



TechnipFMC



A study of strengths and weaknesses found in the iTeam pilot

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Two months into our collaboration with TechnipFMC, the spread of Covid-19 turned the everyday life upside down. We would like to express our deepest gratitude to all our informants adapting to this situation, making time for digital interviews in a situation characterized by insecurity and challenges. However, conducting these interviews digitally seemed to be less of a problem than we first thought - in fact it was a success.

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Executive summary

In this report we argue that iTeam enhanced knowledge sharing and collaboration across departments in TechnipFMC. For the pilot to be further improved, weaknesses with the pilot needs to be addressed. Even more importantly, a number of limiting structural barriers outside the scope of the pilot requires further investigation.

The purpose of the project was to evaluate the iTeam model, a model that was piloted towards one small oil field where TechnipFMC is a supplier of services. The mandate given asked for an evaluation of possible strengths and weaknesses found in the pilot, and this has been seen in relation to knowledge sharing and collaboration across units. Through semi-structured, in-depth interviews with 13 participants, we gained insight into experiences and use of this pilot.

Through our research project we found that participants were overall enthusiastic about the implementation and outcomes of the pilot. Initiating iTeam provided a formalized meeting structure - an important factor for the model to enhance collaboration across units. Further, our findings show that iTeam contributed to the expansion of the individual employees' collegial network, which helped counteract negative effects of silo formation. By embracing collaborative behaviors, iTeam also led to changes in how the employees themselves worked. This included the creation of new knowledge, and it made participants make use of past experiences to solve present problems. In turn, this helped align the ongoing projects in a more proactive and predictable manner. Through these mechanisms, the informants also noticed a change in how their communication with the customer were more unified. This enabled the organization to provide appropriate solutions according to the customer's needs. Overall, iTeam resulted in the participants working more proactively towards their customer.

Additionally, through the analysis of our interviews, we identified possible weaknesses with the model. One of these being related to the employee's dependency on key contributors of the model, notably the main initiators and the leader of the pilot. This is connected to another vulnerability that was found regarding the sustainability of the model's structure. Informants expressed the need for a common "blueprint", which in turn could make the information gathered in the meetings more readily accessible outside of the iTeam meetings. Some also pointed to the fact that the selection of participants contributing to the meetings would have

benefited from a clearer outline, to ensure that all units and disciplines were adequately represented. Lastly, questions were raised regarding the transferability of the pilot to other fields and customers. Some argued that even though this model was seen to be successful in this specific field, its structure might not be equally fitted for other customers of different sizes and complexities.

Through the research of iTeam and its strengths and weaknesses, some more general barriers to collaboration and coordination were also identified. Informants described these both as reasons to why the need for an integrated team was present in the first place, and as explanations to why collaboration can be challenging in the organization. One of the barriers found was the need for a formal anchoring of iTeam in the organization's structure, for instance through establishing routines and practices for collaboration and knowledge sharing. An example of this is how the budgets are assigned to specific projects, which makes it difficult to devote time for added activities to promote coordination. To make these activities more embedded into the organization, management engagement and support is important. Without this support, collaboration and coordination can become a secondary activity, which ultimately causes double-work and loss of opportunities. This is explained by looking at the concept of "sub-optimization", where incentives for performance are conflicting with the interest of collaboration across silos. If an integrated team like this is to survive, it is important that mechanisms like budgeting and incentives support, rather than inhibit the purpose of such efforts.

This also goes for the next barrier found - IT complexity. Due to the fragmented nature of the IT systems in the organization, it is difficult to gather the information needed to get a complete overview of activities towards a customer. iTeam complimented this structure in a way that IT and human efforts were combined to learn from the data available and utilized this into fruitful solutions for the customer. However, iTeam also might have served as a substitute for functional IT systems. By systemizing the information and data that already exists in the systems, the participants were less dependent on navigating through the many complex IT functions. This makes it difficult to gain insight, and our informants expressed a need for such an overview that was easily accessible also outside of the iTeam meetings. Lastly, the fact that TechnipFMC operates in an industry characterized by a high degree of uncertainty, makes it more challenging to prioritize these types of activities. This can in turn cause units to be more

hesitant to unreservedly share information, as their competence may be what ensures their future in the company.

Overall, we found that iTeam has made the different units more coordinated. Sharing knowledge from single projects and combining this towards one field and customer has resulted in more integrated and proactive solutions. By learning and analyzing different cases together, rather than separately, they have utilized the organization's knowledge more effectively. Looking at the weaknesses, adjustments to the original pilot can be done to improve its potential additionally. However, in order to take full advantage of such efforts there are structural barriers that needs to be addressed.

1. Introduction

iTeam was an initiative to strengthen the exploitation and coordination of knowledge resources in the organization. Knowledge sharing and collaboration is essential to the success of large organizations, and in TechnipFMC iTeam was piloted to promote this across different departments. This report will explore strengths and weaknesses in how the iTeam pilot was conducted, and what barriers were found on a more structural level. Before we go more deeply into the main topics of the project, we will give a brief introduction of the industry in which TechnipFMC operates.

1.1 The service and supply industry

The discovery of the Ecofish field in the North Sea in 1969 marked the start of a new era in Norwegian history. Since then, national and international actors have established their presence at the Norwegian continental shelf. Through the 1980s, Norwegian service and supply (S&S) companies developed technological competency which made it possible to handle the technological challenges in the North Sea. By being Norwegian, these companies had an advantage - but they still had to compete (Ryggvik & Smith-Solbakken, 2018). In terms of turnover, the service and supply industry is Norway's second biggest industry (after the sale of oil and gas), and consists of more than 1250 different companies. This industry has developed through 40 years of Norwegian petroleum enterprising and is today a highly competent and international competitive industry. In 2014 the Norwegian S&S industry earned 527 billion NOK, whereby almost 40 percent of these were in international markets (Ministry of Petroleum and Energy, 2016).

Since 2014 however, with the decrease in oil prices, the S&S industry has experienced significant challenges. With oil companies reducing their investments and postponing or cancelling projects, this leads to continuous reduced orders for the supplier companies. Because of this they have had to adapt their capacity, which again has led to lay-offs of many employees (Ministry of Petroleum and Energy, 2016). The oil price peaked in late 2013, and reached its lowest in January 2016. In 2018 the production value increased by 25-30 percent and both employment and investments pointed weakly upwards, but in 2019 the petroleum prices were back to the same level as in 2016. Despite this, the sector was still being optimistic - in August 2019 they estimated that investments would increase by 15-20 percent again. New field developments after 2017, followed by heavy investments in 2018, was also predicted to lead

to growth in the service industry (Skullerud, 2019). It is, however, important to keep in mind that geopolitical circumstances and economical conjunctures will keep causing fluctuations in the oil and gas industry. While conducting this research project, the coronavirus pandemic resulted in yet another situation with major impact on the world's economy. The pandemic first started to spread in China but was rapidly affecting all parts of the world - including the Norwegian oil and gas industry. Only months after having an optimistic view on the future, the insecurities connected to the spread of the virus, along with other political decisions globally, has led to a cancellation of all new projects in 2020 and a cut in costs up to about 50 percent until 2022. This will have dramatic consequences for all Norwegian service and supply companies, including TechnipFMC (Haugan, 2020).

Based on the geographical location, one can divide the Norwegian S&S industry into different specialized segments. In the Oslo and Akershus-region one will find well-established engineering hubs working closely with knowledge-based services. Trondheim is the center of research and development, while the Bergen-region has developed to be the main area for maintenance of platforms and underwater equipment. In Kongsberg the main focus over time has been to develop subsea technology, automation and dynamic positioning equipment. In the south of Norway, one will find world leading drilling companies and the north-west region has a maritime hub representing a complete shipbuilding- and equipment network for advanced offshore vessels. The specialized and technology-intensive S&S industry contributes to a knowledge base which is relevant for other parts of the society as well. The number of employees, a large geographical spread nationwide and a place in the international “big league” for petroleum directed deliveries is proof that the long-term priority of building a strong Norwegian service and supply industry has been fruitful.

1.2 Case description

TechnipFMC is one of the service and supply (S&S) companies with locations all over the country, including units at Lysaker (Oslo/Akershus), Kongsberg, Bergen and Stavanger. Technip (originally a French company) and FMC Technologies (American) merged in January of 2017 and holds today a total of 37 000 employees in 48 countries. The company provides engineering and construction activities in all related segments within the industry; subsea, onshore, offshore and surface technologies. The company's global headquarter is situated in London, extended by two operating headquarters in Paris and Houston. In Norway the

organization employs over 3000 people. TechnipFMC in Kongsberg produces control systems which is sold to the customers. When they finish a project, the unit in Bergen then helps the customer install the control systems and does maintenance and service on these systems afterwards. At Lysaker, they work with software related tasks such as measurement and surveillance, among other things. The different departments have different types of contact with the customer.

The different geographical units have either been part of Technip or FMC before they were merged as TechnipFMC in 2017. Before this restructuring both companies have been offering solutions for the offshore market needs along the whole value chain: From conceptual design to system delivery, from asset management services and facilities, to support for the daily operations and maintenance of client-owned tools and equipment. Because of the demands in the oil- and gas industry, the company is working towards becoming more of a service delivery organization, rather than mainly project based. There has been increasing demands for the ability to coordinate and collaborate across departments. According to our mandate, problems such as double work and fragmentation in the organization were two of the challenges identified. One way of addressing these challenges has been to introduce an interdisciplinary working model, where people from different locations, departments and backgrounds gather to share information and collaborate more frequently. Our case examines how TechnipFMC has introduced such a working method through a pilot project named *iTeam*.

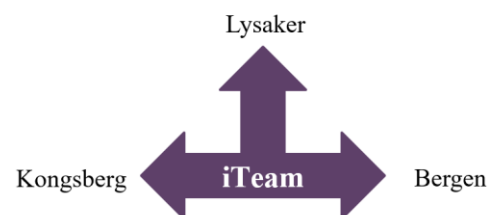


Figure 1

As stated in TechnipFMC’s brochure from 2019¹, “Successful life of field service hinges on three factors: integration, communication and coordination”. By asking how to reduce complexity and working together to be more proactive towards the customer, the iTeam pilot addressed these exact factors. One idea on how to work on this was to bring together the integrated team (iTeam), where employees with different competencies met frequently in a forum for sharing information about current projects. iTeam gathered around 5-30 employees,

¹iEPCI Brochure May 2019. From: <https://www.technipfmc.com/en/what-we-do/subsea/iEPCI-subsea> [18.05.2020]

depending on who was invited and who chose to participate. They represented different geographical locations and departments in weekly, mostly digital, meetings. It was launched in 2018, lasting for approximately 18 months and were directed at one customer operating a small field in the North Sea. In our report we want to explore if such a working model can increase the ability to enhance collaboration and to share knowledge. This gives us the following research question:

What are the strengths and weaknesses found in TechnipFMC's iTeam Pilot in relation to collaboration and knowledge sharing?

To answer this, we will further contextualize the participants' experiences in relation to relevant literature to identify knowledge applicable for the pilot model. Existing literature on silos, knowledge sharing and organizational learning will function as a theoretical foundation, to use for further analysis. The findings in our report may be more important than ever, seeing that TechnipFMC Norway is now cutting back 700 employees because of the ongoing international crisis in the industry (Lorentzen & Kvamme, 2020). Having such a dramatic restructuring in the company calls for new ways of organizing and working together cross-sectionally. Grounding our discussion in relevant theory can help identify what factors are important for integrating this into the organization. Before moving on to theory and analysis we will present our methodological choices, to give our research project transparency and overview.

2. Methodological approach

In the following chapter we will present our methodical approach for gathering data and for analyzing the data material. First, we will give a brief introduction to the choice of design and method: Why is a qualitative method most suitable to our project? Second, we will present our selection of informants, giving a step-by-step description of how this process evolved. This description is then followed by a more thorough characterization of our qualitative method, namely the individual research interview. By clarifying this we can move on to the process of how the data was analyzed. This part is important because it gives our project transparency through details about the analyzing process. Lastly, we will discuss some methodological challenges and opportunities.

2.1 Research design and method

The design of our project is a typical case design, which is very common within the field of organizational research. The advantage of using a case study strategy is that we can get access to a lot of information within a specific area (Askheim & Grenness, 2008, p. 70-72). We are interested in looking at *one* specific case and not at a more general phenomenon. Therefore, to be able to generalize across different domains is not the goal of the project (Stake, 1995, p. 3). An important reason for choosing a case design is because the iTeam pilot already was an empirically defined unit with a specific number of individuals connected to it. In our data collection we want to learn more about the individuals involved, and how they experienced working in iTeam.

Using a qualitative method can help us understand the meaning of people's experiences and uncover their understanding of a specific situation or phenomenon (Kvale & Brinkmann, 2019, p. 20). It is important to emphasize that qualitative research is characterized by more researcher subjectivity than the pure mathematical analysis in quantitative studies. In individual research interviews both the analysis and the interpretation of this has a certain subjectivity from the researcher (Tjora, 2012, p. 25). A way of coping with this is by using the appropriate theoretical approach. In our project we have emphasized the 'abductive' approach - a process which means going back and forth between empirical findings and theoretical perspectives to analyze the data (Tjora, 2012, p. 26). This way of working, both with the data material and the theoretical framework, can help decrease the project's subjective dimensions.

Before starting to contact the relevant informants, we had to get an official permit to gather and store the data we wanted. In our application to the Norwegian Centre for Research Data (NSD) we described our project and gave information on how we would conduct the interviews (time scope, place, etc.), what type of questions we wanted to ask and how we would secure and anonymize the data afterwards. This application was formally accepted by NSD early in the process and has through this period been our functioning guidelines for conducting the research project.

2.2 Selection of informants

Before starting the interviewing process, we had to map out relevant informants. In order to get the best overview, we started by having a meeting with our contact person at TechnipFMC's offices at Lysaker (Oslo). This person was at the time responsible for the iTeam pilot and also led the iTeam-meetings. She therefore had a lot of important information, which was very useful early in the project. Due to her role in the iTeam pilot and her access to information she became our key informant (KI) for our research project. During our project we had 8 physical or digital meetings with her.

It was important for us to make a broad selection of iTeam-informants. We focused on getting in touch with people from different geographical locations as well as different function areas in the pilot, this to be able to cover as many of the roles involved as possible. We made a list of names based on information from our KI, whereby she gave us advice on which ones would be most relevant for further interviews. A potential weakness with our selection of informants may be that the process was too dependent on the recommendations given by our KI. The fact that this person knew the informants as colleagues could potentially make her biased regarding who to talk to. Nevertheless, the number of participants in the pilot was quite small, which would have led us to many of the same informants.

We ended up with a list of 26 candidates located all over the country (Table 1). Based on expertise and roles given in the pilot, they were organized in different categories (see Table 1). These categories were: Core team, back office, sales, business development and others/not part of iTeam. The core team consisted of people considered to have a key role in one of TechnipFMCs projects. Informants from business development and others/not part of iTeam

had not taken part in the pilot, but for other reasons were considered relevant sources. All the 26 people got an email with information about our project. We had a few people reply to this email but had more success when calling and explaining why it would be of great value for us to talk to them - even if they felt like they hadn't had an important role in the pilot. Out of everyone we contacted, we only got one decline. This because this person felt he/she was not relevant for our research question.

Table 1.

By category	Total contacted	Total interviewed
Core Team	7	5
Sales	4	1
Back office	4	2
Customer interaction	4	1
Business development	1	1
Others/not part of iTeam	6	3
Total	26	13

By place	Total contacted	Total interviewed
Lysaker	10	6
Bergen	9	3
Kongsberg	5	3
Other location	2	1
Total	26	13

In addition to this we also used the 'snowball method', where we asked our informants if they had someone in mind they thought would be relevant for us to talk to. This in order to get in touch with other relevant informants not listed from our KI and thereby making the project more independent. Most of the candidates the informants suggested had already been in contact with us or were on our list for upcoming interviews. Even though we didn't get any "new informants" from the 'snowball method', the response we got on this question could suggest that we had talked to the relevant candidates from the beginning.

2.3 The individual research interview

The goal of a research interview is to facilitate an open conversation focusing on different predetermined questions, where the informant to go in depth on the different topics (Tjora, 2012, p. 105). In this type of organizational study, the purpose of the interview can be to uncover motives and attitudes towards social or physical factors at work and to give insight into consequences of concrete measures that have been made. An example of this is changes made in the organizational structure: What kind of changes did the different employees experience, and *how* did they experience this? How do they think their position or work tasks has been affected by new ways of working? These kinds of questions, among others, can help us identify how the informants create meaning, or how they understand their reality connected to experiences with new organizational structures (Askheim & Grenness, 2008, p. 88; Tjora, 2012, p. 106).

In our project we wanted to address strengths and weaknesses with the iTeam-pilot. As we had very little knowledge of both TechnipFMC's working field and the background for starting a pilot like iTeam, we found it most useful to set up a semi-structured interviewing guide (see Appendix A). With questions such as "Can you tell us a bit more about iTeam?" and "How has iTeam affected the way you work?" we opened for the informants to teach us more about the pilot as a whole. A semi-structured research interview gives us different individual perspectives on both the pilot's background, experiences before and after, challenges on the way and so on. Another important aspect with the semi-structured research interview is that it also gives the researcher the possibility to follow-up on any emerging topics during the conversation, and to clarify any misunderstandings along the way.

All the members in our project group used this guide as a standard, although the different interviews took different forms depending on individual differences (roles, amount of information, geographical location) among the informants and interviewers. The interviews lasted about 30-60 minutes each and we recorded them by using a dictaphone. Further these audio files were transcribed individually by the members of the project group. The plan was to do the interviews both digitally and face-to-face. We started off the data collection by conducting an interview at TechnipFMC's offices, but because of the coronavirus situation we

had to conduct the remaining interviews digitally. The program that was used for this was Microsoft Teams².

2.4 Data analysis

Based on the transcriptions from the 13 interviews, we analyzed the material by putting relevant quotations into an excel-document. Deciding what was relevant was dependent on both our research question and our choice of theoretical approach. The different analyses were done individually, whereby we made our own simple coding based on the data material. Codes generated from empirical findings substantiates a typical inductive project (Tjora, 2012, s. 180). The theoretical assumptions we had beforehand is although, as already noted, a more abductive way of working. After making the different empirical codes, we agreed on a set of classification codes (Table 2). These made the basis for the next step: Gathering these codes into relevant groups (Table 3), hereunder *strengths* and *weaknesses*.

Table 2.

Code	Explanation
iTeam implementation	More generally about implementation, structure, roles, time scope, etc.
iTeam strengths and possibilities	What worked, what can make it work better, positive experiences
iTeam weaknesses and possibilities	What did not work, what can make it work better, challenges
Management	Management support, org. anchoring, further development
Structure	Org. structure, wage, terms of work, practical challenges
Digital tools	Digital tools and tools of communication
Fragmentation and silos	Interdisciplinary collaboration, people don't know of each other's competencies, many different departments, unified org., no common blueprint, "one TFMC"
Customer relations	Communication with customer, feedback, demands, proactive org.
Networks and interdisciplinarity	Personal and professional relations
Other	Information which do not fit into the already mentioned codes

² Microsoft Teams is a communication and collaboration platform that combines workplace chat, video meetings, file storage (including collaboration on files), and application integration (Wikipedia.com, 2020).

Table 3.

Weaknesses	Strengths
- Barriers and weaknesses - Operationalization and dependency - Structural barriers to knowledge sharing - Contracts inhibiting integration - Reward systems - no economical rewards - Unsynchronized organizational goals	- Internal coordination - Counteracting effects of dispersed work/digital tools: Human compensation - Expansion of personal networks: iTeam made the customer more satisfied - People got to know each other through the cooperation in iTeam - More interdisciplinary discussions: Better solutions

Making a connection between the two ways of working with the data was not a linear process. To make sure we had the essence of what the informants were really saying in the interviews, we had to go back and forth between the simple coding, the classification codes and the research question. Bridging the actual quotations in our excel-document, the explanation and codes in Table 2, to the strengths and weaknesses in Table 3, gave us more clarity to the overall project.

2.5 Methodological opportunities and challenges

As noted, we ended up using primarily Microsoft Teams for conducting the interviews. Based on the experience we had with the face-to-face interview beforehand, we didn't notice any significant differences in the type of answers we got out of it, or how we experienced the interview. The use of Teams as a mean of communicating was already an integral part of our informants' daily work routine, so the process through this channel was already familiar.

One of the possible downfalls by using a communication tools like Teams is that the information regarding body language and non-verbal responses might be less visible (Tjora, 2012, s. 141). Such non-verbal cues can be important in the interviewing process to make sure reactions and emotions gets interpreted correctly. There are also benefits by conducting the interviews through this type of platform. One of these is that most of our informants where based in their own homes due to the restrictions caused by the corona situation. Our experience was that informants generally spoke freely and openly around the topics discussed; however we cannot ascribe this to a specific characteristic of the interview. According to Tjora (2012, p. 120) there are advantages in conducting interviews where the informant feels safe. In

addition to this it is also more economical and practical when informants have different geographical positions (Tjora, 2012, p. 140). After the corona restrictions came, we also experienced that it was easier getting in touch with possible informants. Since we had the opportunity to do the interviews through Teams, it made us more flexible in arranging time slots for each informant. Based on these factors we did not see it as a significant disadvantage to our project that we weren't able to conduct more of the interviews face-to-face.

Most of the interviews were conducted by two of the members of the project group, to minimize interviewers bias (Cyperess, 2017, p. 259). We also experienced that by doing so we were better equipped to both follow the interview guide to a sufficient extent, and to ask relevant follow-up questions for each informant.

Another limitation to our project may be that we 'only' got in touch with 13 out of 26 informants. Taking a closer look at Table 1 above one can see that some departments were less represented than others. 13 people were contacted in 'sales', 'back office', 'customer interaction' and 'business development', but only five of them participated in our research. As these are such a large part of the relevant departments participating in iTeam, this can be viewed as a methodological challenge: It would have given our data more strength if the distribution of informants in the different departments was more evenly balanced. The validity of our selection must therefore be discussed. Having interviewed 50% of the people involved in the pilot may serve as a weakness in our ability to access as much information as possible (Stake, 1995).

This raises further questions: Who were the people that did *not* reply? And what kind of information could these have given us? Also, there could be a correlation between the people wanting to participate and their role in the organization, their role in iTeam, or even just their personalities as such. Is there a chance that the ones we talked to are people generally 'saying yes'? This question is also relevant to the discussion of using the 'snowball method'. As mentioned above, when asked for further informants, we were suggested people who were already contacted. One reason for this could be that the ones we talked to already knew each other well, or they may have had little knowledge of other possible informants.

In addition to this we have experienced some challenges by working abductively. As we started our project in an inductive manner - by making the interview guide and quickly afterwards starting the interviewing process - we may not always have had the underlying theoretical perspectives freshly in mind. One can discuss if it would have been helpful to do a literature study in advance, so that we knew exactly what theoretical framework we wanted to base our analysis on. On the other hand, this could have limited the potential questions and discussions we had with the informants during the interviews. The thick description one gets out of a qualitative interview can be fruitful, especially when the number of participants from the beginning is quite limited (Kvale & Brinkmann, 2019, p. 112). Both trustworthiness, reliability, and validity are ultimately related to whether the methods used in the research design are appropriate to answer the research question, which again is used to distinguish good from bad research (Cyperess, 2017, p. 254-255). The qualitative nature of the research question led us to choose such a method for addressing the points from the mandate.

3. Theoretical framework

In this chapter we will describe the organizational phenomenon called “silos”, and how knowledge sharing and collaboration are important factors to address this. Firstly, we will explain silos and their positive and negative effects, and ultimately how they are created and upheld. Then, we will explain why knowledge is a valuable asset, how it’s manifested within the organization, and finish with a discussion of the role of knowledge to achieve overall organizational learning.

3.1 Organizational silos

The mandate for this research report describes that iTeam’s “(...) main focus was on coordination and breaking down silos”. The term *silo* originally refers to a “tall, self-contained cylindrical structure that is used to store commodities such as grains after a harvest” (Serrat, 2017). In organizational theory, silos are a metaphor for entities in a company that doesn't or hardly have any communication or collaboration with each other (Serrat, 2017). The interaction and collaboration are largely confined within the department (Forsten-Astikainen, Hurmelinna-Laukkanen, Lämsä, Heilmann & Hyrkäs, 2017, p. 474). Each department is seen as a silo where work tasks are confined within the silo walls without a lot of interference or flow from the other silos.

3.1.1 Negative and positive sides of silo structure

The term ‘silo structure’ usually has a negative connotation. Dell (2005, p. 24) argues that “Silos cause problems primarily because they focus on fulfilling a *function* rather than on achieving a *process* outcome”. Too rigid silo structures can hinder information flow and knowledge sharing between different sections, and therefore hinder optimal task execution, limiting the organizations’ potential production (Sosa, Gargiulo & Rowles 2015, p. 1070). This explains TechnipFMC’s effort in establishing the iTeam as a means to address the inadequate communication and coordination between its different sections.

However, working in silos is not exclusively negative, with one of the potential advantages being a more resource effective administration of operation (Retrum, Chapman & Varda 2013, p. 205). Further, Marion, Christiansen, Klar, Schreiber and Erdener (2016, p. 245) argues that working in specialized groups helps nurture an environment for information processing and idea creation, where influence from other organizational functions is limited. In other words, it

is possible to promote and increase knowledge sharing inside organizational silos, enabling each silo to develop expertise knowledge. When a company separates into units, it helps foster focus, specialization, ownership and faster decision making (Winter, 2016). This supports TechnipFMCs strategy of focusing their resources and structuring themselves according to fields of specialization.

In sum, silos propose a paradox to the organization; on one hand they are a prerequisite in order for specialists to solve their problems, on the other hand they hinder knowledge sharing and collaboration across departments.

3.1.2 Why silos evolve and are upheld

A company can be said to be affected and formed by what happens inside the company and what happens in its environment. For example, as TechnipFMC operates in an environment characterized by frequent fluctuations and a high degree of competition and uncertainty, having the ability to adapt themselves is essential.

TechnipFMC has been focusing on project deliveries, meaning that the customer has ordered a product or a service, which TechnipFMC then has delivered. This might have led the company to develop a structure promoting deeply specialized departments. In recent years, TechnipFMC has also gone through several major organizational changes, for example the merge of FMC Technologies and Technip in 2017. The latest changes being that they have made a move to develop into a more service providing organization³, and a soon-to-come downsizing mainly due to changes in demand in the oil service industry. Rapid organizational change like this creates uncertainty, which can be said to be an important contributor to the development of silo practices as this may cause a reluctance to share knowledge on an individual level, as will be discussed below (Empson, 2001 cited in Ipe, 2003).

In order to ensure an organization's competitive advantage, strategic goals are set for each department. According to Chatterjee, Chanda and Ray (2018, p. 701) the managements initiative to enforce unity toward their own departments goal is one of the drivers causing interorganizational silos. The reason for this is that *the action of enforcing* can cause the

³ Røvik (2010) points out that developing from silo organization to a more process-based organization, is very common among today's organizations. A reason for this is that a process-based organization directs its focus towards the customer by making the process in line with the customers' needs and demands.

departments goal to become the main target, in place of the overall goal of the organization. Internal processes like these can therefore be said to entail negative consequences as departmental silos are likely to look out for their own interests instead of the bigger picture (Dell, 2005).

Further, the different departments may end up competing instead of collaborating (Serrat, 2017). With limited communication and collaboration between the silo structures, there is a good chance they will suffer from their isolation. It can lead to the duplication of efforts, for instance by two units ending up working on the same problem without knowing (Dell, 2005). “(...) In general, silos do not exist because something was intentionally done: they come about because something was left undone, that is, the provision of compelling motives, means and opportunities for personnel to come together” (Serrat, 2017, p. 714). This indicates that by focusing its efforts towards encouraging collaboration and knowledge sharing across sections, the organization has an opportunity to weaken silo formation.

Based on this, the fast-paced changes and organizational strategies that departments are expected to adapt to may reinforce silos *if* the organization does not actively encourage intersectional collaboration. In other words, an unstable environment can be an important factor contributing to developing organizational silos. This because it triggers a change in management goals, and a need to allocate resources to enforce efforts towards these new goals. Silos may therefore evolve due to organizational changes and be upheld by internal processes within the organization.

The reluctance to collaborate and communicate can also appear on an individual level. Individuals in the company can be reluctant to share knowledge, this is especially the case in companies where “(...) an individual’s knowledge becomes his or her primary source of value to the firm, where sharing this knowledge might potentially result in diminishing the value of the individual (...)” (Alvesson, 1993; Empson, 2001, cited in Ipe, 2003 p. 345). This reluctance to share increases when the situation is characterized by an unstable and uncertain situation, for example organizational restructuring or merges (Empson, 2001 cited in Ipe, 2003). Employees can decide to withhold knowledge from colleagues if this knowledge is what makes them earn their position within the company. That is, if they reason that by sharing knowledge, they risk losing their competitive advantage within the company, as well as their chances of

financial rewards (Šajeva, 2007, s. 21). Based on this, as the company can use knowledge to their competitive advantage, so can individuals within the company. This is especially the case if the company has rewards system that ultimately encourages such behavior.

3.2 Knowledge and its role in organizational learning

iTeam was a way to promote knowledge sharing and collaboration *between* silos (Figure 2). This can in turn lead to organizational learning which contributes to the company's continuous development. We will look at how knowledge, knowledge sharing and organizational learning are considered important factors for loosening up rigid silo structures.

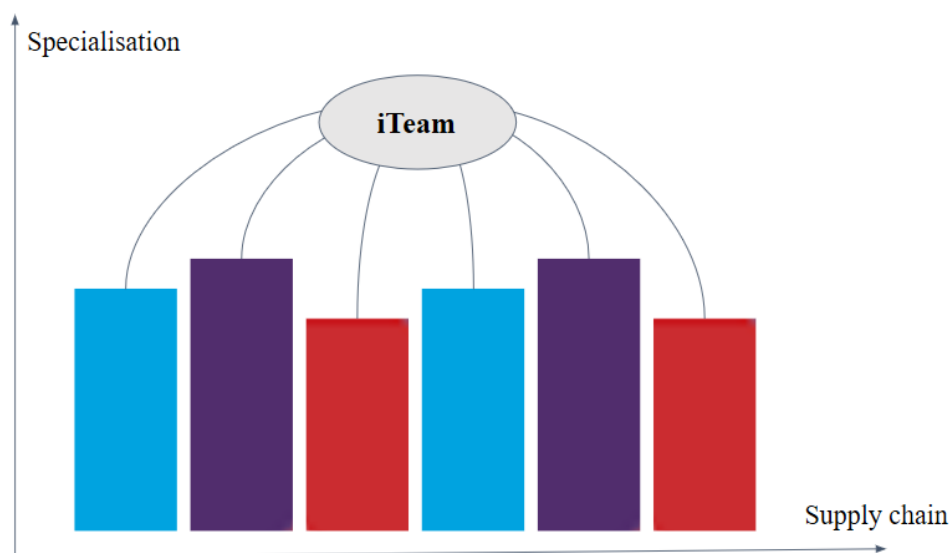


Figure 2: The connection between iTeam and the organizational silos.

3.2.1 Knowledge as a strategic resource

Knowledge is arguably the company's most valuable asset: "[it] is now being seen as the most important strategic resource in organizations, and the management of this knowledge is considered critical to organizational success" (Ipe, 2003, p. 337). The value of knowledge is also - contrary to what might be commonly assumed - exponential rather than linear. "As one shares knowledge with other units, not only do those units gain information (linear growth) they share it with others and feedback questions, amplifications, and modifications that add further value for the original sender, creating exponential total growth" (Quinn, Anderson, &

Finkelstein, 2005, p. 79). Knowledge also increases in value with use, and continually contributes to the renewal and development of the company (Quinn et al, 2005, p. 79). This makes the process of converting knowledge into useful products and services highly valued - this in order to ultimately maximize earning potential. Knowledge also plays a significant role when it comes to how quickly a company responds to changes in the market, how rapidly they are creating new products, how quickly they embrace the potential found in technology etc. All these are examples of new knowledge being created, and each company will have their unique approach to how they handle this, which in turn can be used to its advantage or disadvantage (Nonaka, 2007, p. 164).

3.2.2 Knowledge and knowledge sharing

Nonaka (1994, p. 15) distinguishes between knowledge and information by saying information “is a flow of messages”, while knowledge “is created and organized by that very flow of information, anchored on the commitment and beliefs of its holder”. Knowledge is commonly divided into tacit and explicit knowledge. *Tacit knowledge* is intuitive and not easily articulated because it’s rooted in former experiences, insight, skills and judgement. *Explicit knowledge* on the other hand is easily expressed and explained to others. It’s usually manifested through speech or writing. Tacit and explicit knowledge complements each other in forming meaning to a situation (Serrat, 2017, p. 292; Nonaka 1994). The following table illustrates how knowledge is revealed as either tacit or explicit, at different levels of the organization.

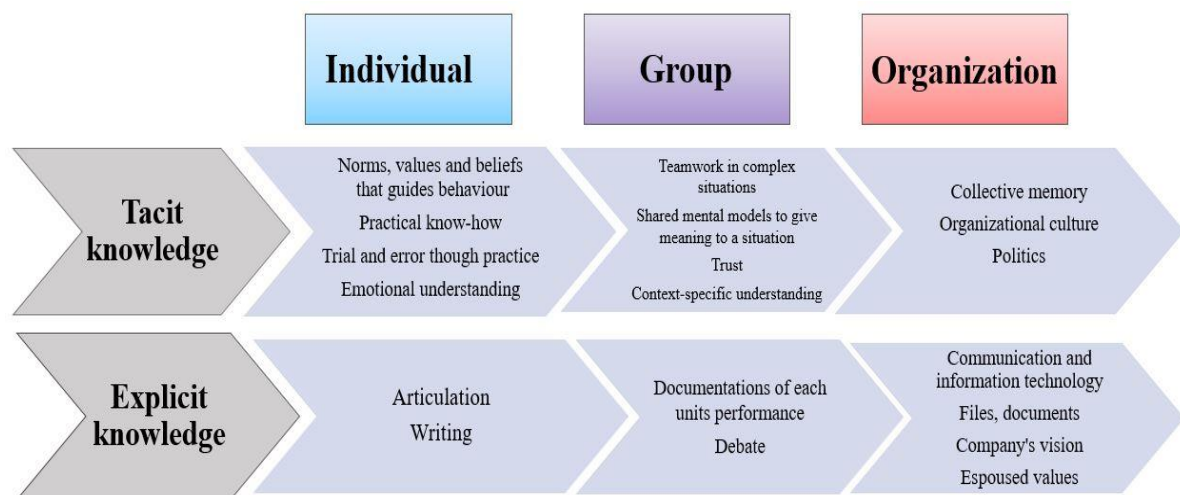


Figure 3: Inspired by Serrat (2017, p. 295) “Knowledge management model”.

Knowledge at an organizational level is expressed in the structure and culture of the company (see figure 3 above). *Structure* refers to the manifested, formal system that conditions the activities and behaviors of employees. Such knowledge is mostly explicit and materialized, such as organizational files, technology, regulations, policies and budgets (Argyris & Schon, 1996, p. 12). This makes *how* the organization is structured of critical interest, because it can either foster or inhibit sharing and creating of knowledge. *Culture* refers to the company's informal organization. Activities and behaviors within the company are guided by shared values and norms that are commonly held by the employees (Weick & Westley, 1996, p. 442). Often, these “informal rules” are implicit and not even noticed before they’re broken. Socialization into the organization's culture happens from the first day an employee starts in his/her new job. This is an example of the processes where learning happens through creation of tacit knowledge. Simplified, tacit knowledge is the organization’s idea of “this is how we do it here”, even though these are not formally espoused. Norms and ideas can differentiate between units, resulting in different cultures across units within the company.

As for knowledge sharing, it is defined as “the process by which knowledge held by an individual is converted into a form that can be understood, absorbed, and used by other individuals” (Ipe, 2003, p. 341). When individuals share and absorb knowledge, both tacit and explicit, it can lead to organizational learning, which will be further discussed in the next section (Nonaka, 1994). The point here is not to argue that sharing a maximum amount of knowledge isn’t a goal in itself, as this may reduce efficiency (Foss, Husted & Michailova, 2010, p. 472). Too many sources of knowledge can lead to information overflow, inhibiting the employees’ ability to focus on relevant information (Fowler & Pryke, 2003 cited in Bundred, 2006). At an organizational level, acquired knowledge and experiences in one unit isn’t necessarily transferable or relevant to another unit. In companies where units use different technology, have a different culture and are remotely located from each other this could be particularly relevant. It is therefore important to note that knowledge and information sharing is highly context specific.

3.2.3 Organizational learning

According to Argyris and Schön (1996, p. 4), *organizational learning* is a continuous process where the organization adapts over time, by continually acquiring, processing and storing information. If we apply this definition to our case, iTeam can be understood as an initiative to

manage the knowledge available to the company (both tacit and explicit). This in order to achieve organizational learning. This is not to say that sharing and discussing knowledge automatically lead to organizational learning. For organizational learning to take place, the knowledge that an employee holds, needs to be made available to others and gain foothold within the organization. This means that organizational learning is intrinsically linked to *change* (Argote & Miron-Spector, 2011, p. 1124). In the case of iTeam, if knowledge from meetings results in changes in how employees work, which leads to a further change at an aggregated level, one can say that organizational learning has happened in TechnipFMC.

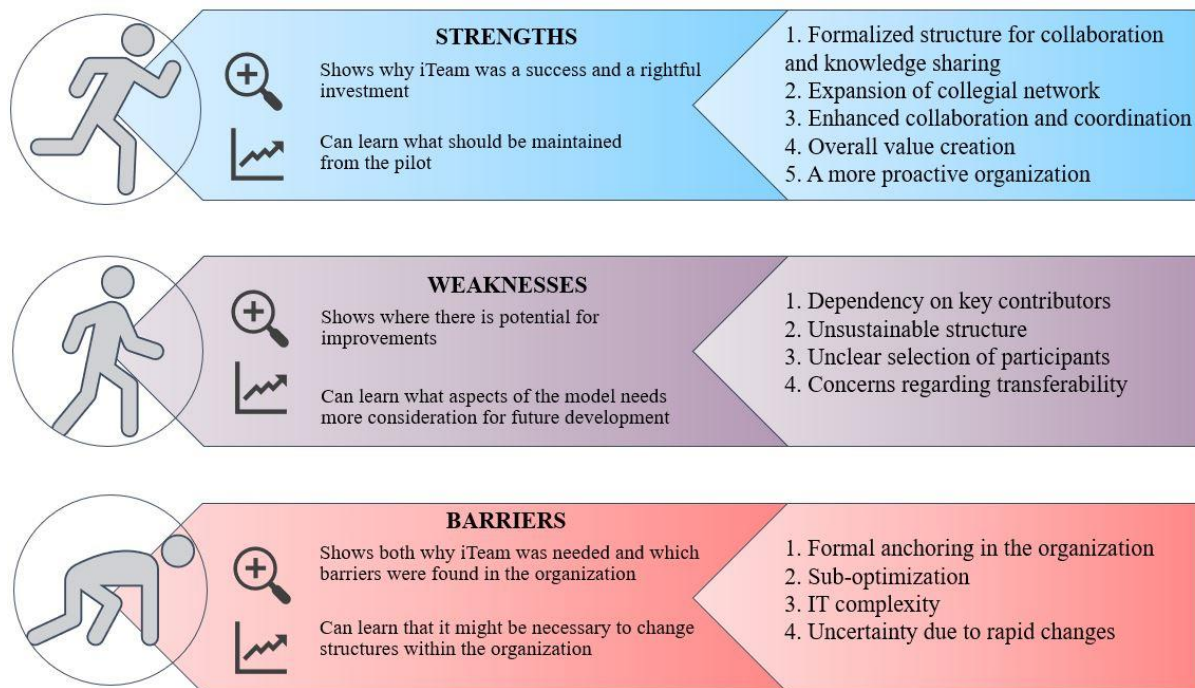
Hence, the potential of knowledge resides first and foremost in how it's *applied* through employees' decisions and actions (Serrat, 2017, p. 956). Therefore, a study of strengths and weaknesses in the iTeam model would look for *changes* in employees' practices and routines, as this captures changes in both tacit and explicit knowledge. How did the introduction of the model bring about changes in the experiences and practices of our informants? Did it change how the tacit and explicit knowledge were acquired, transferred and created? Finally, how did these changes embed themselves in the organization, and did it affect overall performance? We'll attend to these questions in our analysis.

If change in knowledge can lead to overall organizational learning, the prominent question in regard to *if* and *how* it can be managed. Argote (2013) has studied the potential for learning across units in organizations and found that there is a tendency to not take full advantage of the knowledge that already exists in the company. Based on this, she points to three important aspects of how to plan for organizational learning. Firstly, interaction between units is necessary in order to learn from "best practices", and to gain a deep understanding of both *how* and *why* these practices work. Secondly, knowledge of "who knows what" within the organization can enhance the overall performance of the company. Lastly, if knowledge is to be transferred on a large and consistent scale, it needs to be *embedded* in both routines and technology (Argote, 2013). Altogether, knowledge sharing and creation is an essential part of organizational learning, and must be anchored into the everyday life of the organization.

4. Findings and discussion

Considering our theoretical foundation, we will present and discuss our empirical findings. The following analysis will be important to be able to answer our research question. First, we will discuss the iTeam pilot's strengths. Second, we will take a further look at some of the pilot's weaknesses, before we address a selection of barriers it is facing. We consider weaknesses as aspects connected directly to the pilot, while barriers refer to organizational factors affecting the pilot from the outside (Figure 4).

Figure 4.

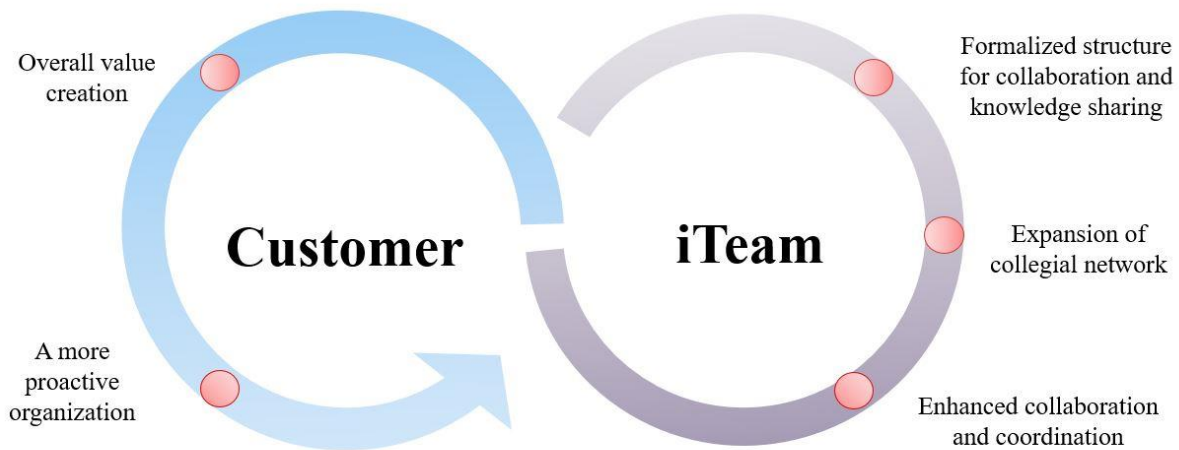


4.1 Discussion of strengths found in the iTeam pilot

We start off our discussion by outlining some of the strengths found through analyzing our data. First, we look at how informants appreciated the fact that collaboration was put into a formalized structure through the iTeam meetings. We will then examine how iTeam expanded the collegial networks in the organization, giving the participants new contacts across units. iTeam also enhanced the ability to collaborate and coordinate, which made it possible for the

units to act as one company. This in turn led to overall value creation, both for the customer and for TechnipFMC which ultimately made them more proactive (Figure 5).

Figure 5.



4.1.1 Formalized structure for collaboration and knowledge sharing

“I always had [the iTeam-meetings] as a fixed point in my calendar” (Informant J). Our findings suggest that iTeam successfully put collaboration and knowledge sharing on the agenda by introducing a *formalized structure*. Formalization was done through several means. Firstly, by giving the group meetings its own name - “iTeam”. Secondly, iTeam-meetings were held frequently making it predictable for the participants, embedding it into their routines.

“The agenda was set. In addition to this, a report was written from each meeting. If we were not able to participate, many of us gave [the project leader] input on the current status for our part of the project, so it could be distributed to the others in the meeting” (Informant J).

Another important finding was also how the information flow went from being based on informal contacts, to a more formalized setting through the meetings:

“We shared information in a more structured way (...). Before this we didn’t have a formal way of exchanging information. (...) Once in a while I talked to someone in marketing. And we talked sporadically with the service department in Bergen. So, it was purely based on informal information flow” (Informant J).

Further, the meetings established a common goal: to share information and stay coordinated by knowing what other participants were doing. To achieve this, transparency and regular

participation was asked from the participants. Based on Serrat's (2017, p. 714) explanation of how silos come to be, this is a step in the right direction for improving collaboration and knowledge sharing across organizational sections.

4.1.2 Expansion of collegial networks

“Without iTeam it will be difficult to keep an overview of such a large company. *With* iTeam you know who to cooperate with - both within your own department and within the organization” (Informant M).

Our findings show that iTeam contributed to an expansion of the individual employees' collegial network. This is an obvious strength of the pilot because one cannot collaborate or share knowledge with someone you are not aware of. Knowledge of “who knows what” can according to Argote (2013), enhance overall performance of the company. Based on this, an expansion of collegial network can arguably be a goal in itself, as it helps employees get a sense of overview in the company. Informants in general expressed having an insufficient overview of the company as a whole, and of their remote colleagues. Lack of overview can be the sum of many factors, for example; the size of the company, a lack of formal organizational mapping, and the fact that the company historically has been divided into different sections.

As discussed previously, informants revealed that interaction and collaboration is largely confined within a department or function. These silo tendencies are upheld when employees only seek interaction with colleagues working in the same silo (Serrat, 2017). Expansion of collegial networks can be said to be an important way to connect and to counteract negative effects of silo formation. For instance, when you know who to contact about certain issues, it is easier to initiate collaborative efforts for productive task execution (Sosa et al., 2015, p. 1070). iTeam brought about a useful change to this as it allowed colleagues from different department to meet and get to know each other. An important note here is that network-connections through iTeam extended outside of meetings, also after the pilot ended. The following statement from an informant illustrates this:

“Through iTeam you already get a good insight into what is going on in general. You also know that the people you worked with in the pilot will still be available to answer possible questions you after the pilot ended. (...) The way it was organized made it easier to keep the iTeam participants as contacts beyond this project” (Informant J).

Most of the iTeam meetings were held through the digital platform Teams, connecting colleagues working at different locations. However, there were informants saying that physical

meetings also should be prioritized: “I think it is important to meet each other face to face in the first meeting, to put a face on the people you will be working with. But also, to be able to read their body language, which is critical to the initial discussions” (Informant A).

“[Before iTeam...] collaboration and communication were based on who you knew and to whom you had good relations, since it was not a set system for it” (Informant E). This supports the existence of silos within the organization. Our findings further show that employees were most likely to use personal networks to get the information needed. On one hand, this is natural because one can obtain the information quickly. However, when the company’s stream of knowledge is highly based on personal networks, it runs the risk that relevant information doesn’t reach all who could benefit from knowing it. As one of the informants expressed it:

“Part of the intention of having an iTeam must be that this will *replace* or *complement* the personal networks - which has been a significant success factor for the ability to enforce something that is not established in the standard procedures of the company” (Informant M).

Our argument is not to underpin the importance of personal network, but rather to point to the risk of “who you know” will dictate which employees collaborate and share knowledge. Behavior and communication can then become selective on subjective, and potentially erroneous criteria.

4.1.3 Enhanced collaboration and coordination

“When you approach a problem that you cannot solve by yourself, you’re dependent on others in order to discuss and solve it. (..) Through iTeam and the people I worked with there, we could discuss problems somewhat outside what I normally do. I was pulled into their discussion regarding problems they had, and we were competent people discussing it all together. And the result became a lot better” (Informant L).

iTeam led to changes in how employees worked, with an overall focus on *collaborative behavior*. Collaboration in this context can be defined as “the act of working together with other people to create or achieve something” (Cambridge Dictionary, 2020). These changes were seen in how they employed, exploited and aligned their knowledge and efforts (March, 1991).

Firstly, our findings reveal that collaboration led to efficient and creative problem solving. As iTeam consisted of employees with different backgrounds and experiences, the premises for *creating new knowledge* were laid. Combining insights that are unique to each individual, enhanced the team’s overall ability to solve problems. This involved capturing the tacit knowledge the individual possesses and making it explicit and applicable (Nonaka, 1994). Two

examples illustrating interdisciplinary problem solving in iTeam were the “asset integrity-challenge” and the “increase of production-challenge”. These are examples of how the interdisciplinary team managed to combine its expertise to solve intersectional issues.

“Asset integrity-challenge”

“The operator had an asset integrity challenge in the field that was identified during an inspection. The apparently obvious reason for the structural challenge on TFMC installed basis, resulted in a plan for mitigation that operator planned. The key iTeam with cross discipline competency did a troubleshooting session on the case, and started to question the "obvious reason". Historical data, design knowledge, operational competency, hardware competency, flow competency were merged and the "obvious reason", and several interactive workshop with operator was executed. The "obvious reason" was soon rejected based on our own merging of competency. This merging had never been done before. This resulted in a completely new understanding of the reason for the structural challenge and also a new solution to the problem, which could then be implemented in the field. In addition, the understanding of the problem meant that TFMC could advice the operator to continuous operation, keeping the uptime and production.”

Source: Key informant

"Increase of production- challenge”

“The operator was interested in a way to increase production. Operator had identified some possibilities but was not able to find a robust technical solution. Operator had worked on this challenge for more than 4 years. The key iTeam was put together, bridging very different competency in TFMC: "Flow Assurance, System Engineering, Product experts, Controls System, Operational experience from field". Through intensive work in a 6 months period the iTeam in close cooperation and interaction with operator came up with a technical proposal that was so interesting that the study moved into a FEED. The challenges were removed one by one, and the technical solutions were so new that no-one had ever thought about them before. The nature of the challenges could not be solved by only one expert, it was the merging of the different competencies that resulted in the surprisingly simple solution.”

Source: Key informant

Secondly, our findings show that iTeam provided an arena where participants could exchange knowledge that they had acquired when facing similar problems in the past. This is of importance as this interaction provides a way to learn best practices, like *how* and *why* these practices work (Argote, 2013). In this sense, iTeam worked as a “lesson learned”-forum, where past experiences were made relevant for current problems.

“One element is having good routines to draw out solutions that were given 2-3 years ago, on a different field in a different place, and to use it on a problem that the customer has here and now. Call it a “bank of solutions” that is continually built” (Informant G).

In literature, this phenomenon is commonly referred to as “exploitation of knowledge”, where employees look inwards to find solutions to current problems (March, 1991). For example, what choice of strategy has been effective in the past? This way of thinking is of course not unique to iTeam, but with iTeam, such transfer of previous knowledge was made available in the meetings through dialog. “We have no problem creating knowledge (..) but we don’t store it with the aims of re-using it. Things get lost, and we don’t know what’s going on in the grand scheme of things” (Informant A). In sum, through iTeam both transferability and the re-use of knowledge was improved, although the re-use of knowledge is still a challenge.

Thirdly, collaboration allowed for better alignment of projects, which helped reduce double work (Dell, 2005). Through iTeam, employees from different projects were brought together to share knowledge and experiences about current activities. This way, employees were less likely to be working on the same issue as other departments, without knowing it. In addition, this exchange of information helped predict and avoid unnecessary mistakes and future problems:

“It’s easy to make a mistake (..) if you don’t know what’s under development or what’s being done in the field by somebody else in the company. But through iTeam I got this kind of information. I got to know who was working on it, so that I could have a dialogue with them before we proceeded. This led us to do things right the first time. We avoided doing it wrong from the start, only to discover it at a time when it would be too late in the process” (Informant L).

Lastly, the information they received and shared helped predict what kind of work the different departments would face, which led to both predictability and better preparations. This could be information about defect products, what products needed maintenance, upcoming vessel-campaigns etc. An example would be that Kongsberg would inform Bergen that they were working on a project for a customer. Bergen could then start preparing for their part in the installment and service. This led to smoother and more informed project handovers.

“About Kongsberg-Bergen; when we have finished testing and delivered a project at Kongsberg, Bergen - who is responsible for life of fields and service - takes over the offshore operation. From then on, the engineers from Kongsberg aren’t involved unless there’s post-deliveries or there’s something wrong. The most important part of iTeam was to involve those who are taking over the project, so they get to know it” (Informant I).

Information coming from the customer's side would also be diffused through iTeam. For instance, the customer could tell Bergen that they were delayed in their project, and Kongsberg would get a status on this through the iTeam meeting. This allowed the different departments to align and correct their information and deliveries.

4.1.4 Overall value creation

One of the questions asked during the interviews were: “If iTeam was the solution, what was the problem?”

“[Three] units really work with the same thing, if you see it from the customer's perspective. They don't care too much about how much flow has been measured under or over the surface of the ocean. It doesn't matter to them. They just have to know that we are the ones to trust, whether we sit in the 3rd or 4th floor” (Informant D).

As iTeam was launched on a small oil field, all participants involved were directing their efforts towards one customer. An important note is that the pilot was initiated partly based on feedback the organization had gotten from the customer at this field. The customer experienced that when talking to their different contacts within TechnipFMC, they received different, and sometimes contradictory information and offers regarding ongoing activities at the field.

“Previously we have had an issue with the fact that we are a large organization, and for the customer it has looked like we work in several different companies. That has not been very popular with the customer, and in that sense iTeam helped us a lot” (Informant L).

Before iTeam, the working method was mostly aimed towards separate projects, and a universal approach to the whole field seemed to lack. As for the employees, our findings show that several of them experienced unclarity about who was working towards the same customer. The “double work”-problem was also frequently addressed: “In such big companies it is very common that employees are trying to solve a problem alone. So maybe people are trying to solve the same problem without knowing it” (Informant I).

How did iTeam act as a solution to these problems?

“[Previously] there has been an attitude of “this is not my job, so I am not going to do this”. And then answered the customer; “No, we are doing this our way, we know it better than you”. And then the customer has been standing there knowing that they are actually right. Previously, they have been met with poorly functioning collaboration, but now I believe this is something we have managed to improve” (Informant L).

Firstly, our findings point to a shift from silo to process-based organizing. By this we mean that iTeam was an initiative to soften silo formations, overriding negative issues caused by this, mainly by focusing on the overall output from the customers perspective (Røvik, 2010 s. 67). This entailed a shift from “Who can do this job?” to “How can we best meet the customer's problem?”

Several of our informants have in one way or another addressed the need for this shift, also pointing out how the interaction with the customer should be. Usually the customer has been contacting specific units or employees within the organization to get to the best solution to their problem. This led to pressure on contact points, as they needed to filter the request to whom or what unit would be best fit to answer it.

“The sales department has been the coordinating link to the customer. However, before iTeam, the salespeople used to address employees one-to-one based on the type of request, rather than having the whole team involved in evaluating it” (Informant E).

The fact that projects could be better and more effectively executed if they worked cross-sectionally was also pointed out, notably because this would provide a better understanding of the customers’ needs. “We see that the customer demand something, but we know from experience that they really need another type of service. (..) We simply need to help the customer order what they actually need” (Informant C).

Secondly, as participants in iTeam learned about ongoing activities, employees were less likely to communicate contradictory or erroneous information to the customer. This was especially important when new offers were to be proposed to the customer, so they didn’t conflict with others that were already on the table. Informant J gives an example of this:

“We had a reconstruction job that was offered by the service unit, that we knew about. At the same time, we got a delivery request asking to build a new one. As we knew this, we could coordinate from then on, so we avoided giving an offer on a new construction that was cheaper than the offer that was given on the reconstruction.”

In the example above, proposing a cheaper offer than another department was avoided, as offers from different sections were communicated. Informant J continues: “This was the big difference - that we would meet the customer and give them an offer based on the knowledge of what other activities were going on”.

Lastly, the pilot seemed to have a positive effect on the relationship with the customer, in terms of increased trust: “I think [the customer] felt like they could relax and didn’t need to think

about everything themselves” (Informant F). This may not come as a surprise, as much of the exchange during the iTeam meetings were indirectly or directly related to providing a better service to the customer.

4.1.5 A more proactive organization

As a result of their environment, and their ambition of developing into a more service providing role, TechnipFMC now seeks to work proactively towards their vision to respond to and provide for their customers’ needs.

“If one department get a request from a customer, it is important that we not only do what they ask for, but also that we inform other departments who work towards the same customer. ‘The customer is doing this, are you aware? Are you interested to look into if there is something else we should offer or contribute with?’” (Informant M).

A proactive organization will actively seek out opportunities in order to achieve added value, extra sales and potential new projects. As informant A nicely summed it up: “iTeam was an attempt to look at all the projects as a whole, and to see if there was an added value in having a common approach to the specific field”. On the other hand, an organization is less likely to succeed in being proactive if there is a constant pressure for effectiveness, or if short term goals have an exceedingly higher priority than long term ones.

“A huge barrier is that we’ve tried to make everything more efficient over a long time - everybody is supposed to be more effective. It ends up with people thinking that they have to get things done faster. Like some kind of assembly line. But this counteracts productivity! It works against curiosity and all those who wish to do something bigger than just the little you need to get done in order to go home for the day” (Informant K).

A proactive way of thinking also implies thinking critically about prevailing working methods:

“Even if we’ve done something 20 times before, it doesn't mean that we’ve done it *correctly* 20 times (..) Should we try a different composition? Are there things in 2020 that isn’t the same way as in 1999? Should we change or improve the process?” (Informant B).

This further shows how combining employees’ explicit knowledge can lead to new ways of thinking, leading to the creation of new knowledge. This can also be referred to as “exploration of knowledge”, which in iTeam was seen through new business opportunities being explored (March, 1991). This requires flexibility, experimentation and even risk taking, and iTeam appeared to achieve several positive outcomes as a result of it.

4.2 Discussion of weaknesses found in the iTeam pilot

As we've seen in the chapter above, the participants in iTeam were overall enthusiastic about the implementation and outcome of the pilot. Regardless, there were some factors that people identified as *potential improvements* of the model. These findings can be useful if iTeam is being further developed in the future. To sort out possible weaknesses, we asked the following question "In your opinion, how could iTeam have been more relevant and useful to you?". Answers did not always regard weaknesses with the model itself, but also touched on potential barriers to knowledge sharing and collaboration on a more *structural level*. This will be discussed more in the section 4.3 *Barriers to effective knowledge sharing and collaboration*.

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4.2.1 Dependency on key contributors

"It was very much up to [the project leader] to follow up, and it was not necessarily delegated to have a deputy if she was not present ... if we were to continue with this in the future, we should really have an agreement on who is the deputy for the meeting chair. Who will lead iTeam if that person doesn't have the capacity?" (Informant J).

A weakness in the model regards *individual dependency*. Our findings show that iTeam was potentially too dependent on specific people, notably the key initiators and the leader of the pilot. Several participants expressed concerns regarding the viability of the model in the absence of the leader. More concretely, would meetings take place if not initiated by the leader? As Informant J expressed it: "It was challenging when the group leader wasn't present - if the leader didn't have the time, the iTeam meetings wouldn't have been held. And these meetings have been quite useful". The workload of developing and running iTeam was mainly carried out by the key contributors alone. It is worth noting that their work and commitment seems to be one of the main reasons for the pilot's impact overall.

Several informants called for a common "blueprint" for the model, meaning that iTeam itself would be the backbone, instead of the project leader. However, the reason why the pilot may be in large part dependent on one person can be due to more general structural barriers. These barriers will be further investigated.

4.2.2 Unsustainable structure

“It would be useful to get a complete overview - If I were in contact with the customer, I would want a place to check things like ongoing activities, current challenges, what has happened, and information about who I can contact that will look into this” (Informant D).

Another weakness in the iTeam model is related to its sustainability. This also ties into the section above regarding dependency on key contributors. “The key is to create a way to structure information so that anyone can lead these meetings” (Informant M). This informant addresses the need for operationalizing iTeam in a manner where the overall structure can be functioning without specific individuals needing to be involved. This also links to the need for a formal anchoring of the initiative in the organization’s structure (Argote, 2013).

“[We should] be able to map out the working processes of such a team, including the sharing of information, transfer of previous experiences, things that are often complex information structures, that should be saved and not be inside of everyone's minds” (Informant G).

A second weakness regarding the model’s structure is how the information shared in the iTeam-meetings are organized and stored. Information was primarily recorded using Excel-sheets, which made it difficult to access by anyone else but those familiar with the template. Difficulties of post-meeting accessibility for participants further increased dependency on the key contributors, making the model unsustainable in the long-term perspective. It is important to note, however, that a key principle of the model was to avoid further complexity, such as introducing new ICT-tools (Information Communication Technology) to keep track of. It is important to avoid information overflow because of too many sources of knowledge (Fowler and Pryke, 2003 cited in Bundred, 2006). If iTeam is to be developed further, one of the challenges will be providing an accessible *overview* of relevant information of ongoing activities and of communication history for each customer, without adding “just another tool” to the total of knowledge sources.

“We have previously tried to sell services to customers, where services that they already received from us wasn’t working (...) This type of overview is critical for us to be able to help the customer with fundamental challenges they have, and also to offer our existing services properly” (Informant D).

This emphasizes the need for an overview of activities towards a customer across units. Informants also mentioned this as a general hinderance to coordination in the organization, and this will be further discussed in relation to the structural barriers identified.

4.2.3 Unclear selection of participants

“My opinion is that it could be more clear who needed to be a part of the team from which units: who do we need from the technical department, from the commercial part, front-end, those who prepare the offer - everyone that is needed in the group” (Informant C).

A further weakness is found in the selection and assembly of participants for the pilot. If the composition of participants was based on collegial networks, how did one ensure that relevant participants didn't get left out of the selection? The fragmented nature of social networks poses a disadvantage when selecting team members, as it may not be aligned with the formal organization structures of the company (Waldstrøm & Luring, 2006, s. 30). On the other hand, in the absence of formalized routines for collaboration, assembling colleagues from collegial networks can be both natural and effective.

Several informants pointed out that the number of participants in the meetings were too high, and that there was some instability in who chose to participate and not. “I think sometimes too many were invited to the meetings. Many of those invited did not prioritize to show up (...). I think we should have focused more on choosing who to invite” (Informant J). Our findings do not reveal if selection and composition of participants in the iTeam-meetings were made on satisfactory criteria, nor what would be an ideal number of participants. These factors therefore need to be carefully considered if iTeam is to be further developed.

One can also question the frequency of meetings. How often should the participants in iTeam meet to ensure continuity?

“We had a lot of enthusiasm in the meetings, but after ending them everyone got back to their usual work tasks. I think frequency is important. One meeting every other week is not sufficient to make it a part of everyone's working habits” (Informant D).

This shows that establishing routines for collaboration takes time and substantiates the culture for collaborative efforts in a team. We will take a closer look at formalized structures like this in the discussion of barriers.

4.2.4 Concerns regarding transferability

“We were able to gather around a client [of that size] in this iTeam. But if we have a bigger customer, it will in my opinion be too complex to be able to work this way. In that case we would have to think differently” (Informant L).

The last weakness that we will point out regards the *transferability of the pilot to other oil fields and customers*. The pilot was a way to test out iTeam on a smaller field before potentially developing an upscaled version. The fields TechnipFMC operate at can be very different in terms of size, types of activities conducted and complexity involved. The same goes with the different customers. A discussion that occurred throughout the interviews was whether iTeam would suit to handle a bigger customer or not. As seen above, some participants were concerned about how the model would perform at a larger scale. On the other hand, some informants saw the use of iTeam towards a larger and more complex customer as potentially being beneficial.

“(…) I think it could have been just as useful to try out [the model] with a bigger customer, one that has a lot of activities going. But the main principles should have been the same. I can’t see that there would be a need for big changes” (Informant J).

Since iTeam was conducted as a pilot, its transferability might be of interest to initiators of similar projects, or for a further development of the model. However, the outcome of this is also conditioned by how the barriers to knowledge sharing and collaboration is handled overall in the organization. Argote (2013) underlines that knowledge sharing must be anchored into the everyday life of the organization - That it must be embedded in both routines and in technology if knowledge is to be transferred on a large and consistent scale.

4.3 Barriers to effective knowledge sharing and collaboration

In this section we will discuss four main barriers that, according to our findings, inhibit the success of iTeam. These are lack of formal anchoring in the organization, sub-optimization, the use of multiple and complex digital tools, and uncertainty due to rapid changes in both the organization and in its environment. These barriers can, according to our theoretical disclosure, be said to hinder knowledge sharing and collaboration, which is what iTeam sets out to promote (Forsten-Astikainen et al., 2017, p. 474).

4.3.1 Formal anchoring in the organization

By formal anchoring we mean embedding iTeam into the organizational structure, by establishing routines and practices for collaboration and knowledge sharing. Our findings point to two main ways to do this, notably through assigned budgets and management support. Note, however, that these two are very much interconnected. An assigned budget to collaborative initiatives will indicate management support, and a *lack* of management support (even when there is an assigned budget) will indicate that collaborative initiatives are less important and

are not sufficiently prioritized. In the following we will discuss the lack of assigned budgets and the role of management separately.

Our findings show that informants repeatedly emphasized how the current budget system discouraged participation in iTeam. The budget system is set up so that employees count and write hours spent on different projects. As for iTeam, participants in the meetings didn't have a specific project account to write these hours on.

“Of course, it requires a lot of resources to work in iTeam. Someone will have to pay those hours, and that was our problem. No one in our management saw the point of doing this. People think more about their own project and wants to make sure what they're doing makes money. (...). But in total, for the whole organization and the top management, they really want all the projects to make as much money as possible in total. And to see that communication across units and to do the activities that will make the most in total [pays off]. One project might make less, for the two others to make more...” (Informant L).

The overall budget system is a structural barrier that has implications beyond the scope of iTeam. The problem is directly linked to intersectional collaboration and formation of silos. TechnipFMC's silo tendencies can be said to be a result of its project-based structure, where each project has its own budget. This can make it challenging to run a fully integrated team, such as iTeam across project lines. If employees collaborate and help other departments, they have no designated place to put these extra hours spent⁴. If they write the hours down as 'internal work' it's not optimal for the organization, and they also add on hours to the department - making it look less effective. As a result, any collaboration across and between departments are faced with both lack of resources and formal approval through an assigned budget. A set economical structure to backup iTeam would enhance its “raison d'être” and give it legitimacy.

The second barrier for anchoring iTeam in the organization is the *lack of management engagement and support*. Before starting this discussion, we want to point out that our findings show that participation and collaboration through iTeam was in general encouraged by the management⁵. Informant D substantiates this: “It has been very much supported. And because of that, iTeam has managed to be piloted. But (...) the organization has not created any room

⁴ In one of our last meetings with our contact person we learned that TechnipFMC tried to work on this issue. The concept “Pull through” was being launched as a way for departments to document that they had contributed to another departments profit making.

⁵ The informants talked about the management without differentiating the levels of the hierarchy.

for it” (Informant D). Despite the encouragement from the management, the participation in iTeam became “on top of everything else”, making it costly for participants:

“To be able to actually do the tasks requires a lot of work. But again, that is because you need to draw together disciplines into a setting where the tasks that needs to be done is an *addition* to everything else people are working on” (Informant A).

Consequently, collaboration and knowledge sharing became a secondary activity. Several informants stated that this was unfortunate, and that the company was losing business opportunities due to it. “We have to get better at showing the management where there is money to make [through an iTeam]. Because it certainly is!” (Informant H). By business opportunities informants referred to added value in terms of new projects and services to offer the customer.

“So, our main challenge is to have the management understand that this is actually important and gives us more work. It results in us getting more jobs, and that we appear as a more serious supplier who listens to its customers. We managed to communicate internally all these small requests and wishes from the customer at different contact points, despite the size of our organization. We could then manage to deliver the products and services in a way that they were satisfied with” (Informant L).

Overall, our findings conclude that a lack of a budget to account for hours spent on iTeam-meetings, was indirectly seen as a lack of formal approval from the management. To promote collaboration and knowledge sharing across silos, like in iTeam, such behavior must first of all be supported on the payroll, in combination with leaders also having to acknowledge the value of working across units - ultimately through an assigned budget. This is in line with organizational theory, stating that incentives and support from leaders are essential for facilitating knowledge sharing: “If organizational entities that are collaborating are forced to do their knowledge transfer without budgets or without the leaders communicating their support, it will be challenging” (Eriksson-Zetterquist et al., 2015). For collaboration across units to happen, formal anchoring from “higher up” in the organization is needed.

4.3.2 Sub-optimization

“You’re measured on the ‘store’ of each group. So if the income does not reflect the priorities they’re assigned to, then it’s not optimal for the group to do it. Collaboration will then have a cost, and at the end of the year you will not be measured on how much you collaborated, but on how much you earned” (Informant D).

Our findings show that the criteria used to measure performance within the company do not facilitate collaboration sufficiently. Instead, performance is measured by key performance

indicators (KPI). “KPI is a positive thing for a manager so he or she can measure his subordinates. This can on the other hand kill a company from the inside out because it becomes an incentive towards sub-optimization” (Informant C).

Sub-optimization occurs when individual units within an organization primarily look after their own department's interests, making the organization *less* successful than it could have been (Cambridge Dictionary, 2020). This is closely linked to the section above, in relation to the budget assigned to each project. It is commonly seen in organizations, and silo structures are likely to look out for their own intended goal instead of the organization's (Dell, 2005).

“We would seize opportunities that one manager in a project may not have seen, because he/she protects his/her own interest. For example, he wants to sell 10 modules, because that is what produces the highest profit for him. But the other projects could sell 30 modules instead! You have to look at the total picture and get the overview - then maybe it is smarter that one project delivers less, because in total we deliver more as a company. And iTeam helped us with that” (Informant L).

The point here is that even as each department reaches their budget goals, it might affect the company's bottom line negatively. The reason for this lies in the unexploited potential that lies in between sections and disciplines. For instance, communication towards a customer is oriented by what *their* unit can offer, leaving out potential sales that could be done by considering the company as a whole. Those who seek to collaborate therefore find themselves facing conflicting interests: choosing to collaborate equals risking that another unit gets the credit for the job they've helped achieve.

“I think it's a definite success criterion in integrated teams to bypass any conflicts of interest. We all have to pull in one direction. As soon as the different interest starts conflicting, we are out of the game” (Informant C).

iTeam can be understood as an initiative to counteract this very problem, by making collaboration and knowledge sharing its very purpose for existing.

4.3.3 IT complexity

The process of knowledge sharing between individuals is when knowledge held by an individual is converted into a form that can be understood, absorbed, and applied by other individuals (Ipe, 2003). In modern companies, technology is an essential medium for this process. In fact, the technological entanglement in everyday work practice is so common, that

it's implication for human behavior is commonly overlooked (Orlikowski & Scott, 2009, p. 433). In this section, we will investigate how the use of different information and communication tools can propose barriers to knowledge sharing in the company. In our interviews we asked the following question to participants: *TechnipFMC operates with a lot of different digital tools, both information- and communication tools. In what way do you experience that these tools are simplifying and/or complicating your everyday work?*

Our findings reveal that there is an overall optimism in regard to the use of information systems. However, several participants addressed how the information systems complicate and slow down working-processes. This might seem counterintuitive, as one of the main advantages of information systems is to codify big amounts of knowledge to *improve* information processing (Orlikowski & Scott, 2009, p. 445). A possible explanation to this is the phenomenon of “dispersed work”, which can slow down the individual capacity to process knowledge efficiently because of the constant need to shift attention between various information systems (Arnold & Randall et al., 2016).

The use of digital information systems seems conditioned by three main factors: What they are being used for? Are they designed intuitively? Were there given sufficient training upon implementation? Firstly, the fact that employees within the company uses different information tools is explained by the *nature of their work* (Šajeva, 2007). Since there are many information systems - each with a particular design and way of using - this demands a specialized skill set regarding those specific tools. The use of tools is conditioned by the task at hand. For example, one tool measures pipeline flow, while another tool gives notifications on acute deviations or needs for improvement in the installments. The different sections of the organization handle different parts of the service and supply chain, and this explains why there are problems with unifying around a set of systems that everyone will find equally useful.

Secondly, the use of both information and communication systems are conditioned by its design (Šajeva, 2007). Is the digital tool designed so that they can be understood *intuitively*? The communication-platform “Teams” is a tool that many informants stated to be “intuitive”, and therefore frequently used. This is also related to the third factor, regarding how the system was introduced to the employees. Was it given *extensive training and guidance* upon implementation? “SAP” is an example of a system that is said to be less intuitive but used

frequently by those who have had sufficient training. This system was also said to include a large number of features, but with a complexity that made it less user friendly for all units. In sum, knowledge sharing can become ineffective if employees are not comfortable with using ICT tools due to lack of familiarity or training. This is also the case if the overall advantage of using the system is not communicated and truly understood (Šajeva, 2007, s. 23).

This leads to a discussion regarding the role of iTeam in relation to digital systems. It is unclear whether iTeam reduced ICT-related complexity by substituting or complementing the role of information technology. As TechnipFMC has years-worth of data from their installments, solutions and services spread throughout these systems, it is challenging to integrate this into one sensible solution for all needs. One of the reasons why it might be difficult to implement new systems to add on to the ones already being used, is the amount of data that is stored, and the complexity of this (Wareham, Fox & Giner, 2014). Another challenge is to manage the tension between stability and change in the development and maintenance of IT systems. For instance, at TechnipFMC this can be seen in the need for stable and well-established systems that employees are familiar with and confident using, while at the same time having these flexible enough to manage current issues across units.

If iTeam *substituted for IT*, this would indicate that employees to some degree distrust the functioning of IT-systems, and therefore feel the need to monitor them and double-check with colleagues. Our findings show some support for this, as one informant stated “today, more time is spent in making sure that our systems work, rather than analyzing the results of them” (Informant D). This can refer to the vast complexity of IT functions needed to bring forth enough information to gain an overview of activities and projects towards a customer. Through active information sharing, iTeam managed to produce an applicable overview, without the individual participants having to manage all the IT systems to get there.

If the case is that iTeam *complimented IT*, this would indicate that employees trust that overall performance is amplified by combining human and IT efforts. “I’m convinced that the whole success [for iTeam] lies in the combination of the knowledge that people possess, together with digital tools” (Informant K). As seen in the potential weaknesses of the pilot, a structuring of the information gathered in iTeam into an IT function could be a possible solution. That way

information could be accessed more effectively and be utilized in collaborative efforts to offer an integrated service to the customer.

In sum, even though knowledge is made explicit through ICT, multiple and complex sources to information creates complexity for retrieving and sharing knowledge. When the nature of these systems is complex and fragmented this can slow down individual working processes. As each unit have different ways of using digital platforms, this can be a barrier to knowledge sharing across units. Furthermore, working processes are complicated by digital tools when big amounts of detailed data are stored in non-intuitive platforms. This way, digital tools carries a potential for promoting knowledge sharing and effectiveness. In order to achieve such potential, it requires thoughtful consideration of both employees' understanding of the systems and their applicability for the company at an aggregated level.

4.3.4 Uncertainty due to rapid changes

“There were better times for collaboration and peer-support a few years ago, compared to what we have seen in the past few years. When you're afraid of losing your job this is not your main focus at all” (Informant I).

The last barrier we will discuss regards *uncertainty*. As described earlier, TechnipFMC operates in an industry characterized by competition and uncertainty, with merging companies and decreasing oil prices affecting businesses. The current “corona-crisis” is an example of how changes in a company's environment can have massive consequences. The crisis has led to a steep decrease in oil prices, forcing companies to lay off employees. When this cut is made, attention is drawn to where the vital knowledge of the company lies (who knows what), to ensure its survival. In sum, the company cannot be understood apart from the environment it exists in. Thereafter the question becomes how the environment affects knowledge sharing and collaborative behaviors across silos.

Our findings suggest that uncertainty in the surrounding environment can make employees reluctant to share their knowledge. There are two aspects to this. The first one is that employees *experience insecurity* about their positions in the company. Secondly, when the individuals experience job insecurity, this affects his/her behavior. “You can secure yourself if you have information about a specific domain which *you* know the best” (Informant I). “In companies where an individual's knowledge becomes his or her primary source of value to the firm,

sharing this knowledge might potentially result in diminishing the value of the individual” (Alvesson, 1993; Empson, 2001 cited in Ipe, 2003 p. 345). From the employee’s point of view this can be a reason to withhold information, even if it’s unintended.

“There is a safety in possessing key information and not to share this. (...). This may be a reason why there is sometimes too little sharing of information between people. If you find yourself in a key position, this would be valuable in uncertain situations” (Informant I).

A key finding is that such behavior is not just seen at the individual level but can also happen in groups and units. “Our department holds key information that nobody else has. Since nobody else knows this, we should share this information with them to make the company’s products better. We should not stay where we are, thinking we are the king of the hill (...)” (Informant H). This point is very much connected to initiatives leading to sub-optimization, as described in the previous chapter.

These factors are important to keep in mind as some participants might consider it as a personal risk to share information about their specific competence openly across all units. In sum, when a company operates in an unstable and uncertain environment, it is very likely that this will affect knowledge sharing and collaborative behaviors.

5. Concluding remarks

iTeam represented an internal process with a main focus on coordination and collaboration across silos. This happened through regular meetings, both physically and through digital means. During the meetings, employees from different departments learned about and analyzed cases together, which led to new insight on how to plan, deliver and exploit opportunities. As the pilot was directed towards one field and customer, knowledge from single projects were shared and combined in order to create integrated solutions, rather than single project deliveries. These kinds of solutions were ultimately positively received by the customer. Informants also valued approaching problems with colleagues from different disciplines who normally worked at different stages in the supply chain. In sum iTeam became the interface where the different departments making up the company's supply chain could exchange and bring about new knowledge.

Based on our analysis we see clearly that knowledge sharing and collaboration is essential to the success of interdisciplinary working across silos in TechnipFMC. Our findings address both strengths and weaknesses in the pilot. In addition, we have identified several barriers to knowledge sharing and collaboration outside of the pilot's scope. For instance, the participants interviewed were asked about the barriers they experienced in relation to collaboration in the organization. When the informants described these barriers, we found that these were actually the same mechanisms that was identified as *the reason why* iTeam was launched in the first place. Based on this we can say that iTeam has addressed the pain points from the original mandate given from TechnipFMC. However, iTeam does not solve these barriers alone - it is highly dependent on the bigger organizational structure, and the external surroundings.

As this report initially refers to, the service and supply industry is characterized by fluctuations in the market and vulnerability towards international and geopolitical conjunctures. There is no doubt that the organization's external environment has an impact on the working methods and structures within the organization itself. With the current coronavirus situation, the oil and gas industry must adapt to a world putting a break on the overall demands for oil. This will not make things easier in the times to come. Because of the industry's ever-changing nature, it is more important than ever to have an adaptable internal structure to be able to meet these changes. This can include facilitating for assigned budgets and proper management support to

give collaboration and interdisciplinary work formal organizational anchoring. In our analysis several informants also pointed at the concept of “sub-optimization”, where the methods to measure performance were conflicting with the efforts of making people collaborate. This is an example of how the organizational structure did not facilitate, but rather inhibited, measures taken to become more proactive and integrated.

By separating weaknesses and barriers, and looking at these independently, we could see more clearly what kinds of challenges both TechnipFMC and iTeam are facing. Understanding *barriers* has less to do with iTeam and more to do with the organizational structure and external environment, as discussed above. The concept of *weaknesses* on the other hand, has in our project addressed possible ways to improve the iTeam model as such. Based on our analysis, we have pointed out the following weaknesses: 1) dependency on key contributors, 2) unsustainable structure, 3) unclear selection of participants, and 4) concerns regarding transferability. Having these four weaknesses in mind can be helpful when planning for progression and to further develop the iTeam model.

Looking at the iTeam pilot’s strengths, on the other hand, we see that this as a sum of many factors: 1) collaboration and knowledge sharing was achieved through a formalized structure, 2) an expansion of collegial networks, 3) enhanced collaboration and coordination, and 4) overall value was created. In addition to this, the sum of these strengths redeemed the aim of becoming a more proactive organization. With iTeam as a contributor to this, past experiences were made relevant for actual problems and the relationship with the customer improved. The pilot’s strengths also helped connecting existing silo structures that may have interfered with the information flow and knowledge sharing between different sections. Such structures can hinder optimal task execution and thereby limiting the organizations’ potential. Collaborating and sharing knowledge in iTeam can be one way to solve challenges across different sections in the company but needs support and facilitation from the management of the units involved.

“[If we don't put this on the agenda] ... I will not be working with this anymore - I will be working in the cashier at the groceries. I think we just *have to*. It is vital for us as an organization. And if we don't manage to deliver this and make money out of the assets we have in both technology and solutions, namely what gives us our advantage, we might have to call it a day. That's where we're at” (Informant H).

Despite the barriers outside of iTeam’s scope, iTeam has been a useful tool in making the units more coordinated and proactive towards the customer. Based on our analysis we can state that

iTeam, to some extent, loosened up rigid silos and ensured knowledge to be utilized more effectively. This shows that collaboration is much needed and wanted by the organization's employees as they strive to offer the optimal service towards their customers, in order to assure the organization's role as a leading supplier in the industry.

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Appendix A

iTeam interview guide (English version)

1. Quick introduction of our project and research question, where the participants were encouraged to have an open dialogue and reason freely around the topics discussed.

A. Opening questions

1. We first want to start out by asking what is your role in TechnipFMC? What is your job title?
2. Can you tell us a bit about your expertise areas and competencies? (developer, engineer, sales, etc.)
3. In what way have you been a part of the development of iTeam? (directly, peripheral, etc.)

B. Introduction of iTeam

1. Can you tell us about iTeam? What is this?
If iTeam is the solution - what is the problem?
2. Do you have any concrete examples of situations where you have benefited from the iTeam meetings?
Why did you choose to participate in the weekly meetings?
3. How has iTeam affected the way you work?
Has iTeam for instance affected the way you collaborate with your colleagues?
4. What kind of information did you typically share with each other in these iTeam meetings?
5. How do you think iTeam could be more relevant and useful for you?
6. What did you do before this pilot came along, in similar situations?
Do you have a forum where you can bring both big and small issues that can be solved across units in the organization?
7. How is collaboration facilitated across the different departments/units?
What kind of barriers do you meet that can hinder collaboration?
8. TechnipFMC operates with a lot of different digital tools, both information- and communication tools. In what way do you experience that these tools are simplifying and/or complicating your everyday work?

C. Final questions/remarks

9. Is there something you want to add to the different topics we have discussed so far? Something you think is important for us to keep in mind?
10. Finally, is there anyone else in TechnipFMC you consider as relevant for us to talk to?