experience. And finally, we will go through specific managerial implications related to SI at an individual level.

GENERAL QUESTIONS

- Can you briefly describe yourself and your academic and professional background? (name, age, academic background, previous positions, current position...)
- Can you, in a few words, explain what your company is doing (company activities and sector, value and mission, number of employees, countries of activity, typical project and customers...)
- In what regard do you consider your company to be innovative in a sustainable way? And to give examples maybe could you explain the last projects you have been working on?
- How would you define a good SI management? What would be the main characteristics?

SI MANAGEMENT MODEL

So now what I am interested in is to understand a bit better the processes, practices and specific models that you and your company use to manage sustainable innovation. I have a list of different elements specific to SI management that I found during my theoretical research and I would like you to explain to me for each one if this element is relevant in your company, based on which model or practice it exists in your company and maybe give me an example of how it is managed.

- Stakeholder management
- Adaptability and dynamic capabilities
- Business model innovation and integrated SI into business strategy

- Knowledge management, learning and open innovation
- Risk management
- The social, economic and environmental pyramid or Triple Bottom Line
- Culture around SI and top-management involvement
- Measuring and reporting

WAYS TO IMPROVE THE MODEL

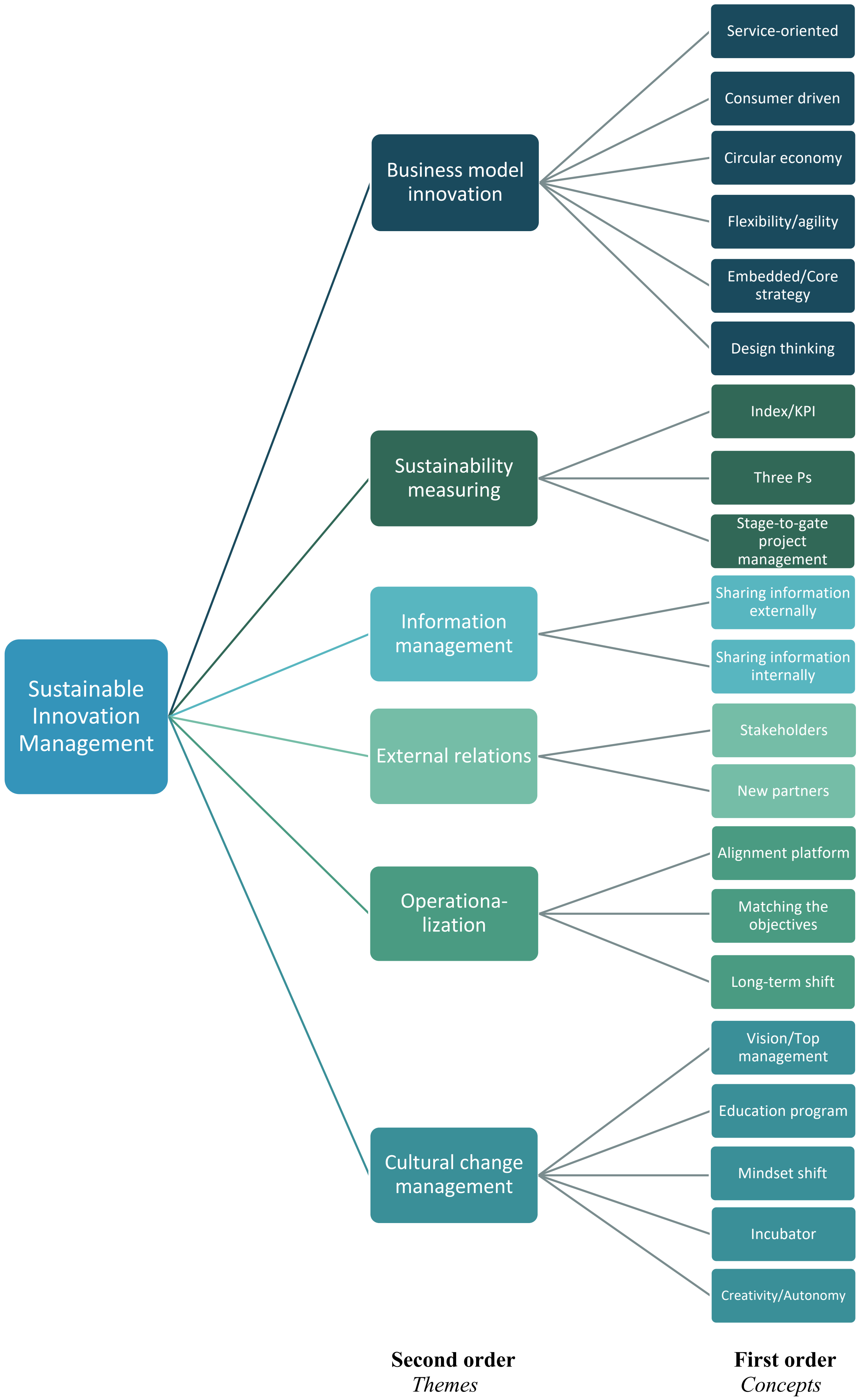
- Did I forget to mention any element that you have integrated in your approach to manage SI and that also seem relevant to you?
- Do you have a management process based on the different steps of innovation: from idea creation to commercialization?
- Have you faced any obstacles in managing SI and creating effective outcomes? If yes, how did you overcome them or not?
- And in general, what are the biggest barriers and challenges to SI management?
- In what ways could the model or the process you use be improved based on your experience?

MANAGERIAL IMPLICATIONS

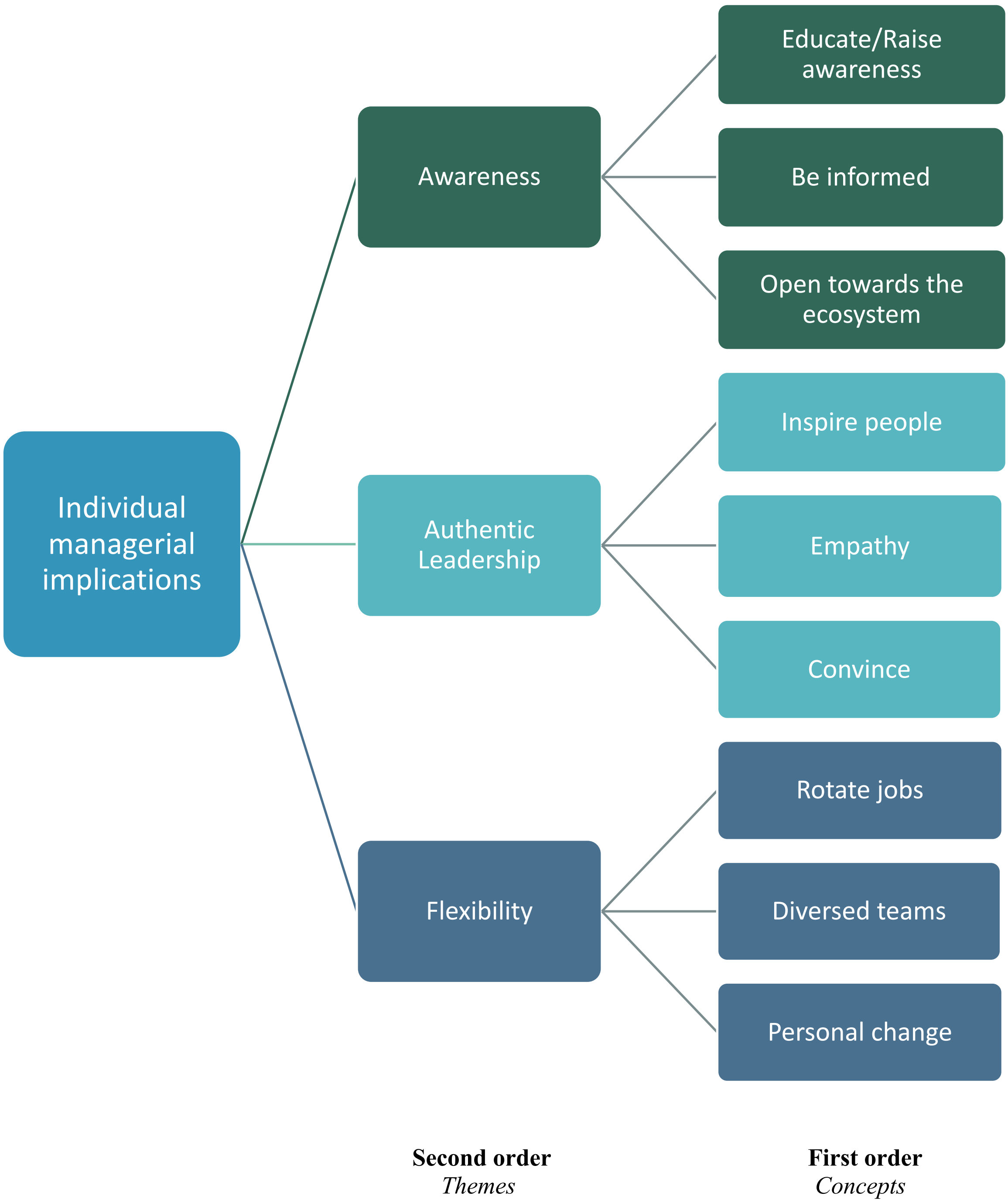
- What are the more individual managerial implications of SI? How did your managerial skills evolve to effectively manage SI?
- What are the main challenges as a SI manager on a day-to-day basis?
- What do you think are the managerial implications on a broader level regarding top management and strategic management?
- In what extent and through which process or practices these two are coordinated in your company?

Again, thank you very much for your time and for the information you provided me during this interview. If you have any remarks regarding this interview, feel free to share them with me so I can improve it for the next ones. I will send you the transcript of the interview as soon as possible, so that you can check that it reflects what was said during the interview.

Appendix 5 – Codification tree for the SIM practices



Appendix 6 – Codification for SI related managerial implications



Appendix 7 – Table interview N°1

Interview length	53 mins
Name of interviewee	Bart Haelterman (BH)
Function	Innovation Manager Corporate, Sustainability and New Business Development
Company name	Recticel
Core business	Chemistry, insulation
# of employees	6000

Appendix 8 – Interview N°1 transcript (June 23rd, 2020)

NB: So, if you don't have any questions, then could you please introduce yourself, your academic and professional background?

BH: Yeah. So, Bart Haelterman, working for 13 years for Recticel. Always been in innovation in Recticel. From background I'm a PhD in organic chemistry. I worked 10 years for Ineos, which is a big chemical company where I did five years of research and five years of production. Then I started at Recticel mainly in research, a bit of quality management, a bit of portfolio management, and for three years now, I am responsible for the innovation group in corporate sustainability. And besides that, also responsible for the complete Recticel group for HS&E, health safety and environment, and sustainability. So, Recticel just briefly, it's a Belgian company with four business lines. We are active in polyurethane, a polymer. And regarding sustainability, we will come back to that. And we have four business lines around four applications let's say. That's on one hand, flexible foam. So, the foam which is in your mattress or that you are using as a sponge to wash your dishes. So, flexible foam, a lot of applications in automotive industry and household and so on. And another one is in comfort. So, that's the link to the second business line which is in fact beddings, so we use again flexible foams to make mattresses, but also slat bases and box-springs. So, flex foam bedding. The third one is rigid foam That's insulation panels to insulate houses. And the special business line, the fourth one it's automotive and there we don't make foams but the top layer of a dashboard. So, that briefly are the four business lines. I'm working in corporate for all of them and mainly related to sustainability topics.

NB: So, perfect you just answered the second question but still maybe about the company exactly. You talked about the activities but in terms of number of employees and countries where you active, is it only in Belgium?

BH: No, we are globally active but 80% is in Europe, Spain, France, Belgium, the Netherlands, Czech Republic, Sweden, Norway, everywhere. In fact, we have globally 60 locations. 6000 employees. Mainly Europe and besides that, some locations in Northern America for automotive mainly. And in the meantime, I think seven plants in China, five automotive and two flexible foam ones. And a small presence in Morocco, in the north of Africa and India, there also we have two locations. So, that briefly represents the company and the turnover is around 1.3 billion. And regarding the customers it's mainly B2B, I would say 95 % plus.

NB: OK. So, as you said you are a manager of innovation and you are also touching sustainability. Then can you explain to me in what regard do you consider your company is innovative in a sustainable way? And maybe you can give examples of the last projects you have been working on?

BH: OK. So, in fact the sustainability journey started at Recticel with the CEO Olivier Chapelle, who came aboard eight years ago, I think. And as I said polyurethane is our application and polyurethane is in fact a thermoset material, which means that you cannot melt it, you cannot re-use it like plastic bottle. Plastic bottle you can grind it and you can re-melt it and you can make another bottle but with polyurethane It's not so possible. So, you have to burn it or most of it is burned. But still I will come back to that. So, in fact eight years ago already our CEO, when sustainability was not mainstream, he thought about the future and he realized that polyurethane will become a problem, in the future, to recycle or to give it a place in the circular economy. So, he appointed, in fact, my actual boss as a sustainability officer, and they started creating a vision around sustainability. So, it's going back in one of your questions, they did stakeholder interviews, with customers, with suppliers, internally in the company and in fact, they came up seven years ago, I think, with a sustainability strategy and also with the sustainability reporting. So, you can find it on our website, the sustainability report. It's integrated for the moment in the financial report and there you will find six KPIs in fact that were defined based on the interviews. Six KPIs on one hand three technical ones and three social ones. And the technical ones are, for instance, related to innovation and we will go more into detail later one. The other ones are regarding carbon footprint, energy consumption and so on... And the social ones are around education, around training and around legal compliance. So, in fact, if you look also on the website, you can see the strategy of Recticel. You have two base layers or two fundaments. Sustainability is one of them. And then you have three pillars and sustainable innovation is one of the three pillars. So, let's say in the five elements of the strategy in two of them, sustainability is present. Regarding innovation, there we, myself and one of my co-workers at that time, developed a sustainability index. So, each project that we are starting, we are assessing a score. It took us quite some time, I think we had five versions of it. And it is based on the triple bottom which we call people planet and profit, so the three P model. It's based on those three Ps and I can share with you the sustainability index, I can send it to you no problem. I will also send a background presentation on what I am talking about. So, you can use it. To come back to the sustainability index, it was based originally, and it's still based on the three Ps. But we struggled quite with integrating the three Ps in one score. What we saw, for instance, you can have a very green, sustainable project with less profit that equals and has the same score as a very profitable project, but with less sustainability content. So, we got out of the profit and we are assessing only people and planet. And profitability, we are keeping separately. In people and planet, you will see there are different elements. We also keep weight to the different elements. They are not weighted equally. Some are more important than other ones. So, for five years, we are doing this for each project at the start. And in the meantime, what we also did, and it's meeting one of your questions, also not only in the beginning, but up to commercialization. So, we are using, and that's another question of you, in the process we are using a stage-gate based project management. And in fact, there are six stages in three categories. First two are feasibility, then you have the project work and then the last two ones are then more industrialization. What we do is that we assess the sustainability index at the start, after the feasibility, after of the pilot project work and after the industrialization. So, it's sitting in four steps, let's say, or in the four moments of the lifetime of a project. We are, in fact, assessing this. The KPI you will find in the sustainability report. We have a cap on 20 points or 20 % and projects above that we are saying these are sustainable and below that are not sustainable. But we have to redefine it because what we see is that we are too severe for ourselves. We always say the reference to compare with is our actual basis. So, if you already have a polyurethane where there are green components or recycled material in, this is the reference and you should do better to have a higher score. But what we see is that we are already having quite some sustainable products. And to do better, we are committing ourselves, let's say, to the industry level where there is not so much sustainability n the actual products. We are redefining it. Some examples. One of the obvious ones: we are already using for 20 years raw materials based on plants to replace fossil fuel-based chemicals. So, that we are already using in quite some time. Recently and maybe I have to share my screen, if you allow me.

NB: Yes of course.

BH: It's a presentation of ideas I gave just before Covid to Volvo in Sweden. So, it's a public presentation, I will send you one of these. So that what I was talking about. The strategy and the three pillars. And why did we engage seven years ago in sustainability? That's also a good one. We are the number one or two in our markets in polyurethanes, so we have to take the responsibility and also the leadership. It's not because we have to do it but because we want to do it. At that time, as I said seven years ago, sustainability was not mainstream. In the meantime, of course, there are quite some EU directives and also legislation on sustainability that appeared, for instance. And I will come back to the EPR schemes, the extended producer research schemes. Take back systems like for batteries in Belgium that's also upcoming for our mattresses. So, this was what I wanted to show, if you look where are we working in sustainability is really around circular economy. And we are working on almost all the elements in research, in practice, like distribution, consumption of course, also there we are working in production or in marketing. But that's not a topic for the innovation part. So, the innovation part is around the other elements. So, if you start on the left top, the renewable raw materials, I already commented on, coming from plants are also from carbon capture, carbon monoxide or carbon dioxide capturing. We are looking to chemical recycling, mechanical recycling, also to sorting. How to sort waste of polyurethane in different directions? We are looking to new chemistries, new technologies, we are looking to eco-design and also industry 4.0. And then, I can send it to you, all the elements are explained. Mechanical recycling, for instance. Mattresses in Europe, there are 13 million mattresses each year which are wasted and most of them end in the landfill. So, buried under the ground. And that's in fact, the volume of two pyramids of Kheops which are buried the ground. Then, you have some figures on own research to comment on project….

(sound problem due to a problem of internet connexion)

BH: One of the mechanical recycling's application is these new products, plates that are used for acoustical installation. Soon after we started with that, we also bought a company in France to make it industrially. And in Wetteren, in Belgium, we also have a pilot line where we make those kinds of products. We are working together, for instance, with Eco-mobilier, which is the institute that organizes the take-back system of the mattresses. And so, all of the applications are in acoustical insulation, and that can be in houses, but also in industry applications, in power generators or in automotive, in cars. That's one of the examples that's already commercially on the market to insulate your house acoustically. Then the biggest project we are running for the moment, it's Horizon 2020, a European project with eight companies or with eight partners that started on 1st of January last year. We are one year and a half further and that's about developing two, well in fact three things. The core is new chemistry so smart design. How to change the chemistry of polyurethane to make it recyclable. Number three is a new kind of chemical recycling. And to foster that, we are also looking to step number two, sorting. We as Recticel we never do sorting because it's not our core business, but it's key to sort out the things which can be mechanically recycled or chemically recycled. So, we engage also in sorting, but we will not do it ourselves. Then two projects we are having in the meantime. Several projects you can read. This is one that started recently. Again, a European project around new chemistries, chemical recycling, where we also look into pyrolysis in different projects in Belgium, in the Netherlands. I already commented on carbon capture instead of fossil fuel raw materials. It's already used in one of our mattress brand KAPUA. In rigid foam, we are also looking to carbon capture within another Horizon 2020 project, with a lot of partners and we are also looking to wood based chemicals in this project SWEETWOODS that started in 2018. So, that's in fact, briefly what we are doing on research level.

NB: Yes, I can see that innovation is like all along the lifecycle like in every step. So, basically would you say sustainable innovation management is more product-oriented?

BH: Yes, I think so. If you look to the process, what we first do in the feasibility it's also a business case analysis and market analysis, a business case analysis, sustainability analysis. And then if that's approved, then the project can start. I already said but stage-gate based, six stages and six gates grouped in three levels. Feasibility, project, lab and pilot work, and then third level industrialization. And there are always decisions made whether to go further or not. And the portfolio, that's at the level of the management committee. So, the big bosses of Recticel. They are assessing, let's say, yearly all the projects. And since last year, the big projects like the chemical recycling project and so on, we have to present each quarter to the management committee.

NB: After that, I just wanted to talk about the different components I found in my research. And you've already mentioned some of them. So, for example the stakeholder management you told me about the interviews that you did at first to know what are the main KPIs? So, I'm guessing that's a very relevant component to you at Recticel. I don't know if you have other examples of stakeholder management like on a daily basis. Or was it something that happened like eight years ago, and today it's not that relevant?

BH: Well, in the meantime, of course, the landscape of sustainability has evolved, and we are in also quite some working groups on sustainability. I'm part, for instance, of Essenscia, the chemistry association in Belgium, I'm one of the board members in the Circular Economy Working Group. I'm also a member of EUROPUR so the Polyurethane Flexible Foam Manufacturer Organization in Belgium that I'm also part of the Circular Economy Working Group. I'm one of the board members of Volumat which is the organization that sets up by January 1st next year the take back system of mattresses. So, we have quite some exchange also with governments, with for instance waste organization collecting parks in Belgium. So, we have quite some insight with a lot of stakeholders on the circular economy for our products.

NB: OK. Another component that I found was adaptability and dynamic capabilities that organizations have to manage in order to respond to change. Do you have an example or can you explain to me how it's relevant at Recticel?

BH: Yeah, that's unfortunately one of the difficulties in Recticel. We are a rather big company and adaptability it's always very difficult. Just to give you a very recent example, one of our flexible foams is used in medical devices, so to filter air and so on. So we had the idea, why don't we make masks for the Covid crisis? We started with that and it took weeks and in the meantime, we saw that company bringing this and that company bringing and so, we were passed by other companies and we just dropped the idea. And that's very striking for Recticel. Everytime we are trying to do disruptive innovation, we fail. If you look to the four quadrants model on innovation, core business, new markets, new applications. So, in the quadrant of new markets new applications, we are starting things, but we never succeed. Only 30 years ago when they started with automotive business line, then they succeeded. But let's say in the years that I am in Recticel, very disruptive products applications, I started some of them, for instance polyurethane coatings, we never succeeded to do big business. So, flexibility and adaptability are still one of the major disadvantages. And sustainability in a way, it's also something disruptive. What we saw to make sustainability alive, during the seven years and more, it's still not lifted at all levels in Recticel. We were and are planning to have roadshows on sustainability, to really bring all people's minds into sustainability thinking and setting. And even in those seven years, it's in the head of the CEO, my boss, myself and then let's say a few hundred people in Recticel, but really lifted, well it's not really… To bring sustainability alive it's also a challenge.

NB: Yeah, that was another part like how much the company's culture and top management's involvement is important for sustainable management? As you said, it's important but do you have a specific way to manage it or to improve it?

BH: Sustainability most of the time is limited to, let's say, energy savings and raw materials savings. But it goes beyond that. So, the initiatives on energy saving and so on that's something let's say common in an industrial environment. So, I don't contest that there is sustainability. But all the rest of the thinking, what we saw, internal to Recticel, is that it was difficult to bring it alive. But for the moment, it's catalysed by regulations or directives that are coming out by competitors. To give you two examples, inflexible foam in mattresses, it's on one hand catalysed by the EPR, the take back systems that are put in place, but also by competition. There is one big fair in Koln in Germany each year around furniture. Three years ago, there was nothing to see about sustainability mattresses. They are glued, very unsustainable. Two years ago, all of a sudden, some competitors were showing eco-design mattresses. And that was only two years ago. And now, in bedding, last year in December, we did a road show with the top line management and also with the development and purchasing teams of bedding. And in, let's say, three months, the management in general was convinced of sustainability. And we had two great conceptions and every demand in bedding in six months' time, in fact, its everyone of the management, let's say, is completely into sustainability. And that was because it was catalysed by competition and catalysed by legislation coming up. And the similar effect is now happening in insulation, which of course it's a very sustainable product on itself because it insulates your house. And we calculated that with one kilogram of polyurethane rigid foam, you are saving 60 times more energy than not insulating. So, it's a very, let's say, sustainable product on itself in its application. But you cannot recycle it. And all of a sudden now in France, legislation was voted that from two years on, I think, all building products so bricks, everything used in building has to contain at least 30 % recycled content. In our product, we are having non recycled content so in in three years' time, we will have to switch the product to something completely else. And that's catalysed purely by legislation. For the moment, in insulation, there are maybe five people of the thousand which are in sustainability. I hope the same will happen as with bedding where in six months, they were converted. But the same challenge we are now facing in insulation. So, happily seven years ago we already started but we didn't go that far to as we would have wanted… The management in the four business lines was already convinced before legislation was coming up but for the moment, we are past by legislation. But we are continuing the efforts and it's really a journey, right? It's a kind of change management that you have to apply to the people. Just to give you one example. I have shown you the application with the flakes glued together for the insulation plates. We are doing that for 30 years, but it was done with waste of the production. So, in fact, foam they make in long blocks, you can compare it with the bread. And for the mattress all of it, they have to remove the crusts like your sandwich or your bread that you don't like the crust and you cut it away. And those crusts, they are reused and bonded together. So, it was virgin foam, so meat form. But we changed that to end of life. So, to use mattresses. And the first time that we did that, we made samples of the old mattresses in small pieces and glued it together. We presented it to the management and there were 20 people in the room, and from the 20 people, only five touched the sample. The 15 other ones didn't want to touch it because they said they were dirty mattresses. So, even within Recticel to have a mentality shift to recycling, reusing, it is a big challenge. It's truly change management also.

NB: OK. And what about open innovation? I don't know if you know what open innovation is… But it's a practice to share information with the environment and with other stakeholders. I wanted to know how do you manage that sort of knowledge that you acquire?

BH: It goes along with what I commented on disruptive innovation. Everyone says that they do open innovation but I if I really look to the applications we are having, for the moment, we are having some of them and we work together mainly with our suppliers, because they have more power and are bigger than us. Like the big chemical companies. We are also having more corporate research where we are looking, for instance, to make customizable mattresses in the future. Where we scan your body and that we offer you, like for running shoes where they scan your foot, we would develop such a mattress. Both the scanning application and the customizable mattress where we are working together, for instance, with a school of architects in Germany. So, you would never think chemistry and architecture to meet each other. They had a crazy idea about 3D printing in a mattress. So, not full 3D printing, but printing a structure in a mattress. And by bringing a structure in a mattress, you can adapt it so there we are working together on a short-term project of one year just to assess the feasibility of whether that's possible or not. Also, for the adaptable mattresses, we are working together with doctors, for instance, which are also part of our world, but just to support doctors, understand the dynamics of the body. And in insulation, but we stopped it, we worked together with technologies coming from aerospace. So, a special kind of insulation products used in aeronautics. So, we dare to go wide and open. But to be honest, as I already commented, there are few applications that we've or had coming from open innovation.

NB: Finally, maybe about business model innovation. You said that you adapted your strategy and integrated innovation and sustainability, but I wanted to know how much the business model that you have had changed. How did you manage to create another type of value that is more sustainable over the years?

BH: That's again for the third time, the comment on disruptive innovation. So, business model innovation, it's very hard to introduce into Recticel. What we did, for instance, is we engaged in online sales and went to B2C in mattresses recently. We did a first attempt three, four years ago, but it stopped, and it's now revived. So, business model online sales of mattresses is one example. But it's also very difficult to integrate into Recticel, let’s say new business models. We had a group working between six and three years ago on it, but they cancelled the group. In my group, there is one of the guys looking to it, because in sustainability also business model innovation is important. So, we are constantly monitoring new business models, for instance, now in the recycling, I commented on the take back system of our mattresses that we are evaluating whether we should or not ourselves recycle. Well in first instant dismantle mattresses, so collect and put them in different pieces. And also, to do then further the product development like I already showed. But business model could be also to go backwards in the chain and to be a dismantler of mattresses. So, we are looking to that and as I said, it's always done in the feasibility study. But again, there are a few examples are made alive in Recticel.

NB: OK maybe the last questions. So, you showed me the process that you use, but what are the ways that you think your process could really be improved? What are the major

obstacles that you have overcome and that made you realize: OK this should be changed in the process?

BH: It’s flexibility and agility. Recticel, a rather big company but the flexibility sometimes I think... Flexibility and speed as I commented with the masks that happened too late… Although we have a rather flat organization, not too many management levels, still we struggle with speed and flexibility. And that's really a difficulty. If I look into innovation also, we always hire chemists and technicians, but sometimes we have to engage other people, a product development or someone like you from a business school to just bring some fresh thinking and new thinking, other ways of looking to things. That's also important. And that's something we rather lack also.

NB: And based on your experience, from your side, from a manager point, what were the implications in the way you are working that have evolved with sustainable innovation on a day to day basis? What were the implications on your managerial competences?

BH: I worked for Ineos 10 years, quite some time ago, and then I was five years in production, what I clearly see is that people have to rotate more. And I was lucky to have a bit of rotation in my jobs. At Recticel, each one and a half year, I have another business card, so that's bringing the diversity and being able and given the opportunity to change which I very appreciated in my career. And that's giving me also a broader view than my colleagues, which were mainly only in R&D. So, for me, it's very important to manage change. If you cannot change yourself or make changes with your people, then it's very difficult to come to results. In fact, in sustainability, the world is changing constantly and very rapidly. You see in sustainability, it goes from here to there, you see now made plastic-free and so on, that only appeared in a few years’ time. Plastic littering and so on. It can change very quickly and very drastically. So, being able to change and change management, that's something really that I have learned, and I appreciate it in my management capabilities.

NB: And maybe just the last question. We talked about some barriers that you have encountered, so how would you define effective management of sustainable innovation? What would be the outcome for you?

BH: That's coming to have a future for Recticel. Polyurethane is very hard to recycle. Even the chemical recycling that I commented, we will never do it ourselves. That will be done by big chemical companies and we are not a chemical company. So really, the outcome of sustainable innovation will be that also polyurethane is recognized as a valuable plastic in the future, which for the moment it's not. If you're looking at plastics, polyurethane most probably will be on the lowest level of sustainability. So, that's the outcome. And therefore, we are, as I showed in the wheel let's say, we are working on different elements. What I did not say you, is that they are also fragmented in time. As I showed you, the mechanical recycling we are already doing it, chemical recycling will be for the next five years and the new chemistries will be within 10 years. So, we are also looking to various options and various options related to a different timeline. So, the outcome would be in the end, in 10 years that polyurethane is on a higher level, not only regarded but also in reality, on the sustainability ladder.

NB: As you told me, you were one of the first ones to do sustainable innovation, I suppose that gave the company some competitive advantage. How did you perceive that?

BH: What we are seeing from the moment in our sector, I am part of quite some working groups, at the time we were really ahead. Now we are, let's say, getting some competitors coming close by. But we are really still at the far end of sustainability. But as I also commented, it's very difficult the change management also within Recticel to keep that advantage. Also, a lot of people in Recticel should be convinced and work in that direction it’s still one of the very big challenges. And, of course, within the sector, we have competitors, they are also getting close by. Maybe one thing I didn't touch, and I still want to touch a subject at the world of sustainability and sustainable innovation. It's also a world of I call it “half-truths”. You can tell half a truth and it's a truth. But you are not telling the complete truth. And what we are seeing is sustainable innovation is that a lot of people are... I cannot call it greenwashing because it's true but it's not a concrete truth. For instance, if you have to compare products, you should always do an LCA, a lifecycle analysis and not comment “but this product has some green content”. Because even a product with green content and not based on fossil fuel, in the end, it can have the worst carbon footprint or sustainability footprint then when completely made out of fossil fuel. So, there are a lot of half-truths. The complete truth that's always difficult to get it in sustainability.

NB: Yes, transparency is very important...

BH: Transparency indeed.

NB: Yes. Thank you.

Appendix 9 – Table interview N°2

Interview length	1h
Name of interviewee	Madeleine Futterman (MF)
Function	Innovation & Sustainability Officer
Company name	Engie
Core business	Electric utility and energy
# of employees	170 000

Appendix 10 – Interview N°2 transcript (June 25th, 2020)

MF: I recently actually have been asked to speak or give interviews or just talk a lot about how we do sustainable innovation in my business unit at Engie. And it's funny because there's so many things that… I get why you say that sustainable innovation has so many definitions, because there's so many things that we do that we don't consciously do. Just like today you have to make a decision on what am I going to work on today? What makes the most sense? And that kind of flows into months and years of work. And then, when you're looking back, it goes OK. So, we did X and then we did Y. This is how we did it. You know, this makes sense. But sometimes it's just because it's the culture that we have in our company what made sense for the circumstances we work in. I mean, I'll tell you all about it retrospectively everything that we did. But never… I don't think we ever sat down and said, this is a model that we are going to apply…

NB: But it's exactly like that. Like I even questioned myself, is it relevant to do a model? Because like every company is different. And so, it's really a conceptual model. And like I did an interview two days ago and I changed a bit my questionnaire because I think the manager didn't think about the theories behind everything. And so, it’s a huge challenge to adapt my findings in theory to the practical word, I'm sure.

MF: I do feel that the theory is important, though. It's interesting to read and interesting to look back and it helps you say, “what would I do differently?”. You know, if I were to apply again, I’d look at the models and see which one I kind of follow and why did I follow that one? What could I learn from following a different one? I think in terms of self-reflection, if you're trying to change your business model then it becomes really interesting. But for sure in the day to day, I'd be surprised if there is anyone who could tell you why he chose his model.

NB: Yes obviously. But as you said it could be really a model that you can look at and maybe think of elements that you thought weren't as important... But yeah. So, if you have no more questions, could you just introduce yourself, your academic and professional background.

MF: Yes. I'm Madeleine Futterman. I work at Engie in the business unit called Engie Global Markets in Paris, France. My undergraduate degree I got from the University of California in Santa Barbara in environmental science. I graduated in 2016 and then worked in different sort of small companies, start-ups all based around sustainability in San Francisco. So, always in sustainability, but in different aspects of it, some in sustainable communications. I worked in a start-up for a year that was doing sustainable procurement software. So, understanding the environmental and social impacts of any product a company might have to buy, mapping that out and then selling them as a software to companies. And I also worked at UC Berkeley in atmospheric science research for a while studying air pollution. So, basically always interested in sustainability and all the different ways of it. And I got to Engie a little under two years ago, working in sustainability and innovation. When I arrived, my manager just told me, you can do whatever you want to do, which was really intimidating when you're arriving in a company and you say, "OK but give me something to do". But over time, I learned more about the company and found my place and was able to really develop kind of my niche and what I work on. So, within Engie, which is a global utility, I work for Engie global markets, which is the entity within Engie that manages the energy trading. Have you heard of energy trading?

NB: No, not really.

MF: I hadn't either before arriving in the... So, it's Global Energy Management so we call it GEM. So, I'll call it GEM from now on it's easier. So, basically, we trade energy on a market like you would trade stocks and bonds on a financial market. We're constantly buying quantities of electricity, of gas, of different types of power and we're selling it either to other traders, to trade it like stocks on the market, or will buy it to give directly to our big clients. So, when you have a big client, like a big industrial, like Saint-Gobain or Nestlé or L'Oréal, they don't buy energy like you and I will buy energy. They buy big quantities. They have big factories that have to run at certain times. And so, we help them buy, ideally, the least carbon intensive energy at the best price for the time that they are going to be using it for. Engie 160 000 or 170 000 people around the world. And our business unit that I work for is about 1600. So, it's about a tenth of the size of all the energy. And we are present in France, Belgium, Italy, the U.K., Spain, Romania, Turkey, Singapore and Houston I think are the main countries. So, most of

Engie’s business units are country by country. But ours is one of two international ones. And that makes the work of kind of innovation and sustainability a little bit different from what the rest of the group is doing. Because we don't actually manage any power plant. So, it's a little bit different for us. We’re the midstreamer from Engie and all of its power plants and the big customers. We’re the ones managing this… Like how do you get the electricity from the power plant to the client in the best way, at the best time? Which makes the questions that we ask ourselves about sustainability really different than the rest of the company. Because we have to work directly with the client. And it's more about understanding the systems of sustainability rather than saying we're going to stop coal and use hydro. If that makes sense. I kind of went into my company more than just my background.

NB: No, no It's great. I have a friend who did an internship at Engie and she told me that even just in Brussels, the headquarter is so big and there's so many people and there's so many business units. So, I know that it's large and it's great you explained that. And for example, what is a typical project and customer in your business unit?

MF: OK, so I guess I can give you a couple examples of basically, what's the business value or what our business does. OK? Take a big industrial client, we'll say Nestlé. They have big factories we’ll say all over France. In the first hand, we will not even talk about decarbonisation, but they need to make sure that they're getting energy, at the best price at the right time. If they want to turn their factory on and they can't turn it on because there's not enough energy on the grid, that's a problem. So, they'll work directly with us to make sure that they have a large-scale contract over one, two, five, ten years to make sure that there's always energy coming to them at the time they need it, in the quantity that they need it. Another thing that we do is what's called a PPA, a power purchase agreement. Which is a contract that we sign with a client saying: all right, we will certify to you that we will give you a green power from a solar farm, from wind turbines, from you name it, we will certify to you that from here for the next five years, we will give you X megawatts of power, that's certified green. That's another type of contract that we do. We also do a lot of gas trading. So, what we'll do is we'll negotiate with people from other countries and say, all right, France needs gas resources for X amount of power for X amount of people. And so, we'll sign contracts with other utilities in other countries to make sure that all the gas comes into France and then everybody can use gas on the systems. Be that industrials, you and me in our homes, etc.

NB: And in what regard would you say your company is interested or how it manages sustainable innovation? In what regard sustainability and innovation are important in your company, but also in your business unit?

MF: OK. So, for Engie as a whole, I'd say, especially right now, this is a time where sustainable innovation is at the forefront of almost everything we're talking about. It's really at the core of our strategy. We changed our name not that long ago. We're going to a big business shift and we're restructuring the business to make sure that sustainability is at the core of what we're doing. So, I'd say it's really talked about. It's really put forward. I can go into more detail, but I saw it may come later in your questions. There's like competitions that are held for sustainable innovation. There's a lot of different things that are put in place to, 1) encourage people to be thinking of new ideas, 2) show that they value sustainability and 3) really give support to new ideas. I'd say the same thing for my business unit as well. We recently, as of a couple of years ago, developed a new vision for the business unit that puts sustainability or the three Ps at the centre of the purpose of our business. However, it's one of the things that's like easier said than done, right? So we say that the three Ps are at the heart of our business and how is it actually implemented on the ground, that's kind of where I came in, where me and my colleagues tried to launch a bunch of different initiatives to make sure that people feel that they have the opportunity to really live out that vision. Because it's one thing to have the vision and another thing for each manager to say to his team: “listen, what can we do to be working towards the vision?”. As much as the culture of the company is changing and is leaning towards that, it's not necessarily the number one thing on everyone's agenda when they have business objectives they have to hit. So, a lot of the stuff that I work on, in my business unit and that I know is being done for the whole company as well is how do we match up our sustainability goals with our business goals at the same time? And then how do we accelerate and support innovation to get there?

NB: Yes, that’s what I found in my theory as I said, management is key for sustainable innovation. And in my research, I find like some elements about what are the different sustainable innovation, management practices that are important right now in the academic world. So, each time I will say one, and if you could tell me how much it is relevant and give an example to evaluate that relevance. I don’t know if you want to do Engie or like you want to do the business unit where you work for?

MF: I'll give you the best answers that come to my mind.

NB: OK perfect. So, you have already mentioned it a little bit, but stakeholder management was one of the first major elements that I discovered. I've already seen at university in my classes, but many articles say that it's very important. So how much is it managed at Engie?

MF: I think stakeholder management is really important. I mean, I'm in a team that's communication, strategy and sustainability all together. And we have someone who's dedicated full time on stakeholder management. She is always doing research up and down the value chain, understanding who the important stakeholders are, engaging in conversation with them to make sure… Because from stakeholders, you kind of learn what's out there. On one hand, it’s like what’s the regulation going to be, what the NGOs are going to be saying? It's also really important to know what your competition is doing. How are the innovating? Also, are they having legal trouble because of mistakes they're making in their supply chain? I mean, stakeholder management is something that we're always talking about and it has to be done well. I think one thing that we have a difficulty doing is linking stakeholder management to innovation. Because often it can be seen as like the CSR aspect of what not to do. I just said that I'm in the strategy, communications and sustainability team but that is recent. We used to be two separate teams. We used to have sustainability innovation on one side and then CSR was a different team. And this was because CSR was seen as like regulation and what not to do, in an all stakeholder management nonsense. And we tried to approach sustainability, innovation as like change management, transformation, innovation. You know, all these exciting new terms but really trying to do the same thing. And I think there's a lot to learn from stakeholder management. But, in terms of innovation, it's hard to make the link just when communicating with other people. I think if you dive deep into it, and you you're learning from it, it can be really valuable. But at least the experience that we've had is that when you come in with a stakeholder management approach in terms of trying to inspire innovation, it can be a little bit of a difficult angle to take.

NB: I get it it’s more like a corporate sustainability management practice and the theory found a link with sustainable innovation. But I can see why it's not that easy to make. The second one is dynamic capability. So, as you said, it's the ability to do change management, to adapt to the constantly changing environments. How much is that part of the way you manage sustainable innovation at Engie?

MF: I mean, it's definitely valued in the sense that sustainability is a field that's always changing. We're always getting new information. And also, because it's so new to the strategy of Engie. When I first started a couple of years ago, no one was telling me this is how we're going to do sustainability at the company. I said like my manager said: so you have a degree in sustainability, I know nothing about it, but I think there's something to do here so do whatever you want. Now, two years later, all of a sudden, I have people from group corporate coming to me and saying: all right, we're putting this plan in place, you have to do X, Y, Z. And I’m like well: I've been doing that for two years and this is how I've done it and maybe we could work together to go further. So, in that sense, I do have to develop and change because right now I'm not just working for my business unit, I’m working for the whole corporation. So, I think it's really important to be flexible in that sense because it's always changing. And if you talk about change management, and then you're talking about transformation, a lot of the work that I do is on cultural shift transformation. So, a lot of the work that I do is on education, whether that's through a formal education program, whether it's through little trainings, whether it's through…

Like I host a sustainability group within the company where we just meet once a month and talk about sustainability issues and there's a little bit of training that goes in there. I have a speaker series that I run at the company to bring sustainable speakers every time we run speaker series. So, I think in terms of transformation thing, it's a bunch of cultural transformation stuff that's really important. I mean, I think for me that's kind of the basis if you're starting from zero. That those kinds of educational things and having an eye for change management and cultural transformation, as well as personal flexibility. I don’t know if that answers your question.

NB: Completely. It actually answers two so it's perfect. It's like the culture around SI and I imagine also like top management involvement is also related to that. Like the CEOs and the big directors also have to get involved. I don't know, how is it taking place at Engie?

MF: Yes, it is. One of the reasons why in my business unit, I was told to kind of do whatever you want and come work on sustainability was because our CEO… So, each business unit has a separate CEO. And he had this kind of feeling that sustainability is where we have to go. But he’s an energy trader, not a sustainability expert, so he's really like laissez-faire, go ahead, go for it, do everything about this. But he knows it's important. I wouldn't say whenever there's a question of sustainability, he'll say go for it. But he’s always willing to put it forward. We have that vision that putting the three P's, people, planet and profit, really at the centre of our corporate vision. However, it's something that is used now in the evaluation of new projects. We developed a tool where we took people, planet and profit and we developed a bunch of different criteria, criteria for each P, and then we have a way of ranking a new project based on the three P’s. Before it was all risk and financial factors and a little tiny CSR report. And now we have a really quantified 3P rating tool, which top management uses for big decisions. But they're not always, 100% of the time going to put the other two Ps over profit, but it's definitely something that's becoming more and more important. You need the support from top management.

NB: In another interview, we also talked about an index but it’s weird how in theory it’s more about models and frameworks… But again, perfect you already mentioned the triple bottom line element so it’s perfect. There's another thing that I found, it’s about knowledge management, that is a little bit linked to stakeholder management. So, it’s just the fact that a company has to manage every time there's a new information about sustainable innovation from past projects, there has to be like a sort of system to take into account this info, to try to see how to be better. So, I wanted to know how does that appear at Engie?

MF: When you say knowledge management, you mean like educating employees about certain subjects?

NB: No, it's more about for example, you have a project touching sustainable innovation, and through stakeholders or else, you learn about a new info like a product that doesn’t work on a specific market. So, how do you take that info into account? For example, if you have a new innovative product, what do you do with the information? There is a huge thing called open innovation where companies are open with their environment about what they do in terms of innovative processes, products and stuff like that. So, it's a big element about innovation, information, knowledge, learning, and is there a process around that?

MF: So, a couple different examples. In terms of kind of trying something out and learning from it and then sharing that information, we have within Engie, what's called a proof of concept system called POCS. And what we've done a few times is when we launch a new project on our BU level, we'll launch the new project, we'll test it out, then do a return on experience. So, everyone who participated in the project. If it was a project with a client, we will ask the client, if it was an internal program, we’ll ask the internal participants about what they did, how they felt, they would change et cetera. And then, we share this with a network of people who are interested in sustainability. So, this is not like a permanent system of doing it. But it's a really common way that, for example, when the Engie corporate wants to get started on a new type of project. Or for example, I was saying the project that recently came to me and said to me that they wanted to start doing X, Y and Z on sustainability. And I said: listen, I've already been doing a lot of it. What I did is I treated it like it was a proof of concept, like a POC. And I went and spoke with a lot of people about how you felt about this project, want did you learn, etc... And then I shared that with Engie Corporate so they could then share it with other people. Because Engie is such a big company, we have twenty-six different business units. So, the company is really spread out and we have a lot of autonomy within the business unit. That system, the return on experience and the proof of concept system is a way for them to say: OK, we know the business units are going to be doing their own things and what we want to try to do is maximize the sharing from one side to the other, so that we aren’t just redoing the same thing over and over again. And then on an individual level, kind of not really on an institutionalized level, the more and the more time I spend at Engie, the more I open up my network to people in other business units. And so, I'm always in contact with people who have similar positions in other business units. And so, with someone in a business unit who's based in Seattle, who was the same position as me, we have a monthly call just to say, what are you working on, what have you learned, etc... So, it's really informal. It's someone that like she added me on LinkedIn randomly. I never met her and then we just started talking and realize that we have a bunch of similar projects and so we share and that happens pretty often within

Engie because everybody's always ... Well not always working on the same thing. But we have similar goals, the same company culture, but the company is so big that we have no way of knowing what everyone else is doing, learning. So, we really try to share as much as possible.

NB: That's very interesting and I don't know if it would be possible but that's something that should even be institutionalized almost. To have a work buddy or something and you just share knowledge and experience. And so, maybe about business model innovation, it's a huge thing in the literature. And I think you've already talked about the fact that with the rise of sustainability issues, I imagine, Engie had to create a new sort of value or like a new business model. And how is that important and how much is sustainable innovation integrated into a global business strategy? How important is that sustainable value?

MF: So I can give you the answer on two levels. I can start with Engie as a global company. So, at Engie, like I said we're going through a big transformation right now. Because if you think about the energy industry, the history of the energy industry, it's historically a fossil fuel-based industry. And it's based on a consumption model. People consume more energy, we sell more energy, we make more money. But if we want to decarbonise the energy industry, we can't just simply make enough renewables out of who knows where, to feed all the energy demand that we've always had. There needs to be more renewables in the energy mix and people need to be consuming less energy. So, how do we create a new business model? How do we innovate on our business model to continue to be a successful company while selling less of our product? So, the transformation that Engie has been undergoing has a target which is to become the leader in the energy transition, selling energy as a service. So, we're really about the services of energy. It's all about energy efficiency services, setting up new infrastructures, helping clients manage their energy use rather than just selling a quantity of energy to the client. We're working closely with the client, helping them understand the carbon footprint of the energy that they use or how to better manage it. Because solar panels are going to be providing energy during the day. For example, can the client stop running his factory at night, but maybe Saturdays and Sundays now, during the day, so that they'll be using less fossil fuels at night. So, in that way, there's been a lot of reflection at Engie of how we shift our business model to more of a service business model. When before it was really a classic capitalist: you just sell more, earn more money. Now, it's how do we work closer with our clients, how do we provide them more services around energy rather than just quantities of energy.

NB: I feel it's about optimizing and not just maximizing right?

MF: Exactly. And so that's at Engie level. And then for my business unit, it's actually a really big question because it's a little hard to understand our impact. Like I said, we're not the ones running the power plant and we're not the ones burning the fuel at the other end. We're the ones trading. We're the ones taking it from a place and bring it somewhere else. We're the middleman. But we have to say, we're the middleman for such large quantities of energy, that we can't just say "not our problem". We have to think about it ourselves. What can we do? What we have is information. We have information about how the energy is created, we have information about where it's going, and we have some information about how it's being used if you have a good relationship with the client. So, we're kind of in this point of how do we rethink our business model? Information is value in the end. So, how do we use this information? How do we repackage it for the client, that supports the client and also supports us? And it's really a key question of what we're working on today.

NB: Great. There's also the reporting and measuring element. So how much is it relevant for you and do you have an example of how it's managed at Engie?

MF: Reporting and measuring innovation.

NB: Sustainable innovation yes. So, innovation that takes into account the sustainability considerations.

MF: Well, I don't know if this answers your question exactly, but the thing that comes to my mind quickly is that in energy we're really all about decarbonisation, right? So, the first step is to measure the carbon impact of our business, to measure the carbon impact of the products that we sell, and to measure the carbon impact of our clients. And once we can have these measurements, well as I said, information is value. So, then once we have information, we can play with it. One, we can identify where should we be reducing our carbon footprint? Two, where should our clients be reducing their carbon footprint? And then by looking at our products, understanding how we help a client based on the products that we have. And then over time, that reporting and that measuring of carbon footprint can help us show if what we're doing is working. Are we really reducing the impact for our clients? Globally, for the world, are we helping or are we not helping? In terms of measuring innovation, I don't really have much more for that, but I know that those are the kind of KPIs that can help us measure our impact and see if we're doing well enough.

NB: Yes, I mean measuring innovation, it's tricky. Before it was like just cost of R&D and stuff like that. Now it's a much more integrative and there are more factors coming into play. And here you said information so do you think that measuring and reporting could be linked to knowledge management?

MF: I mean, definitely. Absolutely. My response to the knowledge management question was basically, what we're doing with what we're calling the proof of concept or your return experience. That's just, information gathering and reporting back where we say what we did. So, there's definitely a huge link.

NB: So, the third part is about the ways to improve your current practices or the model, but you don't have a model. So, first of all, do you think that I forgot to mention any element that you do to manage SI at Engie?

MF: Something we didn't talk about yet, but I thought it was in your document was ideation and creating new ideas.

NB: Yes, it was coming just after that but perfect now too.

MF: So, I guess that's not a model. Also… I should have explained this as well. But my position where I am, I'm really on strategy, education and creating new ideas, creating new projects. And there's another team that's the incubator. And they do all the scale-up of the innovation. So, maybe incubation is another thing. So, in my business unit, we have an incubator and also in the corporate level, we have an incubator. And it's just when there is a project that starts getting launched in a team or with a couple of people from across different teams, and it becomes clear that those people should be taken out of their team because it is a really important thing for the business but it shouldn't be coming out of the team's budget. They're removed from their regular team and put into the incubator for a couple of weeks, couple of months, a year, however long it takes, however long it seems necessary for this specific project. And that incubator has resources and the people who run the incubator are looking out for new projects, they give them resources. Resources can be in terms of people, it can be in terms of time, in terms of money, in terms of consultants, in terms of networking, et cetera. So, that's kind of how we run our incubator. And then at the end, it's like: alright, do we continue the project? Do keep it in the company? Do we try to scale it outside of the company? So, they kind of develop the business model of the new ideas as well as the capabilities behind it.

NB: So maybe even project management could be a new element?

MF: Project management for me is a little bit different. Like project management is I have an idea and I really need a bunch of people to help me in order to get that idea executed. So, I'm going to go within my company, find different people who are an expert in X, and really technically capable in Y, and put them together and then I'm going to be the one making sure all the little pieces are coming together. Whereas the incubator is more about creating the space and getting the resources for that project. So, maybe I'm a project manager, I have this idea and I have people who want to work with me but structurally, within the company, my manager is telling me that I have to keep working on the reports and the other person's manager doesn't want to give him the time and I don't have the budget. I go to the incubator where it says: I, as an incubator, have a budget to test new things so the three of you can work together on this new project.

NB: OK I get the difference now. And the next question is about the ideation. What I had in another interview is that the management model was more related to the different steps of the process cycle from idea to commercialization. So, do you have something like that too?

MF: We don't really have one set system, but we have a couple of different ways that we go about it. So, like I said, a lot of the work I do is based on education. Some of the programs that I run are really finding a link between sustainability and innovation. So, I started a program that I called the School of Sustainability, where it's not just about like sustainability, people, planet and profit. It's about really the link between sustainability and innovation. And so, it’s six days in person and we bring people from all around the company and we teach them about sustainability as a system. We bring in people from different businesses, CSR or more people from the innovation department, some other really sustainable companies. And then we ask people to be working on a new value proposition for the company, throughout the whole time of the project. So, it's two and a half months of training. It’s six full days and there’s time between sessions, where they're working on creating this new idea. And then at the end of the session, they pitch their idea to members of our executive committee and get resources to develop it. So, that's one way that we kind of help develop new ideas. Another way that we support new ideas is... Do you know what a hackathon is?

NB: No not at all.

MF: So, a hackathon is a corporate event. It's not usually just corporate, but it's a big event where you get a bunch of people together to fix a problem. So, it came out of the start-up culture and the coding culture. And the idea is that I have one specific problem and people come together in bunch of different teams, and they compete to try to fix that problem. So, it would be like, let's say, like a really weird example, but like the light bulb in the room doesn't work. Right? That's the problem. And so, I invite a bunch of teams to come and find and I think a winner, one who's like the fastest, easiest, most inexpensive way to make that light bulb turn on. So, we do hackathons as well to kind of accelerate responses to a problem. And then, the third element that we do is what we call an Innovathon. So, it's like the hackathon concept but let's say, instead of having a light bulb that doesn't work, I say: OK, I have a room and I want to work on the lighting, I want it to be more light in the room but you're free to do it whichever way that you think is best. So, people might come in with ideas like putting in windows or a skylight or a chandelier or lights or candles or I don't know. So, it's much more open and around sustainability, that's what we actually do. And there's an event currently going on right now. The theme is decarbonisation and clients, come with ideas. And so, it's basically about six months of different phases of working. We are accompanied by consultants, who help people with innovations, how to build a business model for your program, how to ask the right questions, etc. And there are pitches and they develop it. It's much more open. That's how we show support and get people to think about new ideas. We have a space where you're dedicated to thinking about new things, etc. Those are three different examples of how we get different ideas. And then, like I said, if these ideas are vetted well by the executive committee, then they would go to the incubator to be really developed and get resources to go further.

NB: OK. Did you face any sort of obstacles? So, you've already talked about some difficulties that you had for the different elements. But was there one that you haven't talked about and that you want to mention? And how did you overcome it or not? And what is your outcome of everything?

MF: I think what was been and what is difficult in my current position… Like I said, I came in and was told to kind of just go for it, but I wasn't really given specific resources to do it. I don't think it's specific to sustainability, but I think it's something that's definitely felt across different companies, by people I spoke with as well who are in sustainability, is that everyone says it's important, but it's also commonly seen as a cost. And so, you always have to have in mind, you know, what's the business value of what I'm doing. You actually go get the funds to do it. Sustainability isn't going to have the biggest budget. I mean, that's a challenge, but it's never been an obstacle. And another challenge has been the fact that a lot of times sustainability and innovation as well can be seen as like a "nice to have". I'm going to do my primary business first and then I'll worry about the other thing. It kind of goes back to that cultural change management and the business transformation as well. What we're trying to do is put it at the heart of the cultures, it's everyone's job all the time to be thinking about it. So, again a challenge, but not quite an obstacle.

NB: Yes, it is more like organizational, and I had a similar experience during my internship recently. I had to learn by myself how to do a sustainability analysis, everyone valued my work and sustainability concerns, but no one knew how to do it or would want to do it...

MF: I mean, that's something that I actually felt as well in my position. It is also kind of like personally, in the field that I'm in and for some reason the jobs that I've picked, I've always found myself without a real top down manager who tells me what to do. Which is really nice on one hand but on the other hand, it can be exhausting. It's like I want someone to help me. What am I supposed to be doing today? Am I doing the right thing, you know? And it's something that is probably common because of my field, because it's something that's new. And when you get hired in a company and everyone says: look, I'm not a specialist on this. It's so daunting. But I think also if you're going to be going further into sustainability, it's something that you're going to be seeing all the time. It's like there’s no cotton dry, this is how you do it. And it can be a little exhausting at times.

NB: Yeah. So, I think we can do the last part, and which is about the manager and implications. You've already talked about some. I would maybe just ask you, like at your level, how did your skills evolve by managing sustainable innovation and what is a good sustainable innovation manager? What are the characteristics and skills that that person has to have?

MF: I can answer from the angle of working in a really big corporation. You have to be really in touch with what's going on around you. So, for me, I have to really understand what's going on in the business unit as well as what's going on in Engie corporate because the worst thing that can happen in a big corporation is that you're working on a new idea, you put all these resources into a new idea and you realize that somebody else in the same company is working on the idea, is doing it better, and that the company is basically spending money twice on it. You could have been just working together. You have to be really plugged into what's going on around you. And a skill that I have found, that has been really helpful for me in my current position and in positions before, is being an educator. Understanding how to explain the basic concepts of sustainability and the why. For me, that's been the most important thing, because even though people say they're on board with it, when you come in with a new idea or when you're... So, what I do is I try to help people get new ideas, I'm not going to be the one who's going to think of the crazy idea that's going to make Engie billions of dollars. Maybe one day, but not today. That's not my job. And I don't understand the company perfectly enough to get there. But what I do understand is sustainability and the systemics behind it, and why it's important and how it can bring value to the business. And so, I've really taken on the role of educator, especially working in a really diverse company. Being able to explain things in really simple terms and understand the person in front of you and understand their business as well. Because in such a big company, people work on so many different things. So, for me that's a skill that really has been important and valuable for me.

NB: Great. And like maybe on a broader level, like on an organizational corporate level, what do you think, regarding strategic management and top management, what are the managerial implications that innovating in a sustainable way can have? I know you're not at that position, but I'm assuming that you probably talk with people…

MF: What do you mean by managerial implications?

NB: Well the challenges, the mindset but also like what does it imply to do sustainable innovation in a strategic way when before you didn't do it and now you have to do it?

MF: In terms of the manager's mindset, what's important is to give your employees' autonomy to innovate. That's something that, if people don't feel trusted and respected in their work, if they don't feel that they have the liberty to try things, if they don't feel supported by their manager. If I come in with a new idea that I think is worth testing, but my manager isn't the type of person who just… Like a manager that is a very just cut and drive, do your work kind of person and he isn't going to support me, my ideas are a little weird, and I don't think my manager is going to support me if I go talk to someone else. So, you know that way, innovation is never going to see the light of day. Like I said, it's kind of a cultural thing and what we're working on a lot with the managers in my business student and across Engie, is giving people that freedom when they say: right, it is bringing value to the company if someone's taking a couple hours a day to work on something else, that isn't in their job description, it could be bringing value to the company. From what I've seen and noticed, that's the key thing and that's the biggest difference you see. Like the frustrations with people who I've been working with, who have ideas and they say: well, my manager isn't letting me do it, so I can't anymore. That's a view that I didn't have before it's like the cultural shift and how slow it is. And it's really important in managers.

NB: I don't have more questions but if you have something else that you didn't mention about sustainable innovation management, feel free.

MF: Did I mentioned the innovation trophies? So, in Engie group, we have an innovation competition, every year where they get files for the most innovative projects from across the company. Every year there is about 550 projects that are submitted. And there's a big focus on sustainability. Sustainability isn't a category, but all the projects are judged on four criteria. The criteria are value creation, scalability, extend to the implementation and sustainability. And people can submit projects to a bunch of different categories. And one of those categories is best failed idea. And so that's really trying to get people to be proud of trying and saying it's not a big deal if you fail. And that's a way that the corporate level has really been trying to encourage open innovation, encourage innovation, and by encouraging failure as well. I think that sends a really strong message to our employees. Like we're here to try new things that no one has the right answers.

NB: And that's just among employees? That's not with like people coming from outside?

MF: Just employees yes.

NB: Because I had a marketing course this year and L'Oréal did something like that, but it was for students and we had to do like present a project and pitch it.

MF: I'm sure Engie does some of those open innovation things with students and stuff too. I've just never participated in them. But I'd be surprised if we've never done it.

NB: So yes, if you don't have any other things to say. Thank you very much for your time and help.

Appendix 11 – Table interview N°3

Interview length	1h04
Name of interviewee	Dominica Adam (DA)
Function	Lead Innovation Strategy and Design AXA/ING partnership
Company name	AXA
Core business	Insurance, investment, financial services
# of employees	100 000

Appendix 12 – Interview N°3 transcript (June 29th, 2020)

NB: I don't know if you have questions before we start?

DA: No, I read your interview guide. So, I'm familiar with your structure.

NB: Perfect. So just the first thing. Can you describe what you are doing, your academic professional background?

DA: So, I actually I grew up in Belgium, so I know Louvain-La-Neuve quite well. And I've been living in Paris. I moved here in 2004. I guess it's 16 years now. So, I did my schooling in Belgium, but then I studied abroad. I went to university in England where I studied sociology and then worked for a year and decided that I wanted to study some more. So, I did a masters in environment development and policy where it was very keen to try to make a difference. And at that stage, you know sustainability was still quite a recent concept. We didn't really have masters or courses in sustainability. It was an area that we discussed but it wasn't a formal topic as such. And so, I was looking for work in Belgium and I discovered something called sustainable or socially responsible investment so SRI. And that's why I move to Paris. I move to work for Vigeo, which is a CSR rating agency. There we rate companies' non-financial performances and I thought was a good way to integrate on non-financial topics, giving them a value that then could be looked at as a general concept, when you look at investing in companies. And that brought me to working for AXA, which I joined in 2008, and their CSR department groups, CSR team. So that was also the beginning of CSR and big corporations. And as a part of a corporation of the CAP40, I was leading environmental topics so measuring and reducing the environmental footprint. And this is when we designed the strategy for CSR, for the group and rolled it out across different countries. I did that for about five years. Then I felt that it was good to branch out and to understand the business a little bit more. So, I moved into the property and casualty insurance business to look much more on the offer, product and innovation side of things. So that's what brought me to innovation, to working in digital, which brought me to the product I'm working on today. That’s a partnership we have with ING, obviously the Dutch bank, where we're building from scratch new offers in a very innovative way. We are trying to connect to the customer, building the customer experience, the digital app and enriching a banking app with that information. So that's a little bit about my background. So, from sustainability to innovation.

NB: Maybe could just explain a bit more what the company is like, what AXA is doing, the different activities, the number of employees, different countries and maybe typical projects of AXA.

DA: Well you need to know that AXA is over 100 000 employees in the world. In more than 50 countries. So, it has a 100 billion profit per year. So, it's a very big and important company because thanks to insurance, we protect all the risks in society and then we use the money that customers give us to invest. We’re strong asset managers, we have and manage trillions of euros in investment. So, we have two ways of influencing the market. By the products that we develop, which touch health insurance, to your home insurance, to your car insurance for individuals, for companies. We ensure a cargo ship as a big airplane, that will also provide credit insurance for your home as well. And then we also once we get the money from you, we invest it. So, we are a huge investment company. Invest a lot for the state, but also for individuals. So, there's two important ways that we can influence the economy: through the products that we developed and the company we ensure; and through the investments in the companies that we make. So, AXA is very diversified. So, we are in all the insurance, different product ranges, all the sizes of the market, from individuals to small companies to extremely large companies across the planet.

NB: And in what regard, would you say that AXA is innovative and sustainable. How would you fit sustainable innovation at AXA?

DA: Well, I wouldn't talk about sustainable innovation. It's the first time I've seen this combination of words to be fair. For me, we have sustainability on one side and then we've had innovation on the other side. I do think it makes sense to combine them and there's clearly a sweet spot. But you can innovate without being sustainable. And you can do sustainability without being innovative, I guess. They're not really like tied together within companies, I would say today, unless you're a company that has an innovative business model that's on sustainability topic, where maybe they're more connected. I don't know what you know of AXA, but AXA is one of the biggest, I would say, insurance players in terms of sustainability in the world. So, we are very strong actors on the investment side of things. I don't know if you visited our website. If you go there, you will see there's a whole part on sustainability and our engagements. And there's a lot on climate change and biodiversity. And we've just published, I think, our new integrated report where you'll see the latest achievements and the data that supports that in terms of reporting. We often compare ourselves like to this CSR rating agencies' performances. One of the ones that we follow a lot is the Dow Jones sustainability index. And we're in the top players on that index. And it's also something that we use internally to measure our performance and to leverage our senior CEO's salary and bonuses is connected to that. So, I would say that we are a fairly strong sustainability player, even though we could obviously do a lot more. And I would say that on the innovation and digital, we're not bad players either. I think we've invested quite a lot. So, during the pandemic, you know, we weren't no problem in digital. We were all quite used to working remotely. And there's quite a good company culture on letting people work permanently. And I think, you know, we've been very sensitive to the fact that we had to innovate and change our business models and to be much more customer centric and to provide not just insurance products. So, you know, transfer of risk, which is just a financial product, but we try to bring in services to make a difference. And when you sell insurance, you know, it's a lot about the quality of the service as well, not just the money you going to get back. So, when you have a car accident if you call your assistance, how are they responding to you? How quickly are they coming to get you and your car? If it gets fixed, you know, how easy is it to interact with your insurance company to get the claim money or to get the car fixed that you need it to be? So, we've always been very close to the customer, but we could do a lot more and that means innovating in the digital space. And so, we're across many other companies. We have these mini accelerators or special teams that are forming to see how we can just: A) advise the customer experience, but B) enrich it with partnerships and through start-ups or other companies that maybe have more agility and more innovation in the things that they can bring to AXA. So, I would say, you know, we're a good actor compared to the size of our business in these areas.

NB: I didn't understand quite well, so what is your function at AXA? Can you give me an example of a project that you recently did so I can maybe visualize it more?

DA: So now what you need to understand is that I work in this bank assurance, so it's a bank assurance digital partnership. So, it's something that actually is quite singular, if you'd like to think just to kind of illustrate that AXA is quite digital. So, about two years ago, AXA won an RFP process from ING to co-construct and co-develop new offers in the digital banking app, through your smartphone, that ING has through obviously the direct banking. So, we are co-located in a "WeWork", so not in an AXA nor an ING office building. We're co-located in Paris and we are together redesigning from A to Z, the customer experience, the products that we're going to propose and the services that we could give to ING customers in different markets. One of them being finance. So, in this project, it's like a start-up because we're not just taking an existing AXA product and plugging into the IDG digital app. We are redesigning the product and the experience. So, when we started this project, we were 15, 20. Now we're more than 120, 140, maybe. So, it's big. It’s different lines of business. So, it's for retail customers. So, you have the home, the mobility and the wellness. And then we also provide credit protection. So, I initially joined the project to design their new mobility customer offering and that meant trying to understand what customers wanted from mobility. So, what does it mean to move around today in the city? Most of our customers or ING customers are urban people. What are our people's concerns and needs when it comes to mobility? What type of products would it make sense for us to give out to the customers? So, we did customer interviews, surveys, workshops, benchmarkings, digital benchmarking, insurance benchmarking, to try to assess the kind of products we would like to provide the customer and the customer discourse and message. Then we did ideation workshops, which is much more in the innovation space here, to try to come up with our prototype. The first screens of the user experience. And then once we divide those screens and we knew why we were doing it, looking at also the products that would sit behind it and the technicity that sits within AXA in the back end and ING in the front end. So, it's a very innovative project in the sense that we work in agile, we're connecting design thinking to lean start-up methodologies, working in multi-stakeholder project teams with data, IT, marketing, customer experience, product owners. So, it's quite rich and it's very influenced also by ING, which has been applying agile to a lot of their business in different markets. So, we're following that way of working to be innovative and to be iterative and to try to be close to the customer. It's a complex project because it's not just the project team in Paris, but it's also the countries working with us because the operationalization is very localized in the different markets. Does that make sense?

NB: Yes, completely. And as you said, there isn’t like a specific model. And quite close to what I found in theory, that sustainable innovation is quite a recent concept. And I want to check how in the practical field in companies, is it really sustainable innovation management or is it a bit trickier than that?

DA: It doesn't exist, I don’t think. At least not in AXA. But I think history will be connecting them together. You could innovate and try to make it more sustainable. But let's say for the projects I was working on, the start of it wasn’t to say, how are we going to provide a more sustainable insurance offering to our banking customers? That wasn't the starting point. The starting point was how can we provide a better customer experience to our customers and provide simpler insurance? So indirectly, you could say there's some form of sustainability, transparency and trust that sits behind it. But we didn't say we want to develop a specific car insurance for electric vehicles or a special home insurance for green homes or help with solar panels. You know, that wasn't the starting point. But it was to connect into the market trends and to understand that customers are more sensitive to the origin of their products, to the carbon footprint, to you know, there's these growing consumer trends. And so how do we tap into these consumer trends, but it's a lot of topics to tie in and innovate. So, you need your strategy to be right. And I think for me, you know, innovation has to be the front end of the strategy. And your project leader or your CEO or the heads of the company need to believe and have a vision that would connect sustainability to what it wants to do. And then if you need to innovate to get to it and innovation is a big word as well. You know, how disruptive is your innovation? That's up to you to decide. And it could be incremental innovation that brings you to something disruptive towards the end. For me, it's more a mindset of sustainability. And then the means to achieving that could be applying innovative ways of working. And I'd say that's a bit more how it works.

NB: That's very interesting because, I already did some interviews and it’s interesting to see that not everybody agrees on the subject which makes it interesting to study. And I completely understand what you're saying. Usually it's more like sustainability as a mindset and innovation as maybe the process. And so, the second part will be trickier as you said sustainable innovation isn’t considered as a whole at AXA, but I still want to know your opinion on it. What I found for sustainable innovation management is that there are some major components, like you've already talked about stakeholder management. Well more customer management, I guess. But I suppose that you also integrate stakeholder management and that sort of dialogue in the way you do your projects….

DA: Well you have to. I think I think for me is more the way business is changing. I think companies understand that they need to try to be more concentrated on the customer and then also integrate different stakeholders. So, the internal/external. I think, companies traditionally were much more siloed in the ways of working. So, agile methodologies allow you to be more transversal. But everyone still has their piece of the cake, if you like. IT guys will be very focused on finding the IT solution for the app to work and for the person to buy the products. And they'll be interested to know what product you're selling. But ultimately, they also care about just making sure that the wires connect and that the application has no bugs, that, you know, the person that wants to buy the policy can actually buy it. And the complexity that sits behind that is huge. So, you can’t expect an IT developer to be thinking about the sustainability component of his IT development because he doesn't have the time or the energy to do that. He's really focused on building the app and making it work. So, if you want to make sure that you're embedding it, for me, you have to embed it on a higher level. It has to be part of the design. If it’s part of the design, it has to be part of the vision. And that's why I say I think sustainability is at a high level, it has to start from the top. And then there's different ways of bringing it down into the operations. Because at the end of the day, people are building something or selling something, and that has to be concrete. And sometimes there's a disconnect between the strategy and the operations. But I think everyone, even in the operations is interested in the vision. And people are very sensitive to sustainability. And that's a growing trend. And when I talk to colleagues that are in finance, or doing data or in operations, these are topics that they're sensitive to, but they don't apply them on the day to day work. And I don't know why I was saying all this. What was your question again?

NB: It was about stakeholder management and how do you...

DA: Oh yes. So, transversal because, you know, I've been at AXA for fifteen years and sustainability for me has always been transversal. So, when we came in, what does sustainability mean and how do you integrate that across the business? So, we had to work with all the different what we call lines of business with the different expertise, from finance to investment to data to procurement to HR. In order to define what the CSR objectives would be for the different areas of the business to have this holistic 360 view of CSR. And then sort of stakeholder managem ent has become the heart of CSR and honestly, innovation should have that component. But I'd say innovation what it has, that's different is that CSR sometimes can be a lot internally looking in the company. And in AXA in any case, the CSR work of the team was not product-driven whereas innovation is. We weren't a team that was in touch with customers. A lot of it was in-house for the internal or the policymaking with external policy governments or the finance influencing the entities and what they were doing. So, I worked in group, we were setting the group's strategy that we were rolling out in the different markets and these were more business and operational jobs. And now, especially where I am, we are building a physical product that is going to market. So, it's a quite a different level. So, CSR needed to have a strategy that was holistic with the different stakeholders that to build a digital app you need to have also a several stakeholder approach, but this has to be much more centred on the customer, because we're selling a product to the customer.

NB: Yeah, completely. Another component was, well it's quite tricky, but it's more, I think, theoretical. It's the dynamic capabilities. Meaning that companies have to, in a way, have a process to be flexible and to adapt constantly. And some have processes other not. Some managers also told me that it can be more just like a mindset and it's not really like an organizational process. And as you said, that CSR is more internal, I was wondering, is flexibility something that is related to an organization or is more individual?

DA: I would tend to think it's both. I think, obviously, you need people that try to be flexible in their mindset and try to evolve. But that comes a lot through the quality of your management and the transparency, the communications. But I think is also linked to how you upscale people, how you train them to get new skills, how you create transversality, that people can change jobs and learn different skills on the job. I think it's both. It needs to be in the company's processes, mindset, starting from the top and in the people that you hire. And obviously, if you're in a company that has people that's been working and doing the job for 30, 40 years, it's not that easy to upscale or to change what they're doing. So, you also need to be quite down to earth and to look at the company as a whole with different age groups speak. But you can have a 60-year-old that's very adaptable and a 25-year-old that's not. So, I don't think there's a rule in that but it's definitely for me a mix.

NB: And another question, but I think you've already answered it, it's top management involvement, which is a huge part for innovation and sustainability. And I suppose that at AXA the culture of the company and top management involvement is quite high in the way you manage SI. Can we tell me about that component?

DA: Yeah, I think our CEOs is trying to put the CSR topic and the climate topic, and health topics highly on his agenda. After it's always a challenge to … You know t's OK to manage on a group level, I think the high level, so the political aspects, like European Union and French and United Nations and strong messages and money that we invest, which obviously is already huge. But then how it comes back down operationally to people, down to the project I'm working in, which is an innovative project there. Well there is still sometimes a disconnect. I would say we do a lot, but it's not easy because you're confronting people. People that know about CSR maybe know about innovation, but then they don't know about their business. So, how do you connect people that know about the business or are seen as experts, but they can also understand innovation and sustainability. It takes time for these worlds to converge and to see how people can bring value to each other. And I think in companies like AXA, but probably other companies, there's more over time it will be valued more people that have transversal project management skills. Because in our company, you know, an underwriter, an actuary are the ones on the insurance side that build the products or the pricing and should know about how to do that to make money, because ultimately, I think they will do business. But then how do you bring to these people that are very expert, new methodologies, ways of working? How do you make them feel that they can take new risks and T-that's OK? This takes time for everyone, it's part of it, to understand what they can do, how they can bring value in a different way. And the compromises maybe we need to bring to do things differently. It's maybe better for the customer and ultimately you might sell more. So, it takes convincing communication, examples, testing and that's a big process. And then it depends. Innovation, as I was were saying, you know, there's innovating in your job, it's kind of just enriching, and then there's more disruptive innovation. So, there are different levels there.

NB: And you just said it's a business after all and the financial is very important. There's a thing called the triple bottom line in sustainability. And I wanted to know how AXA is managing that part. Is there a tool or is there a process to manage that sort of social, economic and environmental trilemma?

DA: I mean, there are elements that are put forward. So, I mean, our CEOs, I think now they have in their performance review, they need to contribute to our CSR rating from external agencies. So that gives them a percentage of their bonus. We have our own internal CSR rating for the different companies, which is a great tool to help people understand what CSR means and how they can be making progress. So, it's a maturity model. And that's a process, too. Then I would say we're developing new metrics. So, I think you have a question about reporting. And so, measuring is obviously fundamental. So, you know, and we're also a financial service company. So, putting targets and measuring progress is key, like finding the right KPIs. And then nowadays, on the financial side, we're looking a lot at the carbon footprint of our investment portfolio, we're looking at some different forms of indicators to help us define how at risk we are of carbon. Now is the rating, in our investment portfolios, an element indicating something into our senior remuneration? I don't know, to be honest. What I still know is that our CEOs have targets that are a lot of them still financial and sometimes short term. So, it's very difficult to arbitrate. And that's a common challenge companies have between short term business value to mid to long term business value. And even in the project I'm in, you know, some of it is more incremental innovation because we have a delivery roadmap and a business plan. And then how do you bring in things that are more disruptive that take more time and they are a bit more perspective? We are still kind of in this dilemma of needing to have business targets that are more traditional. And how do you integrate in that space for innovation or new criteria? So, we invest and give money to a charity. But that's an easy way, right? I think of giving money is not completely embedding and creating products, that we might have one product, but it's not the full product range. But should your product range be completely CSR? So, the fundamental business choices. Are there questions that are being raised and have been raised for several years within AXA and there's elements of all of this. But targets are often still financial.

NB: Another part that you mentioned was business model innovation and how services are very important today and like sustainability and innovation can meet in business model innovation. So, I want to know how much business motivation has been relevant for AXA for the past 10 years, since sustainability has grown in the company?

DA: It's key, obviously. You know, if we innovate, we have to have a business model that makes us believe it and that we're going to generate money. So, there's product we've been working with an innovation consultancy firm that talks about money and magic. So, you need both for things to work. We've been testing different things and our partnership with start-ups, buying start-ups. I don't know if you've looked at the innovation landscape of AXA. We have AXA Group Innovation and we have Kamet, which is an internal incubator of start-ups. We invest in start-ups and have co-founders and funders that launch business models, some that are already proving to be fairly successful, quite a lot in health business. Then we have our own venture capital company that we've actually investing stakes and start-ups. Then we have more the digital strategic innovation, where we've actually in the U.S. bought a company in health insurance called Maestro that were involved in the management and the running of that company, more on M&A approach. And then we also have AXA Partners, which is more of an assistance business, a service driven business, which is roadside assistance, health assistance, travel systems, you know, that's assisting people when they have an accident or the emergency rescue. And so, we have quite a lot of things. And all the different companies, have often their own innovation teams and we've been pushing a lot on services and reaching out to start-ups, you know, seeing what we can do to enrich our value propositions for our customers. But I would say today it's still difficult to know how to crack that business model to bring new value to the customer. What kind of timeframe we're looking at? So, it's still, I think, quite early days to know what's a good business model, that's really bringing additional value to AXA, whose primarily revenue source is a risk transfer, so you pay your premium. And so, it's a very different way of operating to possibly partner and add new services. And what's also interesting for you to think about is the distribution model of the companies that you're working with. AXA is depending on the market. In Belgium, its highly broker driven market, what we call intermediated. So, AXA, the insurance company, does not have direct access to these customers. In France, we have a mixture of brokers and AXA specific agents. Then the project I'm working on now it's a direct channel. So, the direct part of selling insurance online or on a mobile phone is still small. How you interact with your customer will have this strange influence on the kind of services you could promote because an insurance broker is used to selling insurance and not used to selling services. And what kind of incentive would he have to sell that service. And then to the after-service market on that? So, in your reflection, when you think about innovation and I don't know if you've looked at that, but the distribution model of your business is obviously critical in that.

NB: Yes, because I didn't think of this as much. It can be a way to improve the model that I was thinking…

DA: Well you need to know how you sell your product because people need to sell it. If you don't sell like directly to your customer, you need to make sure that you're giving your salesforce the tools to sell and the financial incentives to do it. Because today people care about money. I mean, ultimately, it's still, you know, people work because they want to get money.

They can do it with a great product and if the product is CSR than even better, but they need to get the incentive to do it.

NB: Actually, I was guessing that maybe some companies would have a model or process more related to like idea creation and commercialization of innovation and sustainability…

DA: Yes, I mean, it all comes to that. I mean, the project we've worked on, we worked on design, thinking, ideation process. Then once you have your ideas, we test them with customers, then you do feasibility and viability. So, the feasibility is on the operationalization, the viability, you know, on the commercialization of it. And once you tie the three components together, you try to prioritize your innovation and what you're going to put the market. But that's a framework that works to help you prioritize. But that would be more project specific or it was one way of filtering and focusing on what you want to do. There are many different approaches across the group and Kamet they have their own process of how they have different gates to say stop or go on an innovation that's being proposed by the cofounding team. And they might have stopped it several times to rethink, go back to the drawing board or present something that they believe will be viable. And so, we have different methodologies across the group that are more in the innovation space to help you and say, OK, give this guy the go ahead and we're going to invest money because we often invest money in what we're doing. Even just project money. Fifteen hundred. Hundred. Hundred and fifty. Two hundred thousand euros. You know, it can go quite easily to two prototype and test something. We do use design thinking, lean start-up, agile way of working as math that structure things. And ING that we work with has designed their own methodology for innovation, and I forgot its name, but you can find it online, it has some PowerPoint slides that illustrate it on their approach.

NB: Alright I will check it, thank you! And so just before, you talked about the challenges of long-term value, I wanted to know, are there other challenges related to innovation or sustainability today for you as a manager, well more of innovation but still?

DA: No, I think I mean, what I can be seeing also in the price and what comes out although I haven't really followed everything, but there's always this issue. You know, there's the core business which brings you your money today. And then, you know, you need to innovate because you're afraid if you don't, that your business is going to fall through ground like Nokia or like BlackBerry or Kodak. So how do you in a time of post crisis like we've gone through, you know, how is innovation being hit and what budgets are we willing to allocate to innovation? Because we believe it's going to bring true value. I know I've read some articles that people feel like if they're not given the right strategic support and budget and then being supported also in the project making process, then it's very difficult to make innovation happen.

So same thing as above, I do think strategically it's important, but it needs to be followed through in the operations. I think just saying either innovating is a very broad term hence what value do you want to bring to the customer? What change in your process do you want to make? And if I look at AXA, we did CSR then it was all about being digital. Then we moved into innovation. And maybe we will move into sustainable innovation, I don't know. And I mean, also, if you look at people, I talk to people, you know, sometimes I think agile is just another way of wrapping up some things that you're doing good project management. So, it's also a way to acknowledge things that are cool, that are reused and revamped and made a bit more modern. Sometimes it's stuff that you did already because it made sense.

NB: Yes, it's a tricky concept, even like my introduction is based on the fact that sustainability and innovation are just two words that have been used for so many years. And I wanted to define more but it remains quite complicated, actually. So basically, a big challenge for you is like around customers and around like bringing long term value and understanding why you are doing the business?

DA: I think fundamentally for any business that's what it is. And then there's the smaller you know, the Why? What? How? it's a very famous video by this guy. And I do believe that if you do know why you're doing something and that's where your vision, ambition and strategy comes in, it's easier to know what you're willing to compromise or to push to get there, than to push it down to your teams, and even at a project level. But by getting that of why is not that straightforward and then if you know why you're doing it and how you want to do it, then things start to move to come into place. But I do tend to think that people like to know what they want. And you know, it's nice to know what you're building so then people will then be organized around that to get the building done right. But if you don't coordinate all the different expertise inside the company and don't help them understand the parts in the puzzle that they can play, it could be very difficult for them to be consistent at senior division. So, there's lots of things that can be lost in translation. And then the operationalization of things can no longer exist. So, I think for many people, maybe less and less, but CSR or sustainability can still be seen as charity work, can still be seen as a recycling. How and what makes sense? How do you embed sustainability in your product development and your customer offers, to make it work and be maybe accelerated if your customers are more sensitive to it? But it's the same question as the smart phone, you know, when no one wanted this until they built it. So, it's a kind of chicken and egg question. There's a huge need for vision.

NB: So maybe just a last question for that part, you said that you don't associate sustainability and innovation and maybe I wanted to know how would you imagine to integrate like factors related to sustainability in the way that right now you are doing

your projects and managing more innovative factors? How do you think it could work? How would you imagine putting the two together?

DA: I don't know if this is a viable one, but a company could say every project that we're working on today, we need it to contribute to reducing CO2 emissions.

NB: So, it would be more related to specific KPIs and criteria?

DA: I think if you put some kind of target to say any kind of innovation, any kind of, you know, you have to show that it's bringing something to society and then you could define what that means. You know, either social, either it's governance, either it's environmental, a bit like you choose your procurement players and you're going to put in your tenders, some selection criteria. And we have criteria in our investment portfolio. So, it could be on the project side that we also put criteria to let’s say we want to reduce our CO2 emissions at group level. And that means everyone has a role to play in it. And then everyone has to do that and report back on the action that they're putting in place. So, I think that is where setting targets that make sense building to the global strategy can help incentivize people in the project teams.

NB: And based on what we talked about up until now, do you think that maybe there's something that I didn't mention at all that you do at AXA to manage innovation or sustainability? And do you think that could make sense and be relevant in my model? For example, you talked about responsible finance, or investment.

DA: Depends on what... I mean, your model has to be generic to some extent. So, I mean, I don't know what business or industry you're thinking of applying it to, but a model that we work a lot with within AXA, that can work in different areas, are our maturity models, I don't know if you're familiar with those. So, maturity model is a model where you are going to define four or five levels of maturity, you're going to have a question. Some of them can be quantitative, some of be more qualitative, but you could say like by how many percent did you reduce CO2 emissions? Then it could one percent, two percent, three percent, five percent over the past three years. Then people self-assessed themselves, they score themselves. And then you have different criteria that you think would be important to you, so you mix obviously, the investments, the products you have. But you look at the environmental footprint, you look at the diversity and inclusion, you look at procurement, you know, all those key factors. And you could say, well, in innovation you'll have the innovation criteria and then you have the sustainability criteria. How do I help converge these a bit more to see how we can bring value when we wanted to innovate in a process? It could be an internal process or an external process to products. And I don’t if you see innovation from a product, product development, offer development, so is it for customers or is it in a different space that you're applying that. So, you could think about, what's the model and what other criteria is that you would want to integrate into it? And then what level of maturity would be not doing anything to being very good at it? And the advantage in these models is it helps people understand what you mean by the criteria you're addressing when you talk about sustainable innovation and what you think is a really good performance to a not so good performance. And then people use that to learn and understand and then self-assess and then the ventures that you can assess yourself one year and the following in the following year. And then you choose several entities or teams and then you can monitor progress against each other, set the benchmark and then monitor progress over time. So those models can help measure performance. It depends what you want your model to be for. Is your model to measure performance and how people understand the criteria? Is it a model to give a methodology on the way that you should do sustainable innovation? And I would say, well, maybe don't reinvent the wheel. You have innovation models. See how you can plug in more sustainability criteria as in these models. So, there's probably the design process on the innovation side and then the monitoring process perhaps behind it. But I would think of the value chain you're looking at.

NB: Well what I had in mind was a more conceptual model. But further research would be what you said, to measure and see how people can improve these different criteria over time.

DA: I mean, what I think is key is to say is why would you do sustainable innovation? You know, ultimately innovation should be sustainable. One day sustainability should not exist. It should just be embedded in everything we do. So how can you help people think that today customers and society need more sustainability if we want to be viable in the long term and so how do you help people embed it? A lot of people just don't know what it is. Still, people don't know what's sustainability really means.

NB: Yes, actually in one of the interviews, a manager told me that education, educating the employees it's very important. And that was a new thing that I didn’t really find in theory...

DA: I mean, sustainability is huge, right? So, it’s complicated to have a complete holistic model. But obviously, people don't know what sustainability is or don't understand the vision of how it applies to them. And they can't do a good job of applying it. So it's about communication, transparency, education. And it's completely holistic and it needs to be embedded in the core business completely. How do you invent something in the core business? It's going to take time. And your innovation today still seems like an addition. All right. So, in businesses, today is still going to be the chief financial officers. And maybe I think product development and marketing is gaining territory and customer centricity. But, you know, you have to work also within the existing metrics and get core business functions to see what they could do. And to innovate you need budgets. You need people to believe that you have business cases that are going to bring value.

NB: The final part of this interview would be like the managerial implications. What type of evolutions your managers' skills have faced over the past 10 years? What do you think about the evolution of your managerial skills after managing innovation and managing also some sustainability?

DA: I worked on sustainability for 10 years and then I worked more on innovation these past years. I would say that when I worked on sustainability, I had the feeling that I was a pioneer all the time. So, knocking on people's doors, trying to find convergence, explaining what CSR meant, seeing how it could connect to what they did and to find common projects. So, a lot of it was, knocking on people's doors. And that was a lot of fun, very exciting but a lot of energy was required to be knocking on these doors. When I moved into the business, I was core business. And so, the doors were open a lot more easily. People knew what you were doing. There was governance in place. You know, it was understood that that's what you had to do. But CSR was very far from people and their way of thinking. Not that they were close to it, but that was far from it. Then when I moved more into innovation. I'm trying to think. What I like about innovation is the whole brainstorming ideation, talking to customers, getting people together. And the challenge of that is to transform those concepts and ideas into something concrete that you can build and believe that that's going to make a difference. So, I would say that the shift I've seen is around more transversal teamwork, especially now I'm working in an agile project mode. Before we had to go very much to each different team that was working in silos to get them to cooperate with us. Now, we were working on a very different levels group, working for many countries, and now I'm working in a project team on some project lines with many countries. It's much more operational and I think there's more use of digital tools like the ones we're using now, and which makes it easier to work with different countries. There's more agility in the way that we work, with different lines of business. But I'd say a lot of the business is still working on what they have to do. Not everyone needs to be transversal. But I'd say more transversal project management is probably increasing and needs to be there and more customer focused. But it's still a challenge for our company to be customer focused because we're quite highly intermediated. So, I'd say customer centricity, transversality, and some more agility. But it's still not always recognized within these big companies from an HR perspective, you know, it's easier still for them to follow people that have linear careers. If you want to be innovative and do different things moving across different business areas, you often have to build your own career path. I don't know if that's kind of answered your question. I would say when I started that I was maybe younger, much more focused on all the formal processes and now things are maybe a bit informal, more dialogue. I guess we don't dress, I mean now I'm in more of a start-up mode, but, you know, even dressing a bit more casually, maybe things are a bit flattering in some cases in terms of discussions, but that would depend where you sit in the company as well. You know finance and risk management might be very different to marketing and innovation to HR. Every business has its kind of mini culture as well. But we have common cultural and guidelines that you're supposed to replicate in the different areas of the business worldwide.

NB: And that's why also probably culture and top like management systems are that difficult, because it's a lot of small teams, as you said, like small companies within a company.

DA: I mean, I was speaking to a colleague, who was removed, who analyses risks for large groups, and he says, you know, a company is a sum of some small companies. But then it depends on how centralized your business model is. We're fairly decentralized, so if you give power to your local CEOs that manage businesses, thousands of people, well they're big companies as well. But here I'm talking about AXA, one of the biggest companies in the world so you have to also appreciate the history and the model we come from.

NB: Well perfect, I don't have more questions. Yeah, I think it will be interesting to see how actually what I found in theories is what actually exist in the world. And through the interviews, it was interesting to see that a lot of companies do things differently, and sustainable innovation isn't a concept that has the same definition and application for everyone...

DA: I think it's a great concept to merge them together. I don't know what your courses have been putting like content behind it, but I think it's important and good for you to know about, understanding sustainability and understanding the concepts of innovation. And I guess the objective would be to see how you can work pushing them together in a company that really wants to promote that their innovation should be sustainable or not. And I dissociate these words because I think they did they did exist separately, and they could exist together as well. And you want to find companies where there's that sweet spot where you have innovation and sustainability and you want them to cross over and this would be your sustainable innovation. And maybe that's a model. You can draw on your thesis as well. And this is what you were trying to work on, methodologies to facilitate companies to implement that. But it's very hard for you, in a theoretical world to to understand the company side because you never worked in the company and put this in practice. And I'm sure companies, you know, hopefully we keep on the same trajectory. And for me, who's been working in the space of sustainability for many years, you know, since the end of last year with Davos and everyone talking about climate change, there's an acceleration in the discourse and the need for sustainability to be embedded in the way we do business. And in France is quite a mature market. I don't know what kind of countries you've been interviewing because since 2001, 2002, we've had regulation that has forced us to do social and environmental reporting.

We had to start to monitor our footprint and some social indicators. So, that really helped all the big companies listed on the stock exchange to have to put things in place to measure these things. And SRI has also been quite active in these spaces but I would say there's been an acceleration, and for me, a desire to get more involved again in sustainability, because I find innovation doesn't have enough sustainability, to be honest and the project I'm in, I think it doesn't have enough and it could have had more, but it wasn't part of the vision. And I think the pandemic is also, you know, setting the fact that we're very sensitive to external factors. There's the pandemic but we all know that behind there's climate change looming and that's going to impact, and there is already impacting us. So, if we don't act now, we're in trouble. I don't know if you follow the elections here in France, yesterday for "les municipales". It's very interesting to see the position of the Green Party. The Greens were always there, but we never expected them to win so many big cities in France. And so, we'll be interesting to see what happens in Poland, what happens in other national elections to see the kind of global political shift we see coming as well. Because I do believe that policies and legislation is obviously key to accelerate what companies do. So, if you work on sustainable innovation, but that regulation doesn't go in the right direction, you're not going to be innovating very sustainably. And I think that broader systemic context, which is part of it, to understand the trends, market trends from a customer perspective, that, generally speaking, is a factor of what you'll be able to do in terms of innovation, where you get customer buying. But, you know, it's good for you to be looking at innovative and new things to be pushing, because hopefully everyone will be doing this, and we won't even think that innovation could be non-sustainable. I think it's a good time to finish your studies and to be interested in these topics. There's a lot going on and obviously a lot that needs to be done. And I'm much more hopeful today because of everything that's happening that we can make things move more than maybe five years ago or maybe six, seven years ago. I also moved out of CSR because I wanted to branch more into the business, to understand the business constraints because it's easy to talk to the convinced, but it's harder to convince people that don't know what it is. And there's still lots of people that don't know what it is. So, it's a long-term goal. But if you're passionate about it, it's good to stay focused on it and to actually move with that.

NB: I actually did an internship in a small organization this year but obviously sustainability was much better perceived and understood. But that's what is more interesting with big companies like AXA for my thesis because there are so many levels and it's such a big organization that there is a need for systemic sustainable innovation management.

DA: Yes, for big companies it's a process. It's a project that will take a while, you know. And I was hired in 2004 at AXA to work on sustainability and building the group environmental reporting. And they have already been doing some sustainability stuff probably for a few years before that. And the group has a CSR team and unit teams essentially, locally to be infusing that. But the sustainability teams don't do much on innovation because they're not really trained on it, because just working on sustainable finance, working on partnerships with our big NGOs, reporting our environmental footprint, and working on a few other, you know, health initiatives, biodiversity initiatives, you know, that's already five to six people. And they're not on the product side. And lots of the innovation is product related. So, that would be more of the local CSR teams, but they need to understand products to be able to help innovate. But a lot of progress is happening, and connections are being made. So, I think positive overall.

NB: Thank you very much for this interview and for the time you have dedicated to answer my questions. It was all very interesting.

Appendix 13 – Table interview N°4

Interview length	47 mins
Name of interviewee	Frantz Beznik (FB)
Function	R&D Director, Global Head of Sustainable Innovation
Company name	Procter & Gamble
Core business	Consumer goods
# of employees	100 000

Appendix 14 – Interview N°4 transcript (July the 3rd, 2020)

NB: So, for the first part of this interview, I want to understand how sustainable innovation is perceived. I discussed with other companies and it wasn't that clear of a concept. So, I want to see how at Procter and Gamble it exists. So you could maybe introduce yourself and explain your role at Procter and Gamble.

FB: OK, great. Hi, I'm Frantz Beznik; I'm actually leading Sustainable Innovation for Procter and Gamble. So it's not a concept here, it's my job, actually. It's a reality. P&G is a company that sells shampoo, detergents, soaps and others. It's really about products in the homes, fast consumer goods industry. We touch five billion consumers over the world. This gives a huge sense of responsibility as to creating sustainable innovation given it ends up in the hands of five billion people on the planet and that can make a change on their daily lives for the better.

NB: So, at Procter and Gamble, how do the two concepts of sustainability and innovation come into play? Because sometimes there is a CSR department and an innovation department. So how at Procter and Gamble, with recent projects of yours for example, how could you explain how these two co-exist?

FB: OK. For Procter and Gamble, it is pretty simple. It's one and the same. Everything has to be embedded, I think… Just to clarify, we've declared what we call "Ambitions 2030", about a year and a half ago. This is our new set of commitments for the next decade, between 2020 and 2030. And what we've declared, as the company that sells fast consumer moving goods, meaning things that people consume in the homes, that Procter& Gamble is going to aim to invent "Responsible Consumption", This is really a deliverable that we set for ourselves as part of our ambition for 2030. So, Procter and Gamble is basically committed itself to deliver responsible consumption through our brands, through the decade. And that's for me, the best definition of what sustainable innovation can be, to be honest. For consumer goods company like ours, innovation has to be in service of creating responsible consumption in the homes of consumers, over all categories of our products. Now what it means is it needs to be embedded within the mainstream innovation. And so, my job for now exists because we are not yet there totally. We need to crank up new thinking so that it becomes 100% mainstream. My impact and my innovation need to go into the mainstream innovation. I'm working with all the mainstream teams. I'm just helping them to think differently about how we transform our innovations so that they are becoming one of the same : a sustainable innovation that delivers responsible consumption, if that makes sense. So, we have absolutely do not have any CSR department per say that runs Sustainability. We don't believe in CSR much, because CSR means it is lateral. It's aside from your main business; whereas we've decided that we want sustainable innovation to be mainstream. And also, CSR is very fragile, it depends on good willingness. If you absolutely interlinked sustainability and innovation and business, this is one and the same. If you fail sustainability you fail the business, if you fail the business, you fail sustainability. So, it needs to be one and the same. It cannot be an option, with an opt out possibility

NB: Yes, that's what right now for the two years, the theory has said. Sustainable innovation comes more and more into practice but that's not what I saw in the interviews. So, it's actually very interesting…

FB: Well for us it's totally mainstream and totally weaved in into the business. And I don't know how many companies you have interviewed but anyway, we are about hundred thousand employees in the world, and here is the question: "for hundred thousand employees in the world, how many do you think are actually in the sustainability team at P&G?". And people would say: "well, that's a lot of people in a company so probably hundreds" and the answer is: "no, we've got only about ten people as full-time employee altogether on sustainability in the company". And that's not because we are smart; it's simply because we do not want to build a big sustainability organization that is set aside – and that our ninety-hundred thousand employees would look to and say "Hey – this is the Sustainability team that has to do the sustainability job". No, we're just a few of us and we're just enabling the 100 000 employees to actually do sustainable innovation as part of their daily job, and part of the business basically. So, we're very intentional about making sustainability – innovation – business one of the same.

NB: So, in the following of that, there needs to be a management for sustainable innovation. And my second question, as I told you, it's either like the simple question of do you have a process? Do you have a model? Do you have something to manage

sustainable innovation? And if not, I can give you the different elements that I found in my theory to see how you have examples for these elements, how much these elements are relevant for you?

FB: Well, no we do not have a separate process for sustainable innovation. We have one process for innovation in the company – and it applies to Sustainability. We really are again very intentional about the fact that this is one and the same process. It's just a way of thinking which is different. So, we at P&G we have been existing for 185 years and we are very successful, you know, and it's good. And we like to make products that people love and make their life easier. Now, beyond, we are going to make life more sustainable too. So, it's not really different scorecards. It's not a different process. I think what is maybe different is we actually need to work on systems change that are bigger than P&G alone. Let me explain with examples. P&G have invented diapers. We are now reinventing diapers – such that diapers now can be totally up-cyclable and re-used into a second life instead of ending up as waste. And of course, when you decide to do that, this is a total system change across the value chain; it's way beyond you. We, P&G indeed would stop at the trash bin and for the rest, it's another job that is beyond P&G today. But now we're saying, we need to reinvent diapers that can be recyclable and up-cyclable, we need to worry about what's happening after the garbage…who are the actors involved, what's happening and how we're going to change that to create recyclable diapers and make it circular? So, my short answer to you it's not a different process, but it's a very different set of partners, that is way beyond and way more complicated. So, when you reinvent diapers that are recyclable, now you're going to work with recyclers, with cities etc. We are literally creating a totally new stream of waste to be recycled. And we are inventing a process that can actually reuse these diapers and recreate fertilizer and plastic matters, that will be upcycled into plastic material like plastic bench or others. Now you have a process that creates that starts from a soiled diapers and outputs fertilizers and we're going to work with people that want fertilizers. We're going to work with people that want plastic benches. So, you're entering into another sort of ecosystem of innovators and partners that we have never worked with. This is what we are putting into place and testing right now as a full pilot to scale of a district of a city in the Netherlands where we literally are putting a collection box where you can collect in the cities those diapers, working with recyclers and working the cities to actually close the loop and make sure we actually are recycling those diapers and we are recycling them into fertilizers and plastic matters. So, again, it's not about the different process of innovation. But it's about a much larger, more complex ecosystem of innovators & partners. Hopefully it helps.

NB: Yes, from what you say, I think you you've mentioned like stakeholder management. That's definitely like the major point. You've also mentioned at the beginning that it has to be like embedded in the whole strategy and there's a culture around it. So, definitely culture management. And the whole thing about reinventing the whole diaper concept I

would say, that is probably like business model innovation. You have to completely innovate on what you are offering and rethink that.

FB: It's a good point you're making. I think where we have on some sustainable innovations a very broad ecosystem, well you are introducing new costs. You could well say, I don't care about those costs because I don't want to see those costs. Whereas if you want to make diapers recyclable, you've got to care about those costs. Who is taking those costs, how do share those costs? And how you value the work that you can actually go and do to earn to do that. So, it's I would say, again, it's not about a different process or business model but it's certainly a very different ways of innovating the business model. So, I think business model would be the one elements that really is the biggest challenge in terms of how we have to think about things.

NB: And maybe one or two points that you didn't mentio. So there's this theory that organizations now are completely changing all the time. And so they learn new knowledge and new information. And I wanted to know how at Procter and Gamble that is dealt with? Is there a system or a practice that helps manage the knowledge, the new information, the learning process?

FB: Well, we have many platforms. To start with, we are actually a company of business sectors like fabric and home care sector, beauty care sector, family care sector etc....What we aim to achieve is a structure that is very agile at Sectors' leadership level to drive the business. But we also need to create platforms for transversal learnings across the sectors. This is one we are driving on sustainability as the P&G sustainability team – so we can share learnings & best practices across technology, knowledge and intelligence like the business model. We cover and talk to all the company sectors so we can best reapply as opposed to reinvent each time what other sectors have already done – whilst keeping Sectors lead their Business with full agility and autonomy.

NB: There is also another concept that's called dynamic capabilities. It's very theoretical, but it's about the flexibility and the fact that a company has to be like changing all the time. there something that you can tell me about that at Procter& Gamble ?

FB: Yeah, and again I would say it's not linked to sustainability because the innovation process is the same for everybody, and one we call "growth-works". And it's about really implementing the current best approach on how start-ups are learning in a very short period of time and how we actually recycle the learnings, how we create minimum viable prototypes, test-learn-iterate-launch. So, for each of the sector and corporately, we've actually built a "growth-works" capability – to seed like Start-ups in the business/sectors, with venture capitals to rely on funding and working under very short-time frame of learnings, and addressing very laser-focused “killer” questions/problems to be solved .. And since we're very lean on budget and so are the startups, you basically have to be very choicefull on what are the very questions and to create most optimal parallel experimentation to learn fast. Net, we're really trying to work on minimum timeline with maximum learnings, if you will. And again, this is not sustainability. This is about, you know, innovation at P&G and, of course, a lot of these fast cycle experimentation are actually going out right now on sustainability because there's lots of different models. And that's what makes sustainability particularly exciting right now, especially through /post Covid time, there's a burst of momentum, which is really good. And so, with a burst of experimentation, if you're not in a fast cycle learning, you just sink completely.

NB: So, the sustainable innovation that you do touches every department on a global scale?

FB: Yes, my job is totally global. And I touch every single department. So, I would be pointless if my job is not rooted into the sectors of the company and the products of the companies, all over the world. It is probably a good segway to telling you a little more about the 50L home project, which I lead. So, 50L home is a big ambition, for example to make homes of tomorrow run at 50 litres per day per person, yet they feel like 500 liters. Today, typically in cities, we use between 150 and 500 litres per day per person. My shower in the morning and your shower in the morning is probably 60, 80 or 100 liters. It goes very fast at 10L/min shower, I already spend 100L right in my very first 10mn in the morning. And then there's lot more of usage of water throughout the day, and we are mostly not aware of it. We think we don't use a lot, but we do. And yet, 50L per day per person is probably the sustainable level of water consumption in the home. Now, if you compare that with the extreme level of usage right now at 500 L per day per person, this is what inspired our ambition. we say: « OK we're going to make homes tomorrow that run at 50 litres per day per person yet they feel like 500 ». So, it's not about cutting off. It's about finding new ways, especially in terms of reusing water, purifying and sanitizing the water. That's how we can actually re-think completely the way we use and waste the water in the homes. Yet – in such a way that the user will be much happier with a 50 liter home than today’s 500 liter. So, now why does it matter to P&G. well, we are a five billion consumer business, and 70 % of our business is actually in products that use water in the home, e.g. in the form of shampoo in the shower, shaving cream, brushing teeth at the faucet, kitchen tap with dish products, laundry pipes with laundry products, toilets. We very much care about water consumption in our homes – hence why I – and my technical partner – have invented 50L Home and are now spearheading it. Very importantly, it’s rooted within each of the categories, i.e. the laundry category, the shampoo, the cleaners, et cetera, so that each of these categories/sectors can contribute to our 50L dream. Big project, big dream, big mission, working also with big external partners e.g. in the water industry, energy, infrastructure etc..

That's a very good example of how we link innovation to the business and how to take things that are very big at the corporate level, very big ambitions and well embedded it into the business.

NB: I wanted to ask how does that link with the products? But then you said and it made sense because I felt like it went beyond what Procter and Gamble..

FB: Oh, it is going to go beyond. So we're forming a coalition called the 50L Home coalition, we're driving it and steering it but we need other partners because our products would actually be a contributor to the 50L Home because they'd be more efficient, for example, by using less water or less energy. But of course, we will not construct pipes. We are not constructing homes. In that we will do with our partners.

NB : That makes me think about open innovation. Do you practice open innovation at Procter and Gamble?

FB: Absolutely, and we have just talked on 50L Home is all about open innovation. More generally at Corporate level, I would not be too presumptuous by saying that P&G has been one of the leading company on open innovation. 15 years ago, 20 years ago, literally it's been a long time we've been on open innovation. But it's a good question because, you know, 50L Home is definitely one of the obvious things that will become a platform as we finalize the coalition, then we want to really invite startups, accelerators and innovators that can actually go and help innovate with us on such a new idea.

NB: Okay perfect! The third question was about regarding the way you manage sustainable innovation now and the practices that you use, what are the main or the biggest challenges and how do you think it could be improved later on?

There's a few challenges, I think. I talked already, one which is getting into ecosystems that we've never dealt before. And complex things like working with cities and public is very different than private partners. It’s complicated. But it's exciting. Second big challenge is the business model. We need to be very bold in terms of out-innovating our business models, and that’s tough. Three, I would say is cost affordability. We need to break through cost but the reality is that when you start to integrate things that happen post-consumer usage, you're getting into costs that you didn't have to incur before. And so how do you actually manage that in terms of cost and in terms of the consumer – with/alongside your partners? And how do you make sure that sustainability doesn't become a thing for the rich and is actually affordable for everybody. Net, yes, really, these are my 3 biggest challenges.

NB: And in terms of organizational challenges or like internally at the corporate level, what are the challenges to manage sustainable innovation? And as you said, you work at a global scale so there are even like I suppose there are even bigger challenges no? What do you think it's the most difficult part of your job to manage?

FB: I'm not sure, I always worked on things that are difficult. That's my nature. So, it's not like I had an easy ride. And I think for some people, it's actually a burden – so how do you help alleviate the burden so that it's instead about a new opportunity of innovation. Organizationally, I think for me the most important design intent that we created is really to weave/embed sustainability in, as talked earlier. Not a separate sustainability organization. I guess the key challenge is about culture change. What I'm trying over my 90 000 employee partners, is to get them excited on sustainability versus take it as a new burden on top of all the others, especially costs. How do we create new source of values to the consumers; and new benefits too… In fact, it's probably time I speak to my copyright motto…that's my three ‘’magic’’words. So you're going to have to put a copyright sign.

NB: Yes of course!

FB: So, what I'm propagating throughout the company is my simple motto in 3 words « Make Sustainable Irresistible” ©. Sustainability needs to be as irresistible as your smartphone. What I mean is anytime my smartphone is going out of battery, I'm nervous. I need to power it up as fast as possible otherwise I risk to lose everything. This thing I cannot separate from myself. It's just so much part of my life. Well, I want sustainability to be that type of irresistibly - like you just want to have it, it's part of your life- irresistibly. And this is really important because if you really raise the bar very high like that, you must design things very differently. So, I say to people : « look, first and foremost, it's got to be irresistible ». Like, really irresistible… like much better than whatever exists today. So, my 50L Home will be irresistibly better than any home today. And then, once you have that point of irresistibility, then, well, let's design it so it will be sustainable this time. And that's where innovation comes. So I think this is probably a short answer to your questions. I think the culture change is really probably the biggest thing in terms of organization. So, it's not so much organizational design but more about, in terms of management, working that culture so people get totally excited about it. It's really about a paradigm shift and reinventing the way we do innovation.

NB: And could you give an example of how in an organization you would motivate the employees, in a cultural way?

FB: Well, one of the cultural way is to « make sustainbale irresistible »© and you bang it every time. And when people come to you and they show a solution that is sustainable, you say :

« yes but is it irresistible? ». Like, the one thing I heard people tell me about the 50L Home is : « I've got an idea. How about a timer where you can cut short your shower down to three minutes? » and I typically reply« Well, this is insane. I don't want to be living on a three minute shower. I need my relax time. I need to indulge myself. I want to cut the water usage whilst enjoy my 10mn morning shower…!". For some reasons, the world has decided that sustainability will be a trade-off. And that it's coming with cost. And I'm saying "no!". This is what the world is saying, and the world is creating very dramatic imagery of the worlds of tomorrow. Well, let's change all of that. Let's create a world where tomorrow will be so amazingly more extraordinary that whatever it is today, right? And so, it you start with that mindset, then you're into a very different picture and you're into a new innovation land. And so, for me, this is the cultural change, it's to "make sustainable irresistible"©. Don't talk to me about costs, don't talk to me about trade-off. Talk to me about amazing ideas, amazing things that consumers love and let's make those sustainable. So, this is really cultural change, really getting people to absolutely believe, see with their eyes and start to make. Diapers that are upcyclable I mean, consumers love that stuff. When you got a baby in your life, especially now, you really want to think that the world is going to be sustaining and it's going to be beautiful. And so it's an amazing idea. But then you need to create all the possibilities to make the collection easy, to make the purchase easy and all this is about building irresistibility into the proposition. So, that that would be the short answer, there's many more to what we do but I would say really creating a culture of making sustainability irresistible at P&G is definitely one of my big undertaking. And it's been tough because people default to a trade-off.

NB: Yes, it's basically making sustainability not like an option that takes out the quality and the comfort, but something that adds to it.

FB: Yes, exactly. And too often it's like "you need to cut this off" and I'm like "no, I'm not cutting my short time. No way you can do that. I actually wanted to go longer. How about we go longer? How about I even take a longer shower than my 10mn – and yet make it fully sustainable?". That's my paradigm shift. That's what I tell people. And when you get with that, I mean people are like "I don't know what you mean. Like, what are you talking about?" and "Yeah. I want a longer shower. And not only I want a longer shower, but I want to shower with lots of foams. I want a shower where fragrance is all over me….". I'm not talking about trade-off but for some reason if you say that and you're a sustainable innovation manager, people will look at you and say you're crazy. No, I'm not. It's actually doable – and I'm not going to tell you how we could make this happen because it's secret – but we are proving we can raise the bar high on driving better delight – whilst be sustainable. I simply refuse Sustainability be a synonym of trade-off, or less/less bad and horrible. Lets "Make Sustainable Irresistible" ©

NB: And in terms of, well you've already said it I think, but obviously there are mindset changes that need to happen in terms of individual managerial skills. Have you seen other changes in the way you manage? And as you said, having an opposite mindset, like even going further. Do you have other examples of new skills?

FB: Well, I think this was a question about what was my own experience? I think there's a few things here. I think you need to develop a level of empathy. You need to absolutely immerse yourself. I would never have become the head of sustainable innovation at P&G, without being actually on the ground in India, in Africa, having actually created a community centre in one of the biggest slums in Africa, in Kibera. So, you need to be literally on the ground and immersed. I would have never created neither the 50L Home if I had not been in Cape-Town when the drought hit them and they were rationed to 50L brutally overnight. So, I think there's really something around empathy, and true personal transformation. I believe it's just very difficult for an organisation to declare itself sustainable if it's just going to be about trying to attain a rationale goal. You're going to have to really create a lot of empathy through immersions or other quests to really internalize what you're after. And then it becomes authentic. I call that authentic leadership. One of my reference book is from Roberto Verganti on “meaningful innovation”. He’s got a whole process about meaningful innovation, you'd love that. And what I find is that I was practicing his theory with my technical partner as we were inventing 50L Home – without even knowing it. Most importantly, Roberto starts with a foundational question - really linked to my empathy point: “Ask yourself what is the gift that you would want to offer to the world?”. You know, when you give a gift to somebody you really look forward to the moment the person opens it. It makes as much pleasure to you than to the person you're gifting. And that's what you need to think for meaningful innovations to the world. This is what and my technical partner decided we were going to give – i.e. a 50L Home as a gift to the world. And that becomes an obsession and it's just part of your life. It's never getting away. But it's the gift. So, I think there's really something about empathy, immersion for true authentic leadership. That's really important. That goes beyond the goal. Otherwise, it's just a rationale number on a piece of paper. The other key point is really about envisioning. It's a difficult one but if you're not putting yourself ahead of the curve, basically you'll find yourself very quickly obsoleted. So, It’s about offering a gift to the world and anticipating the big changes and changing paradigms. The third is diversity of your innovation network, in terms of being really surrounded with very diverse groups of thinkers, people. I'm not talking just about gender diversity. It’s about the diversity of the groups and inclusion. It’s a lot about listening and making yourself understood. Diversity and inclusion have to step up a big way. And, last but not least, is what I called the power to abandon things that used to work in the past... And how you obsolete yourself to be the next learner. These would be all key traits of leadership that I learned about myself and others in that space. They are not very specific to sustainability. They are all about learning organizations. But I would say, given the context of sustainability, and the fact that it's a very high momentum topic and phenomenal right now, I think it's even more true in sustainability that it hits maybe, in other parts of innovation.

NB: Yes, based on the interviews. I think that my conclusion will be that it's more about management and organization and transformation and a set of mindsets and skills. And not so much about technology. Also, it's about that obviously but..

FB: You're absolutely right. The technology it's almost the easy part. Or more like the easier path. And if it's that where you're heading for your conclusions, as far as I'm concerned, you're heading the right way. And I'm not talking just in the name of P&G. I am of course in many different quorums and sustainability intelligence sessions. This is exactly what I live thru as per the 50L Home coalition, for instance. We're not having conversation about technology, we're having conversation about how we can create the most powerful multi-stakeholder groups public-private. How we can further unleash the dynamic of the team, how is the mindset? Are we raising our ambitions high enough? These are the very true conversations we're having. And once you have that right, technologies will follow. I feel we need now, more than ever, a mindset of transformative change, systems change, complex systems change that are actually not about what I can do in my own isolated business to deliver money and compete. But how we can be both a "Force for Growth and a Force for Good", as per one of our key motto as P&G Company. It's way more complex, but it's way more exciting.

NB: Yeah, I was searching for different mindsets, but it appears that a lot of sustainable innovation managers are or like in my sample at least they are all thinking the same way.

FB: As far as I'm concerned, in Sustainability more than anywhere else, I think there's a much more enhanced need to see the whole and to be very human-centric. The peers I typically meet with in other companies have mostly gone through a personal transformation. So, it does not surprise me that you see those traits coming off from your interviews. You can be a great business or innovation leader, with no much heart. I think it's much more difficult when you aim for sustainable business or innovation, altogether. Yes, there's a lot of heart into Sustainability, which is good. At same time, we also need to be absolutely rigorous on defining the metrics for success – and tracking it with water-tight systems. At P&G, our sustainability goals are scrupulously based on science-based targets – and the famous 1.5C global warning limits. And we have embraced the best tools, processes and systems again to track and measure our progress.

NB: Yes, fortunately, sustainability is more about compassion. Well thank you..

FB: Thank you. I think your conclusions are probably heading the right way. You need a big heart and beyond too, as per my last point you need robust systems and processes to track progress and deliver. In short, big dream & ambitions, yet with metrics. Everybody aims for dream. We have projects that really make people dream and want to jump in and do it, like there is no tomorrow.

NB: Yes, thanks for that. I hope my conclusion will..

FB: Yeah. Absolutely. I look forward to reading it. So this is your commitment.

NB: Yes, of course I will send it to you once is finished.

Appendix 15 – Table interview N°5

Interview length	46 mins
Name of interviewee	Franck Lecomte (FL)
Function	Innovation & Sustainable Growth Director
Company name	Spadel
Core business	Consumer goods
# of employees	1300

Appendix 16– Interview N°5 transcript (July the 9th, 2020)

NB: Avez-vous des questions ?

FL: Non, ça me semble très intéressant et assez moderne comme approche. Il y a une certaine originalité chez Spadel sur le sujet.

NB: Donc concernant la première partie, si vous pouvez vous décrire brièvement, ainsi que votre parcours universitaire et professionnel, et quel est votre poste actuel aujourd'hui chez Spadel?

FL: Très bien. Je suis français, j'ai une formation d'ingénieur agro ParisTech. J'ai fait un MBA en finance à la Business School de Lyon, début des années 90. J'ai eu des fonctions commerciales, marketing principalement dans le début de ma carrière pendant dix ans : chez Orangina, Pernod Ricard en France et à l'international. J'ai vécu en Argentine, au Mexique, en Suisse, puis à Paris. Je suis passé à la direction générale des Grandes Sources de Wattwiller en 1999, qui a été racheté par Spadel en 2004. Puis j'ai évolué dans le groupe Spadel avec des fonctions principalement de direction de business unit en France, UK, le rachat de Carola, voilà pour faire court. Et depuis deux ans maintenant, j'occupe la fonction de direction, ce que l'on appelle en anglais Innovation and Sustainable Growth, donc innovation et croissance durable. Qui comprend trois piliers : un pilier innovation technique, innovation packaging et innovation produit. Un pilier développement durable, où on définit la stratégie développement durable groupe. Et puis un pilier du nouveau business model, du « new route market ».

NB: Ok merci. Du coup, est-ce que vous pourriez aussi expliquer ce que fait Spadel en gros? Par exemple, les activités, les secteurs de l'entreprise, en termes de nombre d'employés et de pays d'activités, comment ça se situe ?

FL: Oui, donc en termes de chiffre d'affaires : 300 millions d'euros. 1300 employés. Nous sommes présents dans 5 pays : Bénélux, France et Bulgarie. L'activité en termes de produits, c'est principalement de l'eau en bouteille, plate, gazeuse, aromatisée. Dans certains pays, en particulier au niveau du Bénélux, des gammes de limonade plate et gazeuse, de boissons avec du jus de fruit et/ou du gaz.

NB: Et donc, dans quelle mesure Spadel est innovante et durable aujourd'hui ? Peut-être pour cela, est-ce que vous pouvez expliquer les derniers projets sur lesquels vous avez travaillé pour mieux comprendre?

FL: Dans notre processus d'innovation, il y a deux grandes clefs d'entrée. La première, c'est la clé d'entrée du consommateur, qui est la clé d'entrée principale, qui se base sur des études de tendances, sur des focus group pour comprendre les attentes du consommateur en matière d'hydratation. Il y a aujourd'hui deux grands types d'attentes : une attente de packaging plus durable et plus vertueux, et une attente d'ingrédients plus durables et meilleur pour la santé. Ça c'est la première clé d'entrée. La deuxième, c'est une stratégie CSR/RSE qui fixe les grandes lignes de développement. Dans cette politique RSE, on a notamment un engagement sur la réduction de l'empreinte environnementale, c'est-à-dire la réduction de l'empreinte carbone. Donc, on a des engagements forts en termes de réduction d'empreinte carbone. On a des engagements forts en termes d'intégration de matériaux recyclés dans les emballages. On a des engagements forts en termes de réduction du poids des emballages et l'intégration de matériaux biosourcés et/ou recyclés dans les emballages. Ces grands engagements sont aussi une autre clé d'entrée dans l'innovation durable. Donc deux choses : le consommateur, puis les engagements internes que l'on a.

NB: Et du coup, les innovations principales sont plutôt sur le packaging, et c'est en fait dans ces packaging-là que vous… Enfin intrinsèquement les innovations sont durables, c'est ça ?

FL: C'est ça. Voilà. Effectivement, les dernières innovations ou les derniers lancements d'emballages durables, c'est par exemple les films, les « shrink film », autour des bouteilles d'eau, qui sont pour certaines marques 100% fait à partir de matériaux recyclés. Ce qui est loin d'être le cas dans l'industrie.

NB: Du coup, dans l'entreprise même, il y a un département innovation durable ?

FL: Oui c’est ça. C’est le département que je dirige qui s’appelle innovation et croissance durable qui associe l'innovation et les grands sujets que l'on doit intégrer dans notre politique générale pour être une entreprise durable. Donc ce que je disais, réduction de l’empreinte carbone et les grandes lignes pour guider l'innovation durable dans une espèce d’écoconception.

NB: Tout à fait d’accord. Alors ce sera très intéressant la deuxième partie, parce que je ne sais pas si vous avez un modèle pour gérer ça, mais dans la théorie, j'ai trouvé que parfois, il existe des modèles pour gérer ces processus et les pratiques liées à la gestion d'innovation durable. Mais si vous n'en avez pas ou même si vous ne savez pas… Voilà je peux vous guider, en tout cas dans les questions. En fait, j'ai trouvé différents composantes et je voulais comprendre à quel point, chez Spadel, ces différentes composantes sont importantes, pertinentes et comment vous les gérer ? Comment vous les intégrer? Du coup, est-ce vous avez un modèle dont vous voulez parler ?

FL: Alors nous, on n’a pas de modèle, on va dire « holistique » pour décrire ce processus-là. On n’en a pas. On a des petits modèles, par exemple, on a un modèle qui calcule l'empreinte carbone, qui est une des briques. Après, on a un modèle de calcul économique, c'est une autre brique. Mais j’allais dire, moi je suis preneur du travail de recherche que vous avez dû faire, et c’est intéressant de voir s'il existe des modèles qui raccrochent le « morceau ».

NB: Mais c'est à peu près ça mon travail, et je peux vous l'envoyer une fois le mémoire fini. En fait, dans la théorie, il n'y a pas de gros modèles holistiques parce que la gestion d'innovation durable, c'est encore quelque chose qui n'est pas super claire et nettement définie. Du coup, c'est un peu ça que j'essaye de comprendre. Mais du coup, voilà par exemple un élément que j'ai trouvé et qui revient quand même assez souvent, c'est la gestion des parties prenantes. Donc, stakeholder management. Et je voulais voir un peu chez Spadel comment ça prend forme, et à quel point ça fait partie de la gestion de l'innovation durable ?

FL: Donc, concernant les stakeholders. Nous on a dans l’approche RSE des stakeholders qui sont clairement identifiés. Des stakeholders qui sont donc des gens qui ont de l'influence, par rapport au sujet RSE, mais qui sont importants. Parce qu'ils ont souvent un avis sur les aspects du packaging et notamment sur le plastique. Donc, ce qu'on a comme type de stakeholder, ce sont surtout des NGO qui travaillent sur des sujets particuliers ou assez générales par rapport au sujet sur l'environnement. Par exemple, des associations de défense de l'environnement, de la biodiversité et de la lutte contre le plastique, des déchets sauvages. Ces gens-là, on les intègre dans la partie RSE. Quand on construit notre politique RSE, on fait des tables rondes et on confronte la stratégie à ces gens-là et on évalue la pertinence des actions et des objectifs.

NB : D'accord donc c'est que pour construire ?

FL: Oui c'est que pour construire.

NB: Donc, il n'y a pas le feedback après ? Parfois c'est dans les deux sens..

FL : Alors par rapport à la politique RSE, car je ne parle pas de l'innovation. Là, on est en amont parce qu'on est en plein dans ce processus. On est en train de redéfinir la stratégie de 2020-2025. Mais le stakeholder management continue ensuite, quand la politique est lancée. Chaque année, on fait des stakeholder management, soit thématiques, soit géographiques. Enfin on n'en fait pas un nécessairement tous les ans.

NB: Et donc, comme vous avez dit, pour l'innovation durable, la gestion des parties prenantes n'en fait pas partie, c'est juste pour RSE ?

FL: En fait, dans les parties prenantes pour « l'innovation », on pourrait y mettre les fournisseurs, que l'on consulte régulièrement pour connaître les types d'études qu'ils, pour voir ce qu'ils ont comme stratégie RSE. C'est un bon moyen d'entrer en discussion avec les fournisseurs. Et puis, une autre partie prenante dans l'innovation, c'est les consommateurs. Donc, ce sont les deux grandes parties prenantes pour le département Innovation.

NB: D'accord, c'est intéressant. Ensuite, un autre point important c'est le business model innovation, donc l'innovation du modèle d'entreprise. Comment chez Spadel, ça a été important de modifier ce que vous proposez, etc. Est-ce que ça a été important ou pas? Comment vous gérez?

FL : On a mis en place une structure qui s'appelle le « Water House Lab » pour réfléchir aux innovations autour du business model. On a lancé un projet dans cette structure-là, qui est un espèce de petit incubateur interne. Mais ça a marché plutôt moyen car ce qui est compliqué, c'est l'alignement avec le business day-to-day. Donc mener des projets d'innovations du business model avec le business day-to-day en parallèle, en fait, c'est très compliqué. On intègre dans les équipes projets des gens qui sont dans leur day-to-day, et il y a beaucoup de monde pour qui c'est difficile de se déconnecter de son travail au quotidien. Et puis, il y a la pression du court terme qui revient toujours sur les membres de l'équipe projet. Donc, voilà, on a lancé un premier projet qu'on a dû mettre un peu en stand-by. En tout cas, on l'a « re-sizé », car il avait beaucoup d'ambition et maintenant c'est devenu un tout petit projet. Donc voilà l'expérience que nous on a sur ce point-là.

NB: Donc, ce qui a été compliqué, c'était de changer le focus vers le long terme, alors qu'au jour le jour, ce sont des challenges à court terme ?

FL: C'est ça, oui c'est ça.

NB : D'accord, mais c'est intéressant. Un autre point important, c'est la gestion des connaissances et de l'apprentissage. Aujourd'hui, une entreprise qui est dans l'innovation et qui s'occupe aussi des challenges liés à la durabilité doit apprendre et gérer des nouvelles connaissances. Il y en a certains qui vont vers l'open innovation, donc, l'innovation ouverte, etc. Et je voulais voir comment ça ça s'intègre chez Spadel ?

FL: Donc nous on a aussi développé ce concept d'open innovation dans cette WaterHouseLab, qui est une manière de faire de l'open innovation c'est-à-dire d'intégrer dans le processus de création des utilisateurs. En tout cas c'est comme ça qu'on a créé le sujet. Dans le processus d'innovation, on a testé très rapidement nos solutions, auprès de consommateurs ou auprès de la cible des prescripteurs. Donc, c'est quelque chose que l'on a fait. Mais de nouveau, je pense que pour réussir dans ce type d'approche d'innovation, il faut avoir une cellule qui a une vraie liberté d'action en marge du core business. Ça c'est une première chose. Après, on essaie d'impliquer et d'avoir des relations fortes avec les fournisseurs, qui eux-mêmes ont des départements R&D importants. Et dans ces départements, ils font des études de consommateur. Ils ont la possibilité de faire du prototypage. Et on raccroche aussi ces sujets d'open innovation dans cette manière de faire, c'est-à-dire en proposant nos sujets d'innovation à un ou plusieurs fournisseurs, qui eux-mêmes ont la connaissance. Et puis, un autre point, on est les membres fondateurs d'un accélérateur dans l'agri food ou la food tech, qui s'appelle ToasterLab. Donc on fait partie du board, on fait partie des membres du jury qui recrutent et qui suivent les start up dans les domaines de l'innovation packaging et l'innovation des nouvelles boissons. Donc on a un espèce de poste d'observation sur ce qui se passe.

NB: Un autre élément, c'est le fait d'avoir une culture autour de l'innovation durable dans toute l'entreprise et que le top management véhicule ce message, cette responsabilité-là. Je voulais voir comment chez Spadel, ça prend forme ?

FL : Alors, ce qu'on a fait pour effectivement distiller ces messages-là, on a créé une plateforme de changement qui s'appelle « Source of Change », qui est une plateforme qui regroupe les engagements pour un packaging durable. On est plutôt sur l'aspect packaging durable. Et on a vu dans l'innovation durable, pour nous le packaging c'est 80% du sujet. Donc, cette plateforme est articulée sur quatre grands piliers : se réinventer, réduire son impact sur l'environnement, recycler les matières et faire son travail de responsabilité vis-à-vis de la société avec un pilier de restauration. Où on supporte des initiatives qui vont dans le sens de nettoyer la pollution par exemple et on a un partenariat avec une NGO qui s'appelle SeaCleaners, qui a la mission de nettoyer les océans. Donc on a cette plateforme-là, sur laquelle on a un rythme de communication interne et externe assez soutenue parce qu'on publie chaque semaine un poste sur un sujet donné. Ça c'est une manière forte d'impliquer le top management. La deuxième manière de faire, c'est que moi, je suis membre du comité exécutif et donc du coup, je suis directement en relation avec le top management de l'entreprise et on a un suivi d'indicateurs trimestriels sur notre politique RSE et sur notre politique de packaging durable.

NB: C'est donc une priorité, quelque chose d'important, qui est assez bien communiquée. Et du coup, quel est l'élément qui est, pour vous, le plus important dans l'innovation durable chez Spadel et qu'on n'a peut-être pas mentionné ? Ou quelle est la plus importante, selon vous? Donc, j'avais cité quelques éléments mais peut-être que j'en ai oublié, et qui pourtant existent de votre côté pour gérer l'innovation durable. Peut-être le reporting ou measuring ? Je ne sais pas si vous voulez parler aussi de ça, mais de façon générale, quel est l'élément le plus important? Parce que de tête, j'avais l'innovation du modèle d'entreprise qui est centrale mais comme vous aviez dit que c'était celui où il y a eu des difficultés, je me demandais quel était le plus important ?

FL: Oui, je pense que le point le plus important, c'est d'avoir une plateforme d'alignement interne sur le sujet de l'innovation durable. Qui est une plateforme où on fixe des objectifs et des ambitions. Et deuxièmement, que l'on suit en permanence en termes d'évolution et qui donne un cadre de travail. Ça, c'est pour moi l'élément déterminant. Et nous, on a appelé « Source of Change », c'est la plateforme de base.

NB: D'accord, par rapport au reporting, j'imagine que c'est plus quelque chose plus lié au CSR, mais dans l'innovation durable, ça a aussi du sens ?

FL: Dans la prochaine stratégie CSR, on va intégrer un volet innovation durable fort. C'est-à-dire, qu'on va intégrer nos engagements de packaging et les engagements produits. Et donc, ce qui est intéressant en termes d'organisation, c'est de faire un lien entre l'innovation et le développement durable. Et moi, j'interviens sur les deux sujets, mais quand ces sujets sont trop séparés dans l'entreprise, il peut avoir un effet de « disconnect ».

NB: Et dans quelle mesure cette dissonance intervient ?

FL : Par exemple, si la direction d'innovation et la direction du développement durable ne sont pas interconnectées, la direction du développement durable a tendance à travailler sur des objectifs très corporate et pas forcément très business. La manière de l'intégrer dans le business, c'est de rentrer par le pôle de l'innovation. Parce que dans la politique RSE, à mon sens, les engagements pour l'environnement se traduisent par des implications sur les produits, en termes de matériaux, en termes de composition, en termes de recettes, etc. Tous ces sujets-là matériaux, recettes, composition, etc. sont des responsabilités d'innovation.

NB : Oui, c'est ça. Donc, l'intégration dans la stratégie de l'entreprise de l'innovation durable, c'est le plus gros élément, que ce soit via la plateforme ou que ce soit via cette espèce de mélange de l'innovation et de la durabilité pour atteindre des objectifs ?

FL. : Oui c'est ça.

NB : Ça confirme un peu ce que j'avais vu dans la théorie, donc ça, c'est intéressant. D'accord, mais du coup, pour la troisième partie, même si vous avez déjà mentionné les quelques challenges que vous avez rencontrés, est-ce que vous avez rencontré d'autres obstacles par rapport à l'innovation durable que vous n'avez pas encore mentionné? Que ce soit dans les processus ou dans des projets ou autres ?

FL: Oui, il y a un autre dont on n'a pas parlé. C'est que quand on parle d'innovation durable, on tombe rapidement dans les sujets de nouveaux packaging, de nouveaux matériaux, de nouveaux ingrédients qui ne sont pas forcément aujourd'hui disponibles d'un point de vue industriel. Et il y a une forte tension entre ces sujets de moyen terme, où il faut y dédier des ressources, du temps, il faut de l'argent ; et des projets de court terme qui sont relativement simples et qui sont toujours prioritaires en termes de timing. Et donc là on a un exercice pas simple, c'est d'essayer de concilier les deux. A la fois, l'innovation long terme, qui est un peu toujours l'innovation de rupture, et l'innovation court terme, qui est souvent une évolution plus qu'une innovation. Et qui pour le business, est souvent perçue comme la plus importante.

NB: Et c'est ce défi-là… Est-ce que vous l'avez déjà contourner ? Quels sont les différents moyens que vous avez trouvé pour le contourner ?

FL : Un des moyens, on revient toujours au sujet de la plateforme d'alignement, c'est à partir du moment où on a une plateforme d'alignements où on a les objectifs court terme et long terme, qui sont des objectifs dans lesquels on peut inscrire le travail au quotidien. Ça c'est un cadre assez strict, et ça permet d'équilibrer le travail.

NB : D’accord. Après, je voulais aussi vous demander si vous aviez un processus, parce que certaines entreprises sont plus axées sur ça, sur le côté étape de l'innovation ou les étapes de fabrication d'un produit. Donc en passant par l'idée à la commercialisation. Comment est-ce vous intégrez le développement durable dans ce processus d'innovation, si vous avez des pratiques spécifiques ?

FL: Oui, on a un processus de stage-to-gate, qui est un processus assez classique dans l'innovation. Avec une étape d’idéation, une étape ensuite de formalisation des idées, une étape de développement, puis une étape de passage en production.

(Coupure de l’entretien dûe à une perte de connexion)

FL : On en était où alors ?

NB : Vous parliez du processus stage-to-gate et je vous ai perdu à partir de ce moment-là.

FL : OK. Dans une des étapes, celle de la formalisation des idées, on calcule l’empreinte carbone et c’est comme ça qu’on intègre et qu’on mesure l’impact environnemental des innovations.

NB: Oui d'accord. Du coup, par rapport aux implications plus managériales, donc la dernière partie, qu'est-ce que vous en tant que vous en tant que directeur, ou auparavant en tant que manager ou à la tête d'un business unit, par rapport à vos compétences managériales, quelles ont été les différents changements que vous avez perçus en gérant d’innovation durable? Est-ce que vous pouvez un peu m’en parler? Comment vos compétences managériales ont évoluées depuis que vous gérez l'innovation durable ?

F.L. : Écoutez je ne sais pas si elles ont beaucoup évoluées. Le service de l’innovation c’est un département très orienté service et qui est interne d’une part. Donc il faut avoir cet esprit-là d’être au grand support du business. Et puis d’une autre part, c’est aussi tourné vers l’extérieur. Il faut en alerte, ouvert sur le monde extérieur. C’est en tout cas la manière que j’ai eu de travailler jusqu’à présent donc voilà.

NB : D’accord, donc être plus orienté vers les consommateurs et services ?

FL : Oui.

NB : Et en terme de façon de penser ou même de gérer des team. Est-ce que vous avez rencontré des difficultés ? Comment vous avez développé certaines compétences que vous n'aviez pas auparavant?

FL : Par rapport à cette expérience-là, je n'ai pas forcément développer des compétences. J'ai l'habitude de gérer des grandes équipes. Donc là, l'équipe en l'occurrence elle est beaucoup moins importante. Donc en termes de style de management, je n'ai pas grand-chose à dire sur ce sujet-là.

NB : D'accord. Mais voilà, j'ai posé à peu près toutes mes questions. Après, est-ce qu'il y a quelque chose dont vous n'avez pas parlé et que vous vouliez parler par rapport à Spadel et à l'innovation durable ?

FL : Non, mais au mois de septembre, on va lancer un webinar sur l'empreinte carbone, à destination principalement des stakeholders et des clients. Pour expliquer la démarche d'empreinte carbone et de neutralité carbone au sein de Spadel.

NB: C'est dans quel objectif le webinar?

FL: L'objectif, c'est d'informer, sensibiliser les clients sur une étape majeure que l'on est en train de franchir qui est la neutralité carbone.

NB: D'ailleurs sur ce même sujet, dans une précédente interview, un manager m'avait parlé d'éduquer les employés et les stakeholders de façon générale sur le développement durable, l'innovation, etc. Est-ce que cela se fait chez Spadel également ou pas?

FL. : Effectivement, on essaye de communiquer sur l'activité du département donc de nouveau au travers de la plateforme sur le packaging durable, où on inclut l'intégralité des initiatives autour du packaging. Et c'est une communication interne qui est un point très important du dispositif.

NB : Mais écoutez, merci beaucoup pour votre temps.

Appendix 17 – Table interview N°6

Interview length	54 mins
Name of interviewee	Sophie Ponet (SP)
Function	Director of corporate affairs Europe & Russia
Company name	Levi Strauss & Co.
Core business	Apparel
# of employees	15 000

Appendix 18 – Interview N°6 transcript (July the 10th, 2020)

NB: If you have any questions now, don't hesitate or even like during the interview…

SP: No, it's all clear for me. So, we can go.

NB: Perfect. Well, then first, can you briefly describe yourself, your academic background and your professional background?

SP: Yes. So, in terms of academic background, I have made different studies. I first graduated in translation, English, German and French. I'm Belgian, I live in Brussels. And then, after that, I've made studies in the same school as you but the Flemish one, KUL. So, I graduated in marketing and communication with a kind of post-graduate in communication. So, that's my background. And I've always worked in communication but in different aspects of communication. I started my career in a creative agency. Realized it was not really my stuff so after one and a half year, I moved to the advertiser side at Toyota working on developing communication campaigns and TV ads, magazine advertising and so on. And then after Toyota, I moved to consultancy, working for a communication agency during seven years on different kind of accounts, going from the car industry to fast moving goods, but also H&M. So, really a great diversity of account. After that, I went to Nespresso, really at the start of Nespresso around 2008, when Nespresso is starting to get awareness, when the campaign with George Clooney is starting so quite famous. So, I worked there for seven years, doing both communication campaigns, but also relationship with journalists and internal communication for Belgium and the Netherlands. And I went to Kellogg's and there I became corporate affairs director for France, Belgium and the Netherlands. That was the second biggest cluster in Europe.

NB: Director of what? I didn't understand…

SP: Yeah, so we were organizing clusters. And I was working for the cluster France, Belgium, Netherlands, and it was the second biggest cluster in Europe, after UK and Ireland. And there I was dealing with all aspects of communications. So, really from internal communication, crisis, corporate sustainability, really everything related to the reputation of the company. And, I joined Levi's two years ago. And so, I'm responsible for corporate affairs in Europe. I was just promoted two weeks ago for the job of director for entire Europe and Russia on corporate affairs. So, here again dealing with all aspects of communication. I'm not dealing with advertising campaign. I'm really focusing on corporate. Sustainability is a big part of my job. Dealing with requests from NGOs, consumer associations, entertaining relationships with stakeholders, all those kinds of aspects. Of course, dealing with the crisis of Covid, developing all the communication we needed in that context. So, I'm really passionate about communication. At some point of my career, I was offered to go much more in the direction of marketing, but I stayed true to communication. Along my career, I gained skills in different aspects of corporate communication.

NB: Then maybe, can you explain what the company is doing, the main activities, the sector, the number of employees, the different countries you work in so I can get a very clear view of Levi’s?

SP: Yeah, I can also send that separately, but we are present in more than 110 countries. We have more than 15 000 employees. But we are not a big player. Sometimes people are thinking that we are a huge company. It's not the case, for an apparel company, we are quite small. Last year, we were a five 5,8 billion dollars company. We went back last year to the stock market in New York. It was the second time in our history that we were going to stock market, which was last year on March the 21st. And we have different brands. Levi's is the most well-known brand. So, it really jeans but we also develop tops and we expand it in categories like women, kids, but also accessories in order really to position ourselves as a lifestyle brand, I would say. The second brand we have and it’s also quite well-known in Europe for young men I would say, it's Docker's. That brand is much more focusing on chinos. And then in the US, we also have two other brands, it’s Denizen and Signature, but we don't have them in Europe. So, I would say that we exist since 1853 and what we like to say is that we are a 167-year-old start-up. Because a couple of years ago, it was not going well for Levi's, we lost half of our turnover. And since Chip is our president, he really… Like what's really key in our company, I would say, is that right from the start we wanted to drive the business according to the value. And so, we really have a value-driven business approach. In every decision we make, we really try to integrate our values and our values are empathy, originality, integrity and courage. And that's really important for us. It's really to drive the business, but also to ensure that garment factory workers are well-paid, are working in good conditions, to ensure that we respect the environment and we evolve on that matter. What we also find important is that when we find some technologies quickly, we open source them to ensure that the entire industry can benefit from them. So, I would say we are a small company, but still very innovative and trying to keep that mindset.

NB: And as you said, innovation and sustainability are inherently to Levi's, so how does sustainable innovation manifest in the company? Is it like I mentioned in the intro, a specific department or is there two departments or is it just in the global strategy? So yes, how does it manifest?

SP: I would say that it's really a good collaboration between design department, marketing and supply chain to ensure really that right from the start, when you start drawing sketches and thinking about a new collection, you also integrate the sustainability aspect of it and the supply chain aspect of it. And also, the challenges that we have. What helps is that in 2003, we created the Eureka lab, a lab next to our offices in San Francisco working on the technology challenges for innovation. One of the biggest innovations coming from that lab, and I can send you information about that, it's what we call the future finish. So, when you've got a jean, normally to finish the jean we used to have at least 12 different stages. Most of them manual stages and sometimes with some chemicals or using stones to have a used effect. Now, what we have is that we've developed a laser technology. And so, in less than two minutes, the laser is finishing your jean and it's quite impressive. I can send you an article with a video in it. I went to the Polish factory last year, and I saw those machines and it's really impressive. And then based on that, you can give up everything because you're reducing the finishing stage while also reducing the impact on environment and chemicals and so on. But you can also do all the designs you're thinking about. When I was there last year, it was just before the summer and they were finishing some jean shorts, for girls and they had that kind of pattern... How do I describe this? You have either the pattern with Levi's written on all the shorts, but you also have the kind of feline patterns. So, the creation is unlimited. And what we did, for example, with that technology is that it's now available on the website. Currently only in the US for the jeans. But in Europe, you can also customize some T-shirts and so on. So, it enables also to put the creativity in the hands of the consumer. Because you can decide then: OK I want to create my own jeans, I want to have a whole at the level of knee and so on. And also, the jean is made just for you, so it reduces the waste. Because when you develop kind of an original collection, either it pleases the consumer, either not. And then you remain with a lot of stocks and we want to avoid that. That technology enables us to develop the jeans and then to finalize them to a distribution centre. Because the laser machine now is also in the distribution centre, so it enables to better fit the demand and to optimize the production. But that's just one of the examples. But I would say it's really the development between the technology and having a technology partner. For the laser it's Jeanologia, a Spanish company. We have the designers and then the marketing to support the story and to support the development of the collection.

NB: So, when I when I told you sustainable innovation, it didn't sound weird. It's something that is embedded and managed as a whole at Levi's, right?

SP: Yes. I can give you another example. So, Paul Dillinger is our VP for creative development. He's a designer. And I think it was already two years ago, he worked on the collection using hemp. I don't know if you know what it is.
NB: Yes.

SP: OK. So, the advantage of hemp is that it's using less water than cotton. Because in our collections, denim it's cotton. So, we use a lot of cotton. And the negative side of cotton is that it requests a lot of water when producing. So, two years ago we launched a first hemp collection and we had some restrictions. So initially, the first collection, it was just a couple of pieces, what we call a capsule collection and only white. Because at that moment we couldn't deal with the dying of the hemp. Because the problem also of the hemp is that it's quite rough, it's not soft and not nice to wear. So, it was really a technological challenge to work with that. And then last year, or actually this year, we managed to dye it in blue. And now for the coming collection, we managed also to develop nice pieces for women. And I just offered a T-shirt to my partner, and that's a yellow T-shirt. So, I would say that month after month, we work on that innovation in order to better fit the taste and also to be more creative. But also what's important is that… Initially, it was really a small capsule collection and you had it, I will be honest, in five stores in Europe, that's nothing. We've got 800 stores in Europe. So, it was really limited. Now, since March, the Wellthread collection is available in 120 stores in Europe and also online. It means also that the sustainability part of our collection is increasing. So, that's one example. For a couple of years, we were working also with waterless technology, for the jeans. Because we made a Life Cycle Assessment of the jeans a couple of years ago, and we realized that to make one pair of 501 jeans, we needed 3700 liters of water. It's huge. And now, with that technology we reduced it by 86 %. So, it's also the idea to really embed sustainability for all the products, even for a classical product like the 501. It's really using technology to support innovation and to support sustainability.

NB: So, for the second part, as I told you, based on the interviews that I already did, there wasn't like a clear management model for sustainable innovation. So, I decided to ask more about the different components. And so, I will tell you component that I found in

my research and if you have an example of how you manage this component, could you explain it to me? So, you've already mentioned it, but for example, stakeholder management. You told me that you work with NGOs and associations. So, can you tell me more about how is stakeholder management involved with sustainable innovation management at Levi's?

SP: Yeah, what we usually try to do is that, when we develop a sustainability program, we work with NGOs and we work with local communities. Because we think it's essential to involve local partners. And we also believe that, you know a couple of years ago, I would say 10 or 20 years ago, most companies were seeing NGOs as the enemy, like people challenging your business and making a hard time for you. We see it differently. We see them as partners. And so, we always try to involve them, like also local authorities, in order to develop our programs. I can give you an example. We have suppliers in Bangladesh. And it's in the Dacca region. That region is really suffering from a lack of water. And so, we developed a program there with local authorities because people living in that region, when they need water, they sometimes have to walk 10 kilometres to get water. So, with our suppliers, we helped them finance new technologies in the factory. We worked also with IFC for the financing. And based on that technology, all the water used in the production process can be reused. What we also did is that not only that water can be reused but can also be drained. The water is also available at the factory for the workers. And so, you got to full cycle. On one side, you're improving the production process while also improving the sustainability, and in this context, really the water usage. And you also support the communities by giving drinkable water to the entire community living around the factory and working at the factory. And you support the supplier because it's not their own factory. But you support that supplier with financing and international help on financing. So, it's really trying to impact also on the local community. That's one example. There's one example we didn't communicate yet due to Covid, unfortunately, is that during the month of March, we finalized a big water project in South Africa. So, we have a factory, an owned and operated factory in South Africa, in Cape Town. And you might know that two years ago there was a huge issue of water in South Africa. So, at some point, it didn't have water anymore. So, there also we developed the same technology. We worked with local authorities in order to ensure that we use water from the ocean to make the production and make it reusable too. So, we hope to communicate on that in the summer. I think at the end of the summer. But for the moment, our factory is closed, and South Africa is hit quite hard by Covid19. So, we couldn't reopen the factory for the moment, and we're waiting for the situation to stabilize in South Africa in order to have, first our employees safe at the factory and to work again with local authorities and build the communication on that. But that's really one of, I would say, 10 or 20 examples. That's why I sent you also the sustainability document. We developed that document last year, because many of our teams in Europe were a bit lost, because we've got so many initiatives that they couldn't figure out: okay, what do we do? And that's why we structure it also on four pillars. So, we work on water, on climate, so everything related to carbon, on people and on chemical. So, stakeholder management is really important because as we work on those four pillars, it implies many different stakeholders. For example, for the water strategy, we're working with the WorldWide Fund, we're working with the University of Harvard, so it goes really from universities to NGOs to politicians of course. So yeah.

NB: Then another thing is business model innovation, which means like how right now with sustainability and innovation, companies have to adapt what they propose, their value proposition and the whole business strategy. So, I wanted to know how much that is relevant at Levi's and how much that has impacted Levi's?

SP: We usually say that sustainability is sewn into our way of doing business. So, for us, it's not something next to it. It's really part of it. And I can give an example, and it's not related to environment. It's broader than that. When we talk about values, 1986, and you were not born yet, but you might know that on the West Coast there was an awful disease that we later will call HIV. And so, one of the family members who created Levi's was at the time the CEO of the company, Bob Haas. And he was really worried about the employees. Today, we talk about HIV like another disease but at the time, people were scared, and they were scared that their neighbours or they colleague might be sick. Because they didn't even know at the time what were the consequences, how to a cure it and so on. So, what Bod did is that first he started a funding of the San Francisco Hospital in order to support that community, because we've always been quite open and supportive of the gay community. Then he also started distributing leaflets in the entrance of the company in order to start building awareness around that illness and also to say that it's not an issue if you come to the office and that your colleague is HIV positive, you can still go to the bathroom and you can work with it. And at the time, it was a big step because given the context, he had many negative reactions during this. He had more negative reaction than support. I would say that we are not afraid of sometimes decisions that are not popular. So, we always say that we prefer to make the right choice, even if it's a difficult choice. I would say that we are quite bold. And that's also what we encourage in the company with employees, is that everybody can come as they are. We are really open to all kind of communities, but it's also important that you raise your voice and that you step up. A couple of weeks ago, with Black Lives Matter, in the US, we have an employee group representing the black community and we had them for a while and we also consult then when we've got marketing campaigns or where we have TV advertising, to be sure that it's also aligned with the black community. And with what's happening for the last weeks, we had European employees saying: we want to raise our voice too so can we create an employee representative group? And so now we are working on that group, too. So, we really try also to support the communities inside the company too.

NB: And for example, the thing you said before, that Levi's wasn't as popular like 15 years ago, and then I guess you had to change something or to adapt? How did that happen, did the value proposition or the business model have to be changed or adapted?

SP: I think it was a mix of elements. At the time, it was 10 years ago, there was the evolution of the casual wear. And especially in the US, they were all wearing yoga pants. So, they were less in love with denim because denim was not comfortable enough for them. And we were kind of late in developing, you know, stretch denim and that kind of thing. So, I think there was first a product change. We had to develop the range to better suit what women wanted and looking for more comfort whit what we call also the mom jeans. That was a first thing. I think also that we were not speaking anymore to the same consumer. And so, how we manage it was actually to place Levi's at the center of culture again. That's when we started programs like music programs saying: OK, we've got communities where children would like to do some music, but they don't have the money. The parents don't have the opportunity to send them to music school. And so, a couple of years ago, we started those programs supporting teenagers doing music, putting them into relation with famous singers and building that kind of music program. Those kind of initiatives also helped to reposition Levi's in the heart of the young consumers, I would say.

NB: And you also talked about the importance of technology to help sustainable innovation, like with the development of that laser technique. I wanted to know then how does knowledge management and the fact that open innovation is important at Levi’s, how is that involved with sustainability and innovation ?

SP: Yes, I would say that in most of the cases, we start an innovation alone. But then quickly we try to bring our peers together because we believe that if you really want to imprint a change, you need to gather an industry. So, that's the step that we take. We’re thinking about a technology like Waterless technology, we share it with peers, we open source it. And so, we share all the technological information so then they can use it. And then, we expand it further. That's every time the same battle that we are following. Also, for workers’ well-being program. I would say now, if you take the context of Covid, we decided to give one million dollars to support different communities. But one of the projects will be also for Bangladesh and Pakistan to work with other brands in order to support the workers there. So, we always try to do things also with others and bring everybody together. It's quite known that in the US we are quite close with Patagonia for example. So, we often shared initiates with them because we shared the same objectives of sustainability. Yes, for us it's really important to share things in order to evolve in a better way.

NB: And for example, with Patagonia in the US, is there even a collaboration in the creation, or is it more in the sharing of knowledge?

SP: No, it's much more in the sharing of knowledge and I would say the sharing of the fight we have. For example, we are promoting the fight that employees need time to go and vote. And that's something we do also with Patagonia. It's aligning together and saying: OK, we give time to our employees to go and vote. But what we also do with Patagonia it's sometimes fight for the rights of LGBTQ or for the rights of the migrants. So, even for that kind of social fight, we join our forces because it's taking energy but our CEO really believes that once we got an idea, let's fight to have the other on board and do it together to be more powerful, especially with the current administration in the US. We were, for example, one of the first company banning the wear of guns in our stores. So, in the US, you can't come to our stores with a gun, you will not be accepted. We had a full campaign of the National Rifle Association against us. So, we are not afraid of going against big lobbies like the National Rifle Association in the US.

NB: And I already imagine the answer but the fact that there is a need for a top management involvement and a culture around sustainability and innovation, I guess that's very important at Levi's?

SP: That's really important yes. And I would say everybody has a voice on that. It's not limited to the sustainability team. And even in the company, we don't have a sustainability department. The responsibility is really shared between supply, marketing, corporate teams or the communication team, our CEO. So, I think it's really driven by the values of the people belonging to the company. One year ago, in Europe, we created a group called Enables, it's an internal group representing LGBTQ+ employees. But that group is also driving the way we do pride. Because we've always supported pride for more than 10 or 20 years. It's been a long time we're supporting pride in the gay community, but we've got them as a sounding board. And also, they push us in order to say for example: we want representativity of LGBTQ persons in the company or we find that that visual is not erasing stereotypes enough. And so, they are consulted. And in that group, you can have the receptionist, but you can have a person like Peter Lewin, who is the leadership mentor for that group. And he's really vocal for that group. So, I would say it's the matter of everybody. It's not a matter of one person. It's not only the VP Sustainability who is in charge of sustainability. It goes broader than that.

NB: And you said, you are in charge of communication about sustainability and innovation in the company. So, how does that take place? Are there any challenges in that? How do you create a homogeneous view of sustainability in a quite big group, with many levels as Levi's?

SP: You would say internally or externally?

NB: Internally.

SP: Internally, I would say that we involve people at all level. And how does that work? Usually we work with task force. And so, in a task force, you can have an intern, for example. So, as I said, we are not thinking about one specific project only at management level. And it's really strange because I was coming from other companies and also big companies like Kellogg's, Nespresso, who belongs to Nestlé, I worked for Toyota. So, I was used to international cooperation and when I was doing my interviews to get the job here, I was really feeling the values of the company during those interviews. I remember, and I will be totally transparent with you, I remember talking with my friends around a glass of wine after my first two interviews and saying: well, it's really strange, values are not just printed on the leaflet at the beginning of the year, I feel that those values are living really through the people. And I never experienced that. And my friends were saying: whatever Sophie, let's see if you get the job and we will talk about it again in six months. So OK, maybe I'm living in wonderland for the moment and I don't see the reality. And we had the discussion six months after I got the job or something like that, and I told them: no, it's really embedded in everybody, it's amazing. Every time we see something, we have to do something for it. Like, we had that Black Lives Matter and the murder of George Floyd, and right after that, we challenged ourselves. And we said: OK, we never disclose our diversity figures. Let's do it. We have them. Let's disclose them. And let’s go a step further, let's take commitment. And I think we came out with this data two weeks after George death. So, even if we are a big company in terms of number of people, we are agile, and we are not waiting. In a couple of days, we are taking decisions and I think that's also because, in this company, we are allowed to take bold decisions. Because when we know that it's right, for human rights or for the environment, we go for it. And I think what's helping that, and that's maybe the difference with other companies, is that even if we are a stock exchange company, 80 % of the company still belongs to the family, to the original family who created the company. And I think that makes it also possible that we are not only managed by investors. It means that given the fact that the family who created the company is still involved, and that the values and the stance we are taking are so important to them, we can continue that, and we can keep developing that. I even had the opportunity two weeks ago to speak with Bob Haas. He is the grand grand child of Jakob, who created Levi Strauss. And he is between 65 and 70 years old, I think. And we were talking about LGBTQ rights and it was also the moment that George Floyd died. And he was also saying: we need to do things; we need to keep fighting. He was the one distributing the leaflets in San Francisco in 1986. He was the one also fighting for equal rights or for marriage for people of same sex. Even if he's a senior person, I would say, he has very liberal views. I think everything is driven by family values and the fact that we are not afraid of taking stance.

NB: And in terms of keeping or managing these values, is there some sort of education inside the company or how do you transmit these values to new people?

SP: That's a good question. No, there is no training on LS&Co values, for sure. It's a good one. I think that they live through the different initiatives we support. And the fact that you can always speak openly, and you can go to the corporate communications department and say: OK, I would like to organize a session on LGBTQ rights. And then we set that up. I think it's also to the fact that all designers or marketing people are in contact with many different comedians. And so, they are open to it. Last year we launched a new collection around bodywear because we didn't have that. And for us, when you see the visual, it's clearly no classical bodywear visuals. So, you've got women of all shapes and sizes. It wouldn't be a classical bodywear campaign that you can see in the street. So, we also think differently because we think about how consumers would wear it and so, we take real models close to consumers.

NB: And what would you say are today the biggest challenges regarding sustainability and regarding innovation management and maintaining that Levi's strategy? What are the biggest challenges?

SP: I would say the pressure that we get from externals. And that's also something I was discussing with peers, because I'm also doing public affairs. And I was discussing with other companies that we have the impression that every time we take a commitment, we are challenged and said: OK, but can you go further? And that it's not always possible. It's not that we don't want, it's that to meet the Paris agreement of 1,5°, it's requesting a lot of efforts along the entire supply chain. And when you have NGOs saying: OK, why don't you go to 2°? So, I think it's the fact that civilians are more aware of sustainability and that's good and really positive. But I think that stakeholders and NGOs are more pressing for higher results. And even if we usually try to commit to short term results, it's not always possible, especially when we are in a situation where we only have two owned and operated factories. And all the others are suppliers and that means we need to involve them in our strategy. It's requesting a lot of work, and that's why we also work with other NGOs or other partners in order to ensure that we can do that. But to not own many factories so it's also part of the difficulty, I would say.

NB: And how do you think the way Levi Strauss manages sustainability and innovation today, how this could be improved in order to face these challenges? Or even without these challenges, does the company sees ways to improve and try to improve some types of management?

SP: Yeah, I think that we see ways to improve. The Covid crisis will not help though, in the way that… It's slowing down a little bit the progress we wanted to make. So, we had to rethink a little bit some targets. But today, you can't say: OK, I have a commitment, I'm good. Check the box. So, I think we constantly need to rethink the way we are producing and the way we impact the environment with our production and the way workers are working for us. So, I think we can never stand still. And that's sometimes difficult, especially when you have a crisis, right? Covid19 is unprecedented, you can't compare that to anything. But we want to stay true to all commitments we made but some we decided to extend a little bit the deadline. We say that despite the crisis, despite the impact on our results, we will stay true to those commitments and we will keep working on sustainability. So, we don't want to say, OK, we've got a crisis, it's a good excuse to forget sustainability. No, we say: OK we have a crisis but let's use sustainability to improve our production and to come with better products for the consumers.

NB: And as you have work with sustainability at your level, you said that you have developed skills throughout your career. When you were confronted with sustainability or when you have met other managers of innovation, what would you say are the skills that have evolved or that have appeared by working around a topic like sustainability?

SP: I think you need a good mix between technical people, so people really coming from supply chain. Because then they can understand the technology that is needed, because they know the production process. I think it's also a good mix or collaboration with design, because if your designers are isolated, they will develop a great collection, but they will not take into account the sustainability part of it. And when we see, this year, we extended the use of hemp, but we also use new fibres like Tencel, a fibre made of wood. So, you can't develop that alone because you need also the sustainability aspect of it. The supply chain aspect. I think it's really to say: OK, we need a strong collaboration in order to make it happen and also, we need to support the designer in the way they want to develop things and see how we can make the jeans evolve. Because denim exists for more than 167 years. The advantage of denim is that it's always been sustainable because it was initially developed for mineworkers. They needed really resistant trousers, given the type of work they were doing. So, it was never fast fashion. But still, even if the product is the same, you'll have to make it evolve. Because now it's using less water, less chemicals. The way workers are working in factories is also different. I think you need to include always that sustainability aspect in your way of thinking.

NB: Yes, that aligns we what I got from previous interviews I don't have any more questions. So, perfect. Thank you very much.