



**AALBORG UNIVERSITET**  
STUDENTERRAPPORT

**OPERATIONS AND INNOVATION MANAGEMENT**  
**MASTER THESIS PROJECT**

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**THE ROLE OF CULTURE IN AGILE GLOBAL SOFTWARE  
DEVELOPMENT ENVIRONMENTS - A CASE ON THE  
COLLABORATION BETWEEN DENMARK AND INDIA**



**bankdata**

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**AALBORG UNIVERSITET**  
STUDENTERRAPPORT

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*Rapportens indhold er fortroligt og må ikke offentliggøres*

**Synopsis**

Den danske afdelingsleder fra Bankdatas udviklingscenter i Indien har udtrykt, at der er en masse underliggende kulturelle barrierer, som i mange tilfælde forhindrer virksomheden i at udføre deres arbejde som ønsket. Gennem en grundig literaturstudie kombineret med adskillige observationer, undersøgte jeg relationerne mellem kultur, innovation, kreativitet, agile metoder, og offshore samarbejde for at forstå den kontekst hvori opgaven er skrevet. Formålet med opgaven var at undersøge kreativitetens rolle i agile sammenhæng, når to kulturelt forskellige nationer indgår i et tæt samarbejde. Som en del af rapporten, udarbejdede jeg huskeregler der kan rådgive Skandinaviske virksomheder, som ønsker enten at styrke eller etablere et samarbejde med Indien. Gennem undersøgelsen lærte jeg, at kultur bærer en vigtig rolle i styrkningen af samarbejdet mellem to vidt forskellige nationer. En stærk kultur er med til at forbedre rekrutteringen og socialiseringen af de Indiske ingeniører således, at de arbejder ud fra det sæt af værdier, der er relevant for den virksomhed som de er ansat hos.

# PREFACE

This master thesis project has been written by a fourth semester student from the master's programme in Operations and Innovation Management (OIM). The report has been written over the duration of one semester and follows the curriculum for OIM at Aalborg University.

## ACKNOWLEDGEMENTS

I would like to thank my supervisors Verena Stingl and Paul Topsøe-Jensen for their guidance and supervision. Also, a special thanks to the Scrum teams from Bankdata that let me observe daily work – it was a pleasure to work with all of you.

## REPORT CONTENT

The **introduction** will be used to introduce the context in which this report takes place and the problem that this thesis project seeks to address.

The **case background** introduces the case company, describing who they are, and what they have been working on over the past few years.

The **theoretical lens** chapter will be used present the literature and theoretical grounding that will be used to answer the research questions that are introduced in chapter one.

The **methodology** chapter will be used to describe the methods used to conduct this report, covering the research methodology, research design, as well as approach for collecting and analyzing data

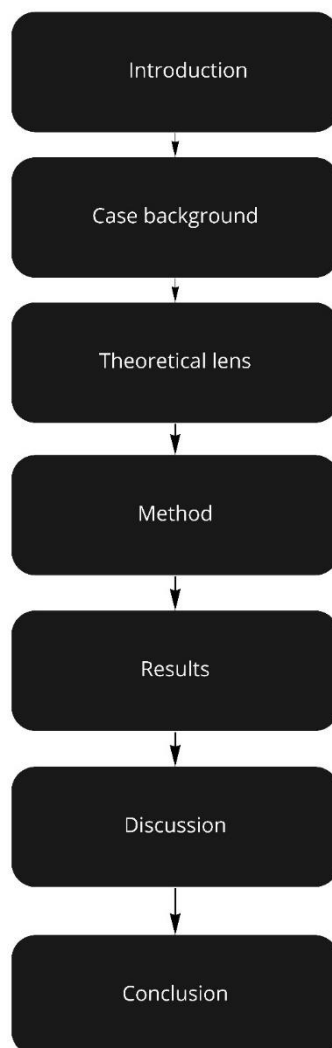
The **results** chapter will be used to present findings from both the questionnaire as well as the observations that were made in connection with this project.

Findings will be analyzed and discussed in the **discussion** chapter

The **conclusion** will be used to make a few concluding remarks on the role of culture, and on how Scandinavian firms can overcome cultural barriers.

## READING GUIDE

- 1) Multiple abbreviations will be used throughout the report.
- 2) Figures, pictures, and tables have been numbered and marked in relation to chapters and sections to which they belong.
- 3) Literature will be referenced using the Harvard style of referencing: (Surname, Year)
  - Books: | Author, Title, ISBN, Publisher, Year
  - Internet sources: | Author, Title, URL, and last visited date.



**Figure i** – Illustrates the report structure

## **ABBREVIATIONS**

GSD – Global Software Development  
OIM – Operations and innovation management  
CCQ – Creative climate questionnaire  
DCI – Development Centre India  
CLO - Chief Liaison Officer  
PO – Product Owner  
ScM – Scrum Master  
BA – Business Analyst  
KPI – Key Performance Indicator  
PDI – Power Distance  
IDV – Individualism  
GPS – Grow, Perform and Succeed  
ROI – Return on investment  
RQ – Research question

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# ABSTRACT

There is much literature on the obstacles caused by cultural differences in global software development projects, but limited insight on how such differences affect the collaboration between Denmark and India. Researchers have found that strong hierarchical nations such as India, have a history of fostering behavior that is in contrast with good Scrum. I sought to deepen this understanding through a literature study as well as case study. The case study was limited to the duration of one semester, observing three Scrum teams where Indian engineers (employed by 7N, India) work together with Bankdata (Denmark) on agile software development projects. The literature study focused on the interplay between culture, agility, innovation, creativity, and socio-cultural collaboration. The work was limited to focus on the role of culture, investigating how cultural barriers affect the effectiveness of agile practices. The first research question was used to investigate the role of culture in agile context, understanding how culture sets the foundation for a healthy trans-national collaboration, and how culture can be used to foster creativity. Findings from this study suggests Scandinavian firms must develop strong and transparent organizational cultures that support the onboarding and socializing of Indian employees. With a strong and empowering organizational culture, firms are able to stimulate behavioral changes so that Indian engineers behave according to the firms' values and needs, and to the three pillars of empiricism that characterizes good Scrum (adaptation, inspection, and transparency). I found that Bankdata has mitigated many cultural challenges already, but that there are still cultural barriers rooted into the way individuals from strong hierarchical cultures think. These cultural barriers are in contrast with good Scrum and cannot just be changed overnight, leaving Bankdata as well as many other European firms prone to obstacles they know exist, but cannot mitigate.

# TABLE OF CONTENT

<b>TABLE OF CONTENT .....</b>	<b>VII</b>
<b>1   INTRODUCTION .....</b>	<b>1</b>
1.1   PROBLEM CONTEXT AND RESEARCH QUESTIONS.....	2
<b>2   CASE BACKGROUND .....</b>	<b>5</b>
2.1   BANKDATA.....	5
2.1.1   OWNERS, PARTNERS AND CUSTOMERS.....	5
2.1.2   IT-SOLUTIONS .....	6
2.1.3   ORGANIZATIONAL STRUCTURE .....	7
2.1.4   DEVELOPMENT CENTRE INDIA .....	7
2.1.5   DCI DNA .....	10
2.1.6   B-AGILE .....	12
2.1.7   TEAM COMPOSITION .....	15
2.2   CULTURAL BARRIERS .....	17
<b>3   THEORETICAL LENS .....</b>	<b>20</b>
3.1   CULTURE.....	20
3.2   COUNTRY COMPARISON .....	23
3.2.1   POWER DISTANCE .....	24
3.2.2   INDIVIDUALISM .....	25
3.2.3   MASCULINITY .....	25
3.2.4   UNCERTAINTY AVOIDANCE .....	26
3.2.5   LONG TERM ORIENTIATION.....	27
3.2.6   INDULGENCE .....	27



3.2.7   COUNTRY COMPARISON SUMMARY .....	27
3.3   AGILITY .....	28
3.4   INNOVATION .....	30
3.5   CREATIVITY .....	31
3.6   CREATIVE CLIMATE QUESTIONNAIRE .....	31
3.6.1   CHALLENGES .....	32
3.6.2   FREEDOM .....	32
3.6.3   IDEA SUPPORT .....	32
3.6.4   TRUST / OPENNESS .....	33
3.6.5   DYNAMISM / LIVELINESS .....	33
3.6.6   PLAYFULNESS / HUMOR .....	33
3.6.7   DEBATES .....	33
3.6.8   CONFLICTS .....	34
3.6.9   RISK TAKING .....	34
3.6.10   IDEA TIME .....	34
3.7   CCQ RESULTS .....	35
<b>4   METHOD .....</b>	<b>36</b>
4.1   RESEARCH METHODOLOGY .....	36
4.2   RESEARCH DESIGN .....	39
4.3   DATA COLLECTION AND DATA ANALYSIS .....	40
<b>5   RESULTS .....</b>	<b>42</b>
5.1   OBSERVATIONS .....	45
5.2   OTHER FINDINGS .....	48
<b>6   DISCUSSION .....</b>	<b>50</b>

6.1 | LIMITATIONS ..... 54

**7 | CONCLUSION .....56**

**SOURCES .....58**

BOOKS ..... 58

CONFERENCE PAPERS ..... 58

JOURNAL ARTICLES ..... 59

WEBPAGES ..... 60

**APPENDIX .....63**

    A: ..... 63

    B: ..... 64

    C: ..... 65

*“Culture eats strategy for breakfast”*

# 1 | INTRODUCTION

It has become normal and at the same time easier for companies to offshore IT-development projects due to the internet and globalization. (Šmite et al., 2021) The efficiency, speed, and coverage of the Internet mean that the world has become smaller and at the same time more accessible (Šmite et al., 2021)

Although the world feels smaller, it does not mean that operations can be done in the same way regardless of location and culture. (Summers, 2008) This is a relevant statement for my thesis, as it has been evident that national, organizational, and cultural differences can catalyze unforeseen obstacles when European countries collaborate with India on agile software development projects. (Summers, 2008; Šmite et al., 2021; Hofstede Insights, n.d.)

Every nation has its own culture and way of doing things, and the same goes for every organization. (Hofstede Insights, n.d.) Culture is encrypted in every corner of our societies and can be seen in our feelings, ways of thinking, and in behavioral patterns. (Hofstede Insights, n.d.) The people that are responsible of bringing a company's vision to life are the ones responsible for its success or failure. (Tomkowiak, 2010) There are unwritten rules and attitudes that influence the behavior of people, and this will not just disappear over time. (Hofstede Insights, n.d.) Many firms fail to incorporate appropriate culture in such trans-national collaborations, making it very difficult for them to thrive (Coffman & Sorensen, 2013; Šmite et al., 2021)

Based on the above, this thesis examined the interplay between culture, agility, innovation, creativity, and transnational collaboration through the context of Bankdata, Development Centre India (DCI) where Danes and Indians collaborate on agile software development projects in remote self-organizing teams.

## 1.1 | PROBLEM CONTEXT AND RESEARCH QUESTIONS

At the start of this project, there was an expressed need at Bankdata to strengthen their existing collaboration with India. They planned to hire more Indian engineers and wanted to investigate how to do so. Bankdata had previously tried to establish an offshore setup in India (back in 2009) but without success. Since Jyske Bank is both an owner and customer of Bankdata, it was decided in 2011 between Jyske Bank and Bankdata, that Bankdata should take over their operations with 7N, India. (7N, 2019) 7N recruits Indian engineers and employs them with different partners around the world. Bankdata has over the years learned through their close partnership with 7N India, that the collaboration is functioning better than expected, even during times of a pandemic where none of the teams can meet physically. However, this collaboration is not without obstacles.

During the first meeting with the Department manager at DCI described how cultural disparities contribute to reducing the effectiveness of their Scrum-practices. It was expressed that the Indian staff, in many cases, do not act according to how Bankdata wants them to, often times being reluctant to share critical information in debates, reluctant to reveal a lack of understanding to superiors, as well as reluctant towards warn about non-feasible deadlines.

This thesis project sought to investigate Bankdata's collaboration with India, scanning through their agile environments to identify cultural barriers, and to get a glimpse into the work climate in these multi-cultural Scrum teams. The Department manager wanted a new pair of eyes to look over the setup. To do this, three of Bankdata's self-organizing Scrum teams were observed, attending to their daily meetings as an observant. Each team was observed for the period of two weeks, participating in all scrum ceremonies (daily scrum, sprint retrospective, sprint refinement, sprint review, and sprint planning). What is seen through observations, is mostly subjective to the person observing, so a questionnaire was used as a complementary way to collect more data, adding more depth to the study.

To narrow the focus of this project, two research questions were articulated (see table 1).

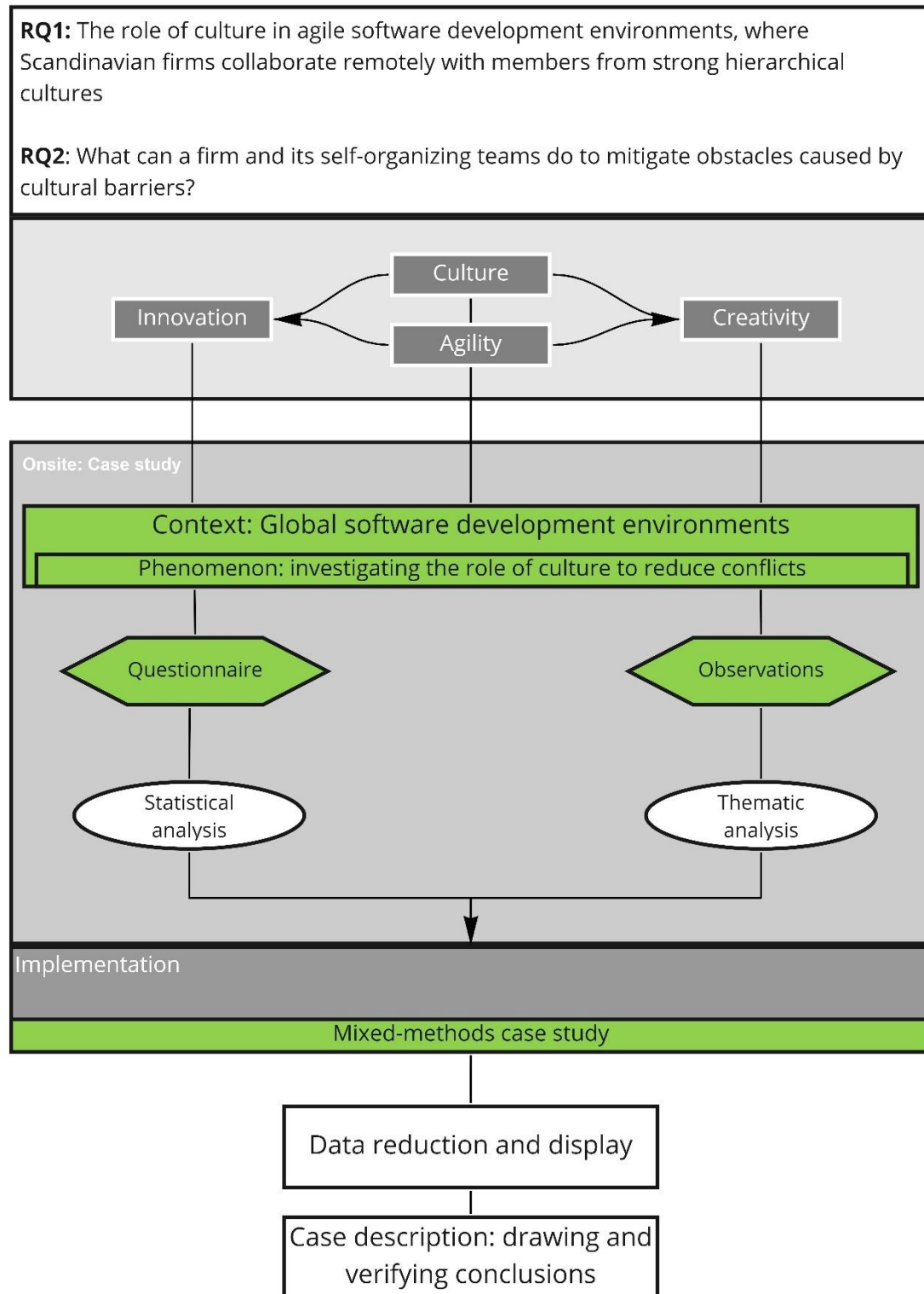
*Table 1 – A table that illustrates the research questions that this project seeks to clarify*

<b>RQ1</b>	What is the role of culture in agile software development environments, where Scandinavian firms collaborate remotely with members from strong hierarchical cultures?
<b>RQ2</b>	What can a firm and its self-organizing teams do to overcome obstacles caused by cultural barriers?

**RQ1** was focused on the role of culture, in remote collaborations between Scandinavian and Indian firms. Based on existing literature, as well as the information given by the department manager, there are many cultural barriers that Scandinavian firms must overcome when collaborating with Indian engineers, but there are also many challenges that have been mitigated over time. It is certainly not an easy task to bridge the cultural gap between such vastly different cultures, but organizations can overcome cultural challenges over time, through a continuous learning process. Since culture can have such a big effect on agility, it was found relevant that this thesis should investigate the role of culture with focus on how culture can be used to either strengthen or weaken collaboration as well as flourishing or restraining creativity.

**RQ2** is an extension to the first research question, focusing on what other Scandinavian firms can learn from the case of Bankdata. This question was answered by analyzing studies and practices that have already contributed to a reduction of cultural barriers complemented with practical examples of findings from the observations that were made in connection with this case study.

Figure 1 - A visual illustration of how this study was mapped out



## 2 | CASE BACKGROUND

The report has been written in close collaboration with Bankdata, Development Centre India (DCI), and is an extension to what they have been working with over the past few years. The following chapter describes who Bankdata is how they operate, and the case that I will be focusing on.

### 2.1 | BANKDATA

Bankdata was founded in 1966 and is a modern, financial IT company. Their main profession is within IT/banking, and they vision to be a leading financial IT company. The company is organized as an association with the purpose of developing and operating IT solutions for a community of Danish banks. The community can also be described as a common platform for which they must deliver solutions to. These banks are not just customers, but also owners of Bankdata.

#### 2.1.1 | OWNERS, PARTNERS AND CUSTOMERS

At 43 percent, Jyske Bank is the bank with the largest ownership interest in Bankdata followed by Sydbank which owns 32 percent (which makes up 75%).

The other banks own less percentages because they are relatively small compared to Jyske Bank and Sydbank. The ownership distribution is illustrated in figure 2, below:

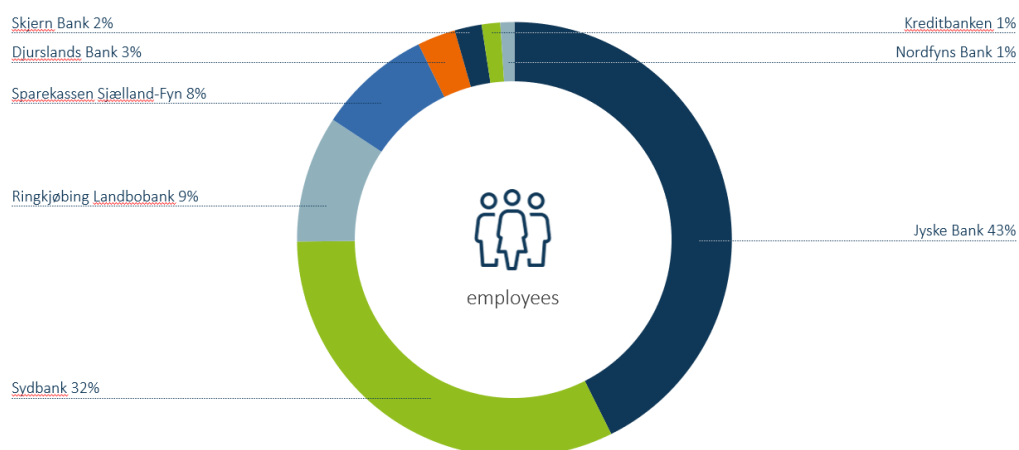


Figure 2 - Illustrates Bankdata's partner banks as well as owners (Bankdata, 2021)



## 2.1.2 | IT-SOLUTIONS

Bankdata is one of three Danish data centers that serve all Danish banks, with the exception of Danske Bank and Nykredit, because they have their own 'IT departments / data centers' in-house. Bankdata is an association owned by Danish banks, and through collaboration, together they develop financial IT. Bankdata delivers two things mainly: core banking and development of new products, see figure 3.

Figure 3 - Illustrates what Bankdata delivers to customers (Bankdata, 2021)



**Core banking** covers all the functions, systems and programs used for ordinary banking operations that run 24/7, all 365 days of the year e.g. (withdraw/transfer money, pay bills, use of debit cards, etc.).

**IT-Development:** In addition, Bankdata also develop new products for their customer banks. This can be new functions to online/mobile banking, implementation of third-party solutions such as Apple Pay, or completely new products

### 2.1.3 | ORGANIZATIONAL STRUCTURE

The context of this project takes place in Development Centre India, which is a sub-unit of Digitalization & Core Banking. To define how tasks should be allocated towards the fulfillment of organizational goals, many organizations design their own organizational structure. (Daft, 2020) The organizational structure of Bankdata can be seen in figure 4. The red circle highlights the department (DCI) that this thesis project will be focusing on.

Figure 4 - Bankdata's current organization chart (Bankdata, 2021)



### 2.1.4 | DEVELOPMENT CENTRE INDIA

Bankdata has established a cross-continental collaboration with 7N (India), making it an internationally staffed operation. They used to have a Danish manager on-site in Delhi which contributed to bridging the cultural the gap between different locations and cultures. However, due to the corona pandemic, Bankdata has withdrawn their staff back to Denmark and has since not sent any Danes on-site back to India, due to the risks related to COVID.

What started as remote development with limited capabilities and skills, have over the years transitioned to become self-organizing teams with full product responsibility. Bankdata visioned that the development center should be a central business driver, similar to their Danish teams.

The Development Centre in India has since grown from 45 employees to more than 100 people, over the duration of two and half years. This aggressive growth has been supported by restructuring the Indian operations and appointing '*Tribe leads*' as local leaders.

Each tribe lead manages by the values of Bankdata and according to Scrum principles. There are five tribes, each with a tribe lead who acts as a personal leader. Each team is connected to a Danish department who is business responsible for the team.

When a department from Bankdata wants to associate with the Development Center India, a department manager must approach the Chief Liaison Officer (CLO) of DCI. The CLO then delegates this responsibility to a Tribe Lead from India who will help in recruiting and onboarding. There are five tribe leaders, and each of them is responsible for three collocated Scrum teams.

Tribe leaders support growth, as it makes the recruitment and onboarding of new Indian engineers more manageable for Bankdata. Since the implementation of tribe leads, the Indian operation has undergone radical changes. What started as few development operations is now self-organizing teams that are responsible for covering the whole product life cycle

The organizational structure for DCI is illustrated in figure 5, below. At the top of the organizational chart, seen through the lens of the Development Center India, is the Chief Liaison Officer who is also the department manager. Under him are the tribe leads who are each responsible for at least three collocated Scrum teams. The red circle the teams/stakeholders that were involved in this project.



Figure 5 - Organization chart at Bankdata seen through the lens of Development Centre India (Bankdata, 2021)

### 2.1.5 | DCI DNA

Bankdata, Development Centre India has defined clear values that newly recruited engineers are introduced to as part of the recruitment process. They refer to this as the DCI DNA. The DNA is the foundation for their workplace, as it guides the staff in carrying out work passionately and proficiently.

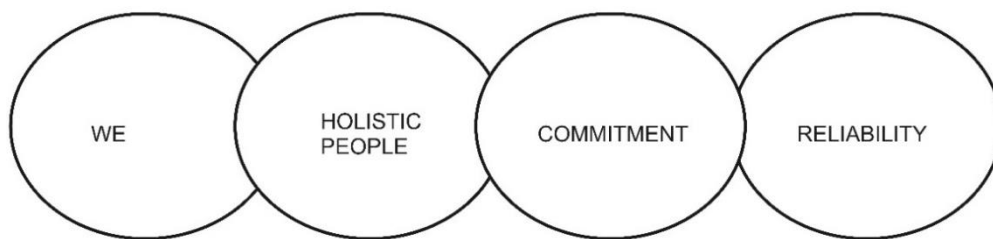
When recruiting new employees in India, the DNA plays an important role, as it defines the work culture (how work should be carried out and how people should behave, see figure 6.



Figure 6 - Illustrates the DCI DNA (Bankdata, 2021)

When employing new Indians to the team, Bankdata presents them to their organizational culture. All newly recruited employees are therefore schooled four values that define how Bankdata carry out work, and what values they should strive to live by, see figure 7.

*Figure 7 – The cultural values of Bankdata that employees should respect and strive to live by (Bankdata, 2021)*



“We” is that the foundation of Bankdata is based around their community. Success is sought through collaboration and transparent knowledge-sharing both internally and with partners/customers. Mutual respect brings equality and trust to the workplace and ensures that employees are not just colleagues but also comrades that work, play, fight and celebrate together.

“Holistic people” is that employees at Bankdata should strive to be holistic. All people are complex and unique with different competencies, individual skills, and needs. Employees have the freedom to shape and control their own tasks and results but also the responsibility to stand up for the decisions they make. That’s why Bankdata believes in a fair work-life balance as well as a sound balance between responsibility and freedom.

“Commitment” is the driver that fuels job satisfaction because common sense and personal responsibility is the key to a proficient community and workplace.

“Reliability” refers to how employees are encouraged to work methodically towards delivering high-quality operations, combatting digital threats, and complying with legal requirements.

### 2.1.6 | B-AGILE

Bankdata uses the Scrum framework to manage their complex projects. The principles of the Scrum method provide many short sprints and fast delivery to customers.

(Nettleton, 2011) Scrum is a framework for project management that focuses on iterations, continuous improvement, and transparency. (Nettleton, 2011) Each element and role in the Scrum framework serve a specific purpose, crucial to the overall value as well as results obtained with Scrum. (*The Roles – ScrumMaster.Dk*, n.d.) The principle in Scrum is based on process control and lean thinking, meaning that knowledge comes from experience and decisions are based on what has been observed. (Nettleton, 2011) The lean mindset aids in reducing waste through incremental improvements based on iterative step-by-step optimization(*The Roles – ScrumMaster.Dk*, n.d.) Scrum engages groups of people who collectively have the expertise and skills necessary to perform work. (Nettleton, 2011) There are three roles in Scrum: Product Owner, Scrum Master, and Team Members, see figure 8.

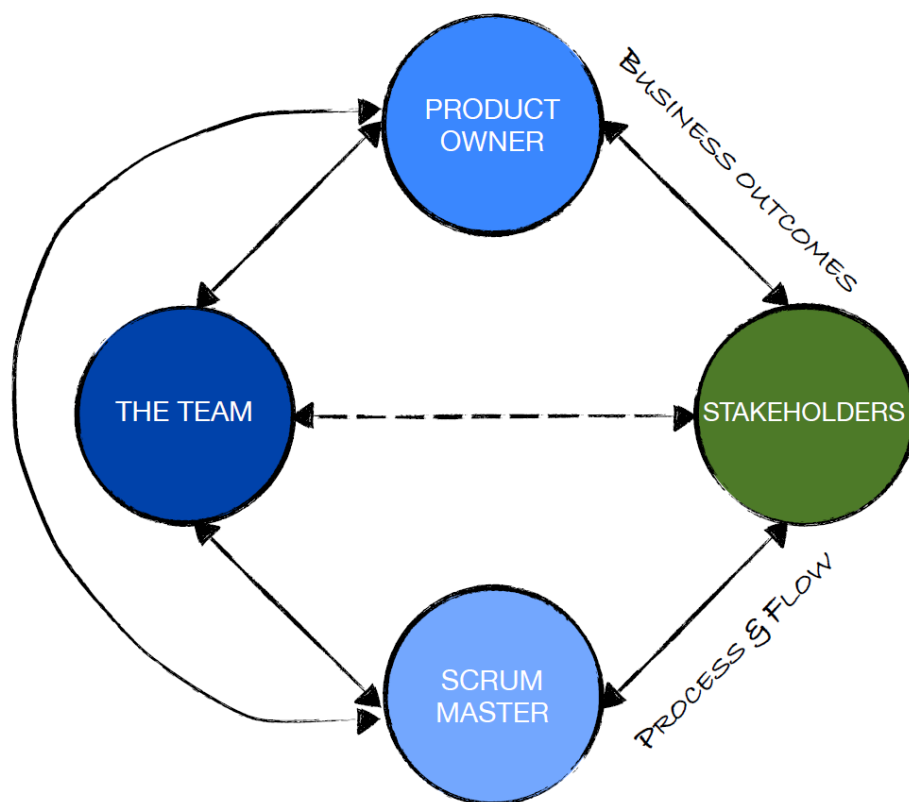


Figure 8 - Illustrates the relationship between Scrum Roles (Nettleton, 2011)

Scrum Masters (ScM) are responsible for making sure that all team members follow the principles of Scrum. (Nettleton, 2011) Unlike traditional project managers, Scrum Masters do not hand out assignments to the team. (*The Roles – ScrumMaster.Dk*, n.d.) Instead, the Scrum Master is there to create value by always observing and listening for weak signals that either indicate opportunities or potential threats. (Nettleton, 2011) The Scrum Master always serves the team and product owner, protecting the team from constant changes and interruptions from surroundings. (Sutherland & Schwaber, n.d.) The Product Owner creates a plan and shared vision for what is to be achieved, resulting in an orderly list of requirements, also referred to as the Product Backlog. (Nettleton, 2011) It is the Product Owners duty to construct and work on the backlog, defining user stories, improving descriptions, acceptance criteria, collecting new ideas, listening to signals from users/customers and prioritizing efforts. (*The Roles – ScrumMaster.Dk*, n.d.) Product owners are also responsible for making sure that the team delivers quality results by understanding the customer's and user's needs and translating these to the team. (*The Roles – ScrumMaster.Dk*, n.d.) It is the Product Owners responsibility to explain and facilitate this domain knowledge to the Scrum team that works on delivering the end-products. (Nettleton, 2011) When in doubt, the team relies on the product owner who can direct the team in the right direction. (Sutherland & Schwaber, 2020; *ScrumMaster.dk* –, n.d.) Scrum teams at Bankdata are usually small and cross-functional, consisting of 3-9 team members that collaborate in self-organizing units with the right competencies and skills needed to be carrying out tasks from the Product Backlog. (*The Roles – ScrumMaster.Dk*, n.d.) When doing so, the team has full authorization to find the right tactical solution on how product backlog items should be solved. (*The Roles – ScrumMaster.Dk*, n.d.) Scrum teams collaborate closely with the product owner to thoroughly understand items from the product backlog, and together they find the right acceptance criteria for what it takes to finish each item. (*The Roles – ScrumMaster.Dk*, n.d.) Based on group consensus, the team estimates the workload for each product backlog item, and together with the product owner – they break down items from the product backlog into appropriate, manageable sizes that can be solved within a Sprint. (*The Roles – ScrumMaster.Dk*, n.d.)



## **GROW, PERFORM AND SUCCEED**

As part of their agile approach to project management, Bankdata has established GPS (Grow-Perform-Succeed) as a development course for employees to continuously improve competencies and behavior, see figure 9. GPS is a continuous process, where employees together with managers plan how they can develop new competencies purposefully.



*Figure 9 - A visual representation of GPS and what it stands for (Bankdata, 2021)*

Grow is about self-development and the acquirement of new competencies. Perform is about seeing and experiencing the effect as well as the value of the employee's self-development. Succeed is concerned with how satisfied an employee is with the new results that they create. As part of GPS, employees participate a minimum of four annual GPS conversations, where they must build upon their GPS plans, updating them after each meeting.

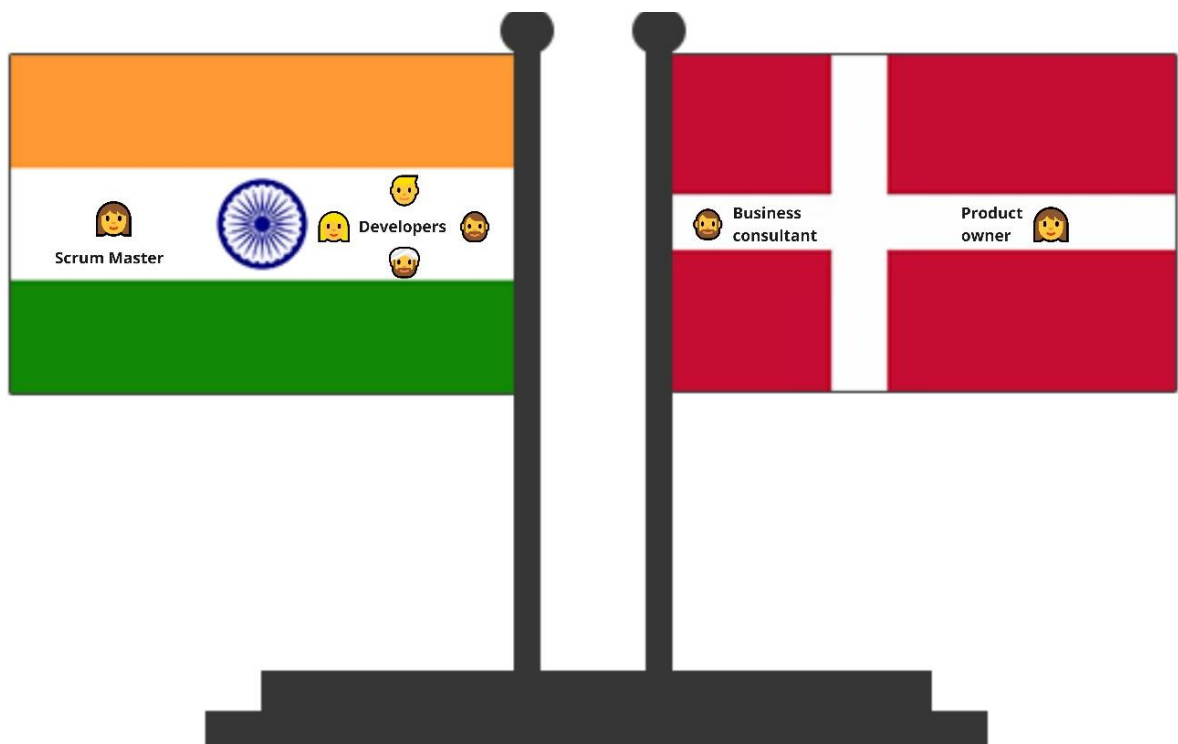
### 2.1.7 | TEAM COMPOSITION

There are two team formats in the development center India i.e., collocated, and distributed teams. In collocated teams, the product owner, department manager and vice president are very keen on the cooperation from the start and closely involved with offshore operations.

#### COLLOCATED TEAMS

The typical collocated team at Bankdata consists of Indian software developers along with Indian Scrum Masters. A typical collocated team also has a Danish product owner/business consultant assigned to each Scrum team. The main advantage of this team composition is that all developers are from India, which makes it easier for them to collaborate internally. One of the disadvantages of this model is that collocated teams often miss out on the opportunity of working with Danish developers on a daily basis. The composition of collocated teams is illustrated in figure 10, below.

*Figure 10 - Illustrates the collocated setup (Bankdata, 2021)*

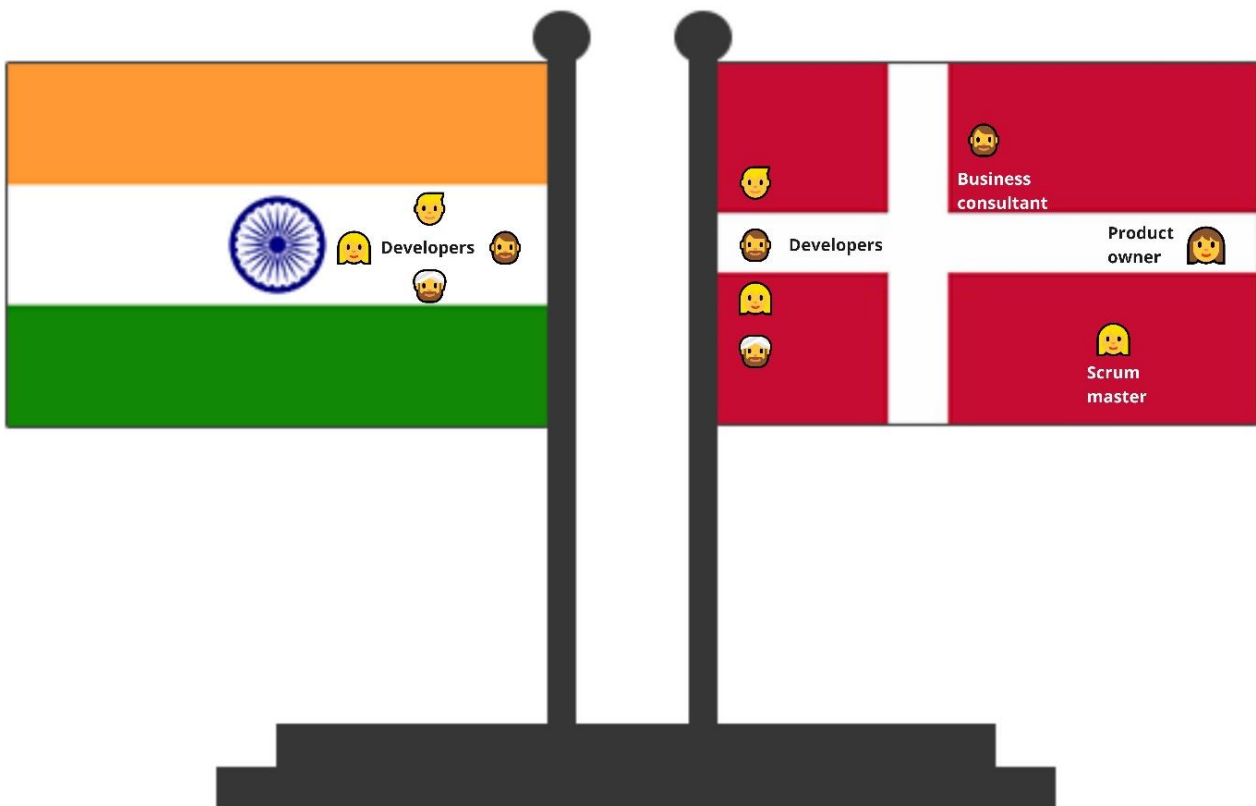


## DISTRIBUTED TEAMS

In distributed teams, the scrum master and department manager always make sure that developers from India take part in most events that take place in Denmark. It is important that the Indian developers get every bit of information related to their department. Here, the scrum master as well as the department manager goes the extra mile to make sure that the Indian developers feel like they belong to one department.

Distributed teams typically comprise of three mainframe developers from India along with three mainframe developers, a product owner, a business analyst, and a front-end developer from Denmark. The main advantage with this team-composition is that the team will get the best from both worlds, but the disadvantage is that it may create a feeling of two sub teams in the team. The distributed team composition is illustrated in figure 11, below.

*Figure 11 - Illustrates the distributed setup (Bankdata, 2021)*



## 2.2 | CULTURAL BARRIERS

Researchers have found that cultures with high preference for command-and-control management styles (countries such as India, China and more) tend to foster behavioral patterns that are in contrast with good Scrum. (Šmite et al., 2021; Nettleton, 2011)

The cultural barriers that have been derived from my literature study can be seen in table 2, below

*Table 2 - Cultural barriers derived from existing literature*

<b>Cultural barriers in agile GSD collaborations with India</b>
Members from strong hierarchical cultures are known for not taking initiative – awaiting to do what they are told
Members from strong hierarchical cultures are often reluctant to discuss failure
Members from strong hierarchical cultures are reluctant to warn about non-feasible deadlines
Members from strong hierarchical cultures are reluctant to reveal a lack of understanding
Members from strong hierarchical cultures are known for settling into established habits, following routines and roles without questioning
Talkback approach is often needed to ensure that Indian engineers are in alignment with what is needed to be done

According to the pillars of empiricism, the effectiveness of Scrum can be weakened by a lack of transparency, inspection, and adaptation. (Nettleton, 2011; Gonçalves, 2021) Hence, every individual from an agile organization must incorporate these three characteristics as part of their behavior, in order for the teams to thrive and perform well in these remote agile environments. (Nettleton, 2011) Due to the major difference in power distance between Western societies and strong hierarchical cultures, Western firms find it difficult to ensure that Indian engineers are always in alignment with what it takes to practice good Scrum. Since Indian culture is much different than that of Danes, it requires for both countries to socialize and bridge this cultural gap between these two nations, to strengthen the effectiveness of their Scrum practices.

The same way that nations have different cultures, each self-organizing Scrum team also socializes in its own way, as every unit has its own unique team culture, and rituals that they follow. All teams follow the Scrum framework and its principles, but the way things are done is always slightly different from team to team.

Scrum is just a framework, a skeleton you may say, and Scrum teams must therefore develop their own habits over time, making improvements through a continuous learning process where they identify impediments, and remove them along the way. (Nettleton, 2011)

In an interview with the Scrum Master of a distributed team, I learned how the Indian staff in her team, at times are not as *transparent* as they should be. The Scrum Master explained that Indian engineers at times are reluctant to reveal a lack of understanding when given assignments, and in some cases also reluctant to warn about non-feasible deadlines. In such situations, trust becomes a barrier because the team will never know for sure when someone is not being open and transparent. Especially in this remote setup, where gestures cannot be expressed in the same way as in meetings with physical attendance.

Another challenge that the Scrum Master addressed with the distributed setup is that the Indian engineers are in general not as technically competent as the Danish developers. The lack of technical competencies requires the team to conduct frequent *inspections* to quality check what the Indian staff develops to avoid misunderstandings. Recognizing when to conduct an inspection can be extremely hard to predict, because the Indian staff are not transparent in their communication as they should be.

However, Scrum is known for increasing task awareness, and the framework works as a mechanism for mitigating socio-cultural, geographical, and temporal challenges. (Ali, 2015) Working hours are for example synchronized using Scrum events, and Sprints allow the teams to easily identify and resolve challenges along the way, making the teams more *adaptable* to environmental changes. (Ali, 2015)

It is very common for collocated teams to have playful activities take place before Sprint retrospectives. Retrospectives are used to reflect on a sprint, discussing what went well, what could have been done differently, and what the team will commit to in the following Sprint. (Nettleton, 2011) Since Indians engineers known for not sharing their honest opinions when giving feedback and known for being reluctant to share critical information during meetings, Scrum Masters from the collocated teams have embedded small competitive games as part of their culture to socialize the team, bonding the staff to be more open when sharing thoughts during Retrospective events.

By observing both distributed and collocated Scrum teams, this thesis provides insights on how the Indian staff thrive in different remote agile GSD environments, along with insights on what the role of culture is in agile collaborations where Scandinavian firms work closely with Indian engineers.

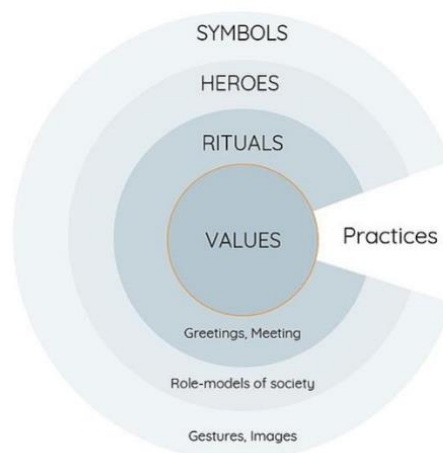
### 3 | THEORETICAL LENS

This chapter represents the theoretical grounding of this study and is based on literature that is already widely acknowledged within the areas of research: culture, agility, innovation, creativity, and socio-cultural collaboration. To understand differences between Denmark and India, this project will see culture through the theoretical lens of Geert Hofstede's 6-D model, and test creativity using Göran Ekvall's creative climate questionnaire (CCQ), using it to measure an as-is snapshot of the current creative climate at Bankdata, Development Centre India.

#### 3.1 | CULTURE

Culture has been defined by many, and in many ways due to its multiple meanings (Hofstede Insights, n.d.) Culture seen through the lens of Hofstede can be compared to an onion where there are multiple layers (symbols, heroes, rituals, and values) that are unique to every nation as well as organization (Hofstede Insights, n.d.), see figure 12.

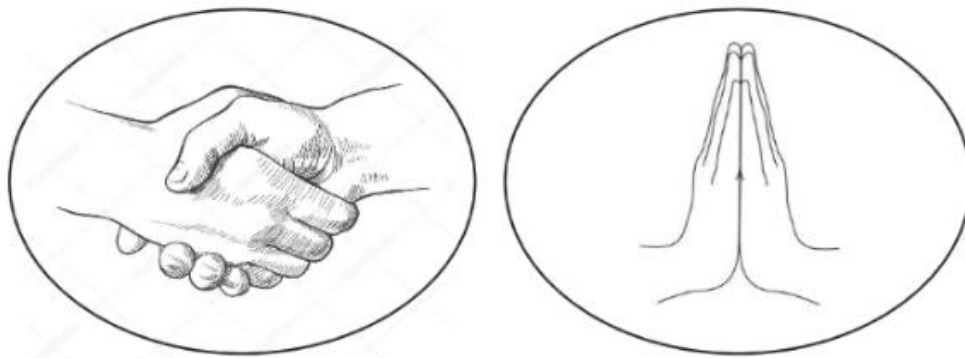
*Figure 12 - Illustrates the onion-model developed by Geert Hofstede (Hofstede Insights, n.d.),*



Values are at the core of culture and is rooted in the environment we grow up in. organization (Hofstede Insights, n.d.) As an example, Hofstede compares it to the way we have interactions with parents, and the way schools teach us what is acceptable and what is not. (Hofstede Insights, n.d.) In other words, values can be considered preferences that groups of people live by, at a national as well as organizational level. (Hofstede Insights, n.d.)

Rituals can be seen in the activities that we do in our spare time such as going to the gym or watching tv-series with the family on Sunday evenings. (Hofstede Insights, n.d.), Rituals typically happen in loops where certain activities take place at certain times e.g., festivities such as Christmas in the western side of the world, and in India - Diwali.

Rituals can also be seen in the way people greet and interact with each other e.g., in western countries we shake hands, whereas greetings in India are spoken as Namaste and with a slight bow as well as hands pressed together (Hofstede Insights, n.d.), see figure 13.



*Figure 13 – Handshake vs. namaste*

Heroes are the role models of a cult, the ones everyone look up to and strive to live and be like. This is often public figures such as athletes, actors, musicians, company founders and even fictional figures such as Iron Man, Batman and more. (Hofstede Insights, n.d.) Countries do not always share the same rituals, such as Danes preferring football over cricket.

Symbols can be considered the outer layer of the onion and includes things such as cuisines, spices, dances, flags and more. organization (Hofstede Insights, n.d.), As culture is a group phenomenon, it is of course not likely that every person in every group can represent the values, symbols, rituals, and practice of the culture they are part of. organization (Hofstede Insights, n.d.),



## **NATIONAL AND ORGANIZATIONAL CULTURE:**

Culture can be seen in both nations and organizations, so to make a distinction between these two types of culture, we must understand the differences. (Hofstede Insights, n.d.) Hofstede defines national culture as the programming of the human mind by which one group of people distinguishes itself from another group. (Hofstede Insights, n.d.)

Organizational culture on the other hand refers to how members of an organization relate to each other, to their work and to the outside world. (Hofstede Insights, n.d.) It is more straightforward to measure in comparison to national culture because unlike nations, organizations have well-defined goals and objects that they strive to live by. (Hofstede Insights, n.d.) Each organization designs its own processes and activities to meet goals and requirements. In addition, organizational culture is always contextual and should be aligned with what best supports the strategy that each firm follows. (Hofstede Insights, n.d.)

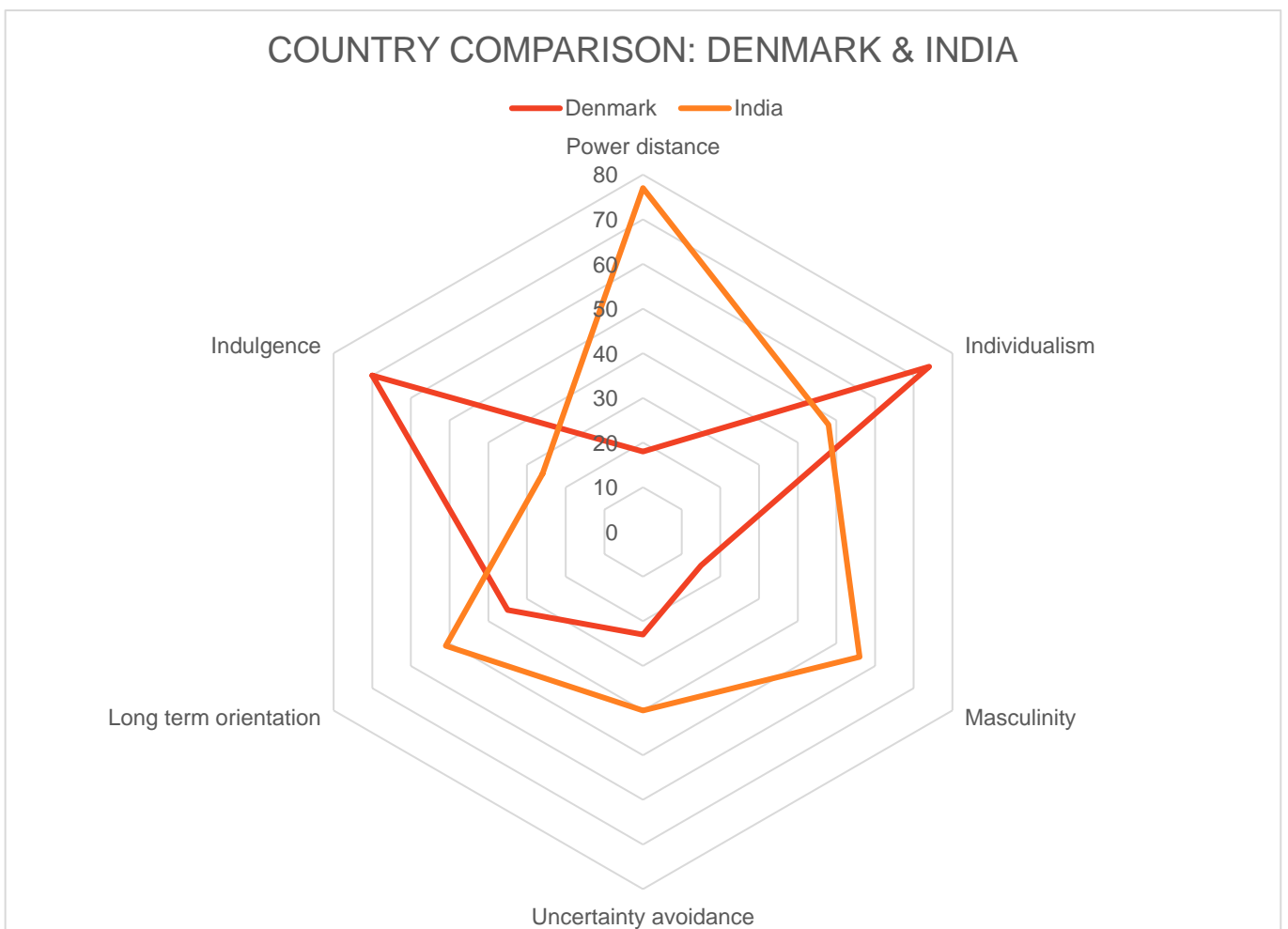
Following the logic that culture has multiple layers (see figure 14), organizations must be able to recognize and embrace cultural differences in transnational collaborations. This requires a corporate culture that emphasize on empowerment and equality rather than control and formalization.

*Figure 14 – A wheel that illustrates the layers of culture in organizational / national context (CPerspectives | Culture, n.d.)*



### 3.2 | COUNTRY COMPARISON

Through a comprehensive study of IBM over the duration of many years, Geert Hofstede observed six dimensions of cultural differences that are critical to any offshore operation. (Hofstede Insights, n.d.) His studies led to the development of the country comparison tool which will be used in this report to compare the unwritten rules and attitudes of both Denmark and India. (Hofstede Insights, n.d.) This approach has been chosen to demonstrate cultural differences between India and Denmark. Results from country comparison between Denmark and India can be seen in figure 15, below.



*Figure 15 - A radar chart that visualizes the country comparison results between Denmark and India (Hofstede Insights, n.d.)*

### 3.2.1 | POWER DISTANCE

The first dimension in the 6-D model is *power distance* (PDI) which is the attitude towards authority, and the distance between individuals and hierarchy. (Hofstede Insights, n.d.) In other words, this dimension refers to the way members of a culture count on and accept the fact that power is unequally distributed in societies. (Hofstede Insights, n.d.)

Each nation has its own culture where status, position in the hierarchy, age, family, and network are some of the most important factors when it comes to cultural differences. (Hofstede Insights, n.d.) Culture can also be seen in a person's competencies and experiences. (Hofstede Insights, n.d.)

The PDI in Denmark is in general low compared to other nations, due to their style of management. (Hofstede Insights, n.d.) Danes are acknowledged for their approach to coaching and employee autonomy. (Hofstede Insights, n.d.) Power and decision-making is often decentralized, and managers rely on the experience of team members. (Hofstede Insights, n.d.) Unlike Denmark, India scores high on the PDI dimension. This is partly due to their preference for hierarchical structure in societies and organizations. (Hofstede Insights, n.d.) Communication in India is top down, meaning that employee autonomy is relatively low because workers depend on their bosses for directions. (Hofstede Insights, n.d.) Due to the high PDI in India, Indians are more likely to accept that there are un-equal rights between power holders and regular employees.

In such cases, superiors are always accessible but one layer above less so. (Hofstede Insights, n.d.) Managers count on the obedience of team members, and employees expect clear direction as to what is expected from them. (Hofstede Insights, n.d.) Danes believe in equal-rights, employee autonomy, accessible superiors, and empowerment of self-driving teams. (Hofstede Insights, n.d.) With a score of 18 in comparison to India with 77, it is very clear that both countries are radically different from each other in terms of power distance.

### 3.2.2 | INDIVIDUALISM

The second dimension in the 6-D model is *individualism* (IDV) is the degree of interdependence a society maintains among its members. (Hofstede Insights, n.d.) IDV refers to how people are supposed to look after themselves and is defined by Hofstede as people's self-image measured as either "I" or "We", where "I" represent individualism and "we" represent collectivism. (Hofstede Insights, n.d.)

India has an intermediate score of 48 in regard to IDV, meaning that is a society with both individualistic and collectivistic traits. (Hofstede Insights, n.d.) It is partly collectivistic because actions of individuals are influenced by various social frameworks such as families, neighbors, work groups and other in-groups. (Hofstede Insights, n.d.) Relationships are key to everything in collectivistic societies, and individuals are expected to act in accordance with the greater good of one's in-group. (Hofstede Insights, n.d.) Hinduism is a very dominant religion in India, and the philosophy behind it is that life is a cycle of death where everyone is reborn after death. (Hofstede Insights, n.d.) Their destinies depend on how each individual lived in their preceding life and this affects individualistic behavior because people are aware that what they do in this life will have an impact on their rebirth in their next life. (Hofstede Insights, n.d.)

With a score of 74, Denmark is much more individualistic than India, meaning that it is a nation in which individuals are expected to only take care of themselves as well as their immediate families. (Hofstede Insights, n.d.)

### 3.2.3 | MASCULINITY

The third dimension in the 6-D model is *masculinity*. A high score in masculinity defines a society that is driven by competition. (Hofstede Insights, n.d.) Masculinity can be seen in the motivation for success and achievements and is often based on value systems that starts in school and continues throughout organizational life. (Hofstede Insights, n.d.)

A low score in masculinity (feminine) means that the society has bigger emphasis on life quality and altruism. (Hofstede Insights, n.d.) In other words, countries that score high in masculinity tend to be motivated by wanting to be the best, in contrast to feminine societies where people are motivated by doing what they like. (Hofstede Insights, n.d.)

India scores 56 in the dimension of masculinity and can therefore be considered a masculine country. (Hofstede Insights, n.d.) Denmark is a feminine society, with a very low score of 16 in this dimension. It means that Danes emphasize on liking what they do instead of wanting to be the best. (Hofstede Insights, n.d.) Conflicts are in general resolved through negotiations, long discussions as well as compromise, often until consensus has been reached. (Hofstede Insights, n.d.)

#### **3.2.4 | UNCERTAINTY AVOIDANCE**

The fourth dimension in the 6-D model is *uncertainty avoidance* which refers to the way societies deal with the fact that the future can never be known. (Hofstede Insights, n.d.) Should we try to control the future? (high uncertainty avoidance), or just let it happen? (low uncertainty avoidance). (Hofstede Insights, n.d.) The way a culture learns to deal with these uncertainties is reflected in the score on uncertainty avoidance. (Hofstede Insights, n.d.)

With a score of 40 in uncertainty avoidance, India has a low to mid preference for avoiding uncertainties. India accepts imperfections and is in general a patient country with high tolerance for the unexpected. (Hofstede Insights, n.d.) People feel comfortable settling into established routines, rules, and roles without questioning the way of doing things. (Hofstede Insights, n.d.) Denmark's preference for uncertainty avoidance is lower than India, at a score of 23. In Denmark, it is okay not to have the answer and solution for everything. (Hofstede Insights, n.d.) Danes are comfortable in situations like these, as plans can change overnight. (Hofstede Insights, n.d.)

### **3.2.5 | LONG TERM ORIENTATION**

The fifth dimension in the 6-D model is *long term orientation* which describes how societies maintain links with its own past while dealing with challenges of the present and future. (Hofstede Insights, n.d.) Societies prioritize and deal with this differently, e.g., countries with a low score prefer achieving quick results without overthinking the future. (Hofstede Insights, n.d.) According to Hofstede, western societies typically have a low score on this dimension, including Denmark with a score of 35. India on the other hand is somewhere in the middle with a score of 51, meaning that it is a society that is okay with changes, and people in general very forgiving to the lack of punctuality. (Hofstede Insights, n.d.)

### **3.2.6 | INDULGENCE**

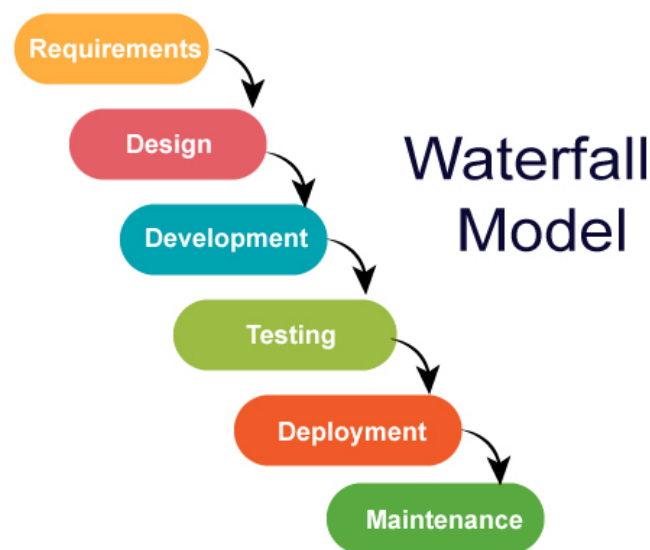
The sixth dimension in the 6-D model, indulgence relates to the extent to which people try to control their own desires and impulses based on the way they were raised. (Hofstede Insights, n.d.) Cultures that are restrained can be considered societies where people have weak control over desires and impulses. Cultures where people have strong control over desires and impulses can be considered indulgent. (Hofstede Insights, n.d.) India has a low score of 26 in this dimension, meaning that it is a culture of restraint. Such societies struggle with cynicism as well as pessimism, and people tend to feel as if their actions are restrained by the norms of their society, and that indulging themselves is not acceptable. (Hofstede Insights, n.d.) Denmark on the other hand has a high score of 70, meaning that it is a very indulgent country where people are in general willing to do whatever is needed in order to have fun and enjoy life. (Hofstede Insights, n.d.)

### **3.2.7 | COUNTRY COMPARISON SUMMARY**

Based on Hofstede's country comparison tool, there should be many cultural differences in the collaboration between Bankdata and 7N, India. In order to understand whether there is alignment between his findings and Bankdata's collaboration with India, we must understand what it is to be agile as well as how culture can be used to foster a healthy and innovative work climate that supports creativity.

### 3.3 | AGILITY

Agile practices can be considered quite the opposite approach to the traditional “waterfall” model. The waterfall model is a plan-driven way of handling projects and larger tasks and is based on sequential phase-driven model, where every phase relies on the completion of the previous one. (Atlassian, n.d.) What characterizes the waterfall model is that all requirements are planned and determined in detail before starting a project as illustrated in figure 16.

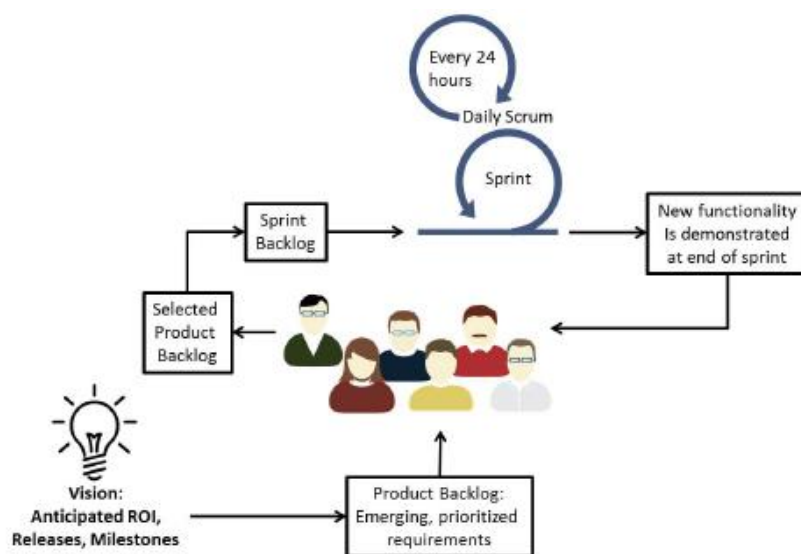


*Figure 16 - Illustrates the waterfall model (JIRA Waterfall Model - Javatpoint, n.d.)*

The problem with the waterfall approach to project management is that projects are becoming increasingly complex, and companies need to be able to respond to fast-changing and challenging business environments, where goals and outcomes may change over time. (Atlassian, n.d.) Using the traditional waterfall model for project management can be heavy and extensive, as requests for changes are often uncovered late in the process, making the project management team prone to unforeseen obstacles that may hinder them with delivering the project in time. (Atlassian, n.d.) The most common problem with this approach to project management is that in practice, it can be extremely difficult to abstract and plan enormous and complex projects without overlooking unforeseen details that may cause delays to the project delivery. (Atlassian, n.d.)

In contrast to the waterfall model, agile methods are based on iterations and incremental improvements. For example, when using Scrum as a framework for project management, there are many short runs defined as Sprints. (Nettleton, 2011) A typical sprint is illustrated in figure 17, where the process starts with a vision (anticipated ROI, releases and milestones) that is then processed into the product backlog as requirements with different priorities. (Pichler & Schulze, 2005)

*Figure 17 - Illustrates the Scrum process (Pichler & Schulze, 2005)*



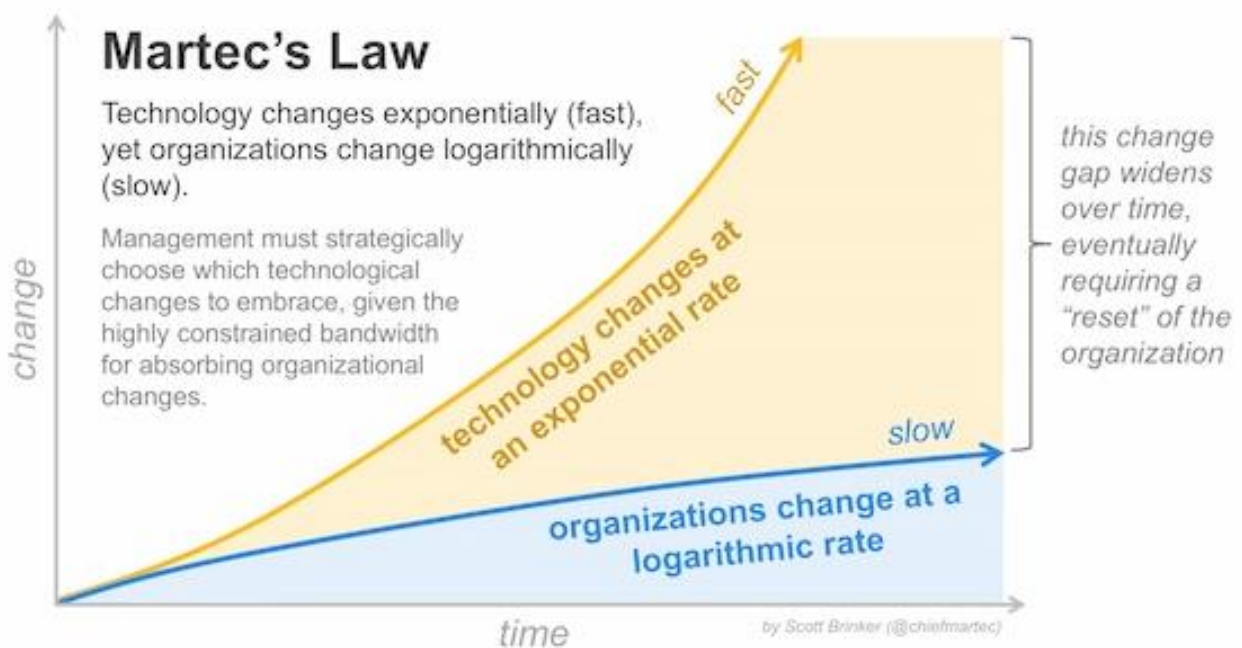
The Scrum team then selects items from the product back log and puts them into the Sprint Backlog. (Nettleton, 2011) The Sprint backlog defines all items that a team selects for a Sprint. As for the Sprint, every 24 hours the team collects thoughts and plans for the next day to come. (Nettleton, 2011) By the end of a sprint, the team demonstrates new functionalities that have been developed, and plan for the coming Sprint. (Nettleton, 2011) Sprints can be considered iterations, and each demonstration at the end of a sprint allows developers to learn from customers through feedback loops. (Atlassian, n.d.) Continuous deliveries and close communication can be crucial to avoiding critical mistakes such as misunderstanding customer requirements and expectations. (Atlassian, n.d.) This is where agile methods distinguish themselves from the traditional waterfall model, as these methods allow the project team to learn from change while contributing to perceived customer values. (Atlassian, n.d.)



### 3.4 | INNOVATION

According to Martec's law, technologies change much faster than organizations do. (Brinker, 2016) Keeping up with new technologies require managerial emphasis on methods and approaches that can be used to build resilience and embrace changes. (Brinker, 2016) As technology change much faster than organizations, there will certainly always be a point in time where there is a technological gap that require organizations to reset and adjust technologies as well as people according to new market trends and customer requirements. (Brinker, 2016) Martec's law is illustrated in figure 18.

Figure 18 - Illustrates Martec's Law (Brinker, 2016)



Organizations can use agile methods to bridge this technological gap. (Brinker, 2016) The philosophy behind this is that the rate at which technology changes cannot be slowed down, but companies can mature their resilience towards changes to a certain degree. (Brinker, 2016) Agile practices such as Scrum makes organizations more robust and adaptive to environmental changes, as agile methods strengthen their metabolism in such situations. (Brinker, 2016)

### **3.5 | CREATIVITY**

According to Amabile 1998, creativity does not flourish in organizational context as much as it should. The creative climate is shaped by an organization's culture and may positively or negatively impact the creativity of any individual. (Amabile, 1998) Creativity can be seen in the interaction between employees, daily routines, areas of responsibility and working methods. (Amabile, 1998) Amabile defines business creativity as something that is associated with making useful and actionable ideas and that it is often related to things that influence the way business gets done e.g., improving a product, developing a new product, negotiating prices, finding new suppliers and more. (Amabile, 1998) Creativity was thought relevant to this study because every organization is unique in its own way and likewise, the attitudes and competencies of employees are different and unique as well. It is the organization that is responsible for establishing a framework, as well as boundaries for employees to follow in order for the creative climate to flourish in a company. (Burnett et al., 2014)

### **3.6 | CREATIVE CLIMATE QUESTIONNAIRE**

One of the project deliverables was to capture the creative climate at Bankdata, using the creative climate questionnaire (CCQ) developed by Ekvall. Creativity is something that can be promoted and inhibited by everyone, and for creativity to flourish, it presupposes a creative climate in the organization. (Ekvall, 1996) There is no time to wait for creative geniuses to be born, nor is it useful to pursue a strategy of only hiring creative individuals. (Lego, n.d.) Even if an organization try to do so, the organization needs to be able to support creativity for it not to stifle. The CCQ can be used to get a glimpse into the creative climate at Bankdata to identify underlying issues that may inhibit or flourish creativity and innovation in these self-organizing agile teams. Ekvall identified ten dimensions that can be used to assess how any organization supports a creative climate; challenges, freedom, idea support, trust and openness, dynamism and liveliness, playfulness and humor, debates, risk-taking, time and conflicts. (Ekvall, 1996) Nine out of ten of these dimensions are variables that are positively associated with a creative climate, with the exception being conflicts. (Ekvall, 1996)

The creative climate questionnaire consists of 50 questions that cover 10 dimensions. There are five questions for each dimension, and these questions do not come in chronological order.

Results from the CCQ can be considered an organizational measure as it gives a real-time glimpse of the present, given that respondents anonymously give their perspective on what how they feel people in general behave in the organization.

### **3.6.1 | CHALLENGES**

Ekvall describes that when the level of challenges is high, it means that employees are committed, that their work is considered meaningful, and that the organization challenges the employee's ability to contribute creatively. (Ekvall, 1996) A low level of challenges indicate that employees may have lost interest in the work that they do and the organization that they work for. (Ekvall, 1996)

### **3.6.2 | FREEDOM**

In a climate with a lot of freedom, it is expected that employee autonomy is high, meaning that employees are able to make their own choices, and in self-driving teams that are closely connected with relevant contacts within the organization. (Ekvall, 1996) Together, they collaborate, discuss problems, and make suggestions. In a climate with low freedom, employees are passive, reliant on rigid instructions and employees are careful not to do something that is out of bounds. (Ekvall, 1996)

### **3.6.3 | IDEA SUPPORT**

In a climate with high idea support, ideas and suggestions are supported in an attentive manner by bosses and colleagues. Employees listen to each other and are encouraged by new initiatives. (Ekvall, 1996) In this type of climate, the atmosphere is also constructive and positive. Organizational climates with low idea support typically have managers that say no to new ideas, and feedback is often focused on mistakes and obstacles rather than opportunities and openness. (Ekvall, 1996)

#### **3.6.4 | TRUST / OPENNESS**

In organizations with a high level of trust, there is no fear of being ridiculed by failure, and communication is open, transparent, straightforward, and honest. (Ekvall, 1996) The staff in such firms dare to come up with ideas of their own and share it with colleagues and leaders. (Ekvall, 1996)

When organizations face the opposite situation, people are suspicious of each other and very careful about making mistakes. Employees may then be reluctant to share ideas, fearing that good ideas may be stolen or exploited. (Ekvall, 1996)

#### **3.6.5 | DYNAMISM / LIVELINESS**

In dynamic organizations, new things happen constantly causing changes in the way people think and solve things. (Ekvall, 1996) The environment in such firms is often turbulent and fast-paced causing the ways of doing things to change often. (Ekvall, 1996) Organizations that score low in dynamism can be considered slow-paced environment where everything proceeds as usual. (Ekvall, 1996)

#### **3.6.6 | PLAYFULNESS / HUMOR**

Climates that score high in playfulness reflects relaxed atmospheres where laughter, joking and having fun in the workplace characterizes the organization. (Ekvall, 1996) When organizations score low in playfulness and humor, the atmosphere is stiff and more tense. (Ekvall, 1996) In this type of climate, junk communication is considered inappropriate, and humor is mostly absent. (Ekvall, 1996)

#### **3.6.7 | DEBATES**

Organizations that score high in debates are characterized by the eagerness to come up with ideas and suggestions, and managerial support that ensures everyone can be heard. (Ekvall, 1996) A low score in debate indicates that employees follow procedures without questioning them. (Ekvall, 1996)

### **3.6.8 | CONFLICTS**

When there is a high degree of conflict in an organization, conflicts are met with professionalism and cultural differences are taken into account. (Ekvall, 1996)

In such climates, groups and individuals may dislike each other, which can result in slander, backstabbing and more. (Ekvall, 1996)

A low degree of conflicts does not mean that people hate each other less, but instead they are able to control their feelings and restrain personal and emotional tensions (Ekvall, 1996)

### **3.6.9 | RISK TAKING**

A high score in risk-taking indicates that the climate supports fast decision-making in times of uncertainty. (Ekvall, 1996) The time from decision to action is fast, and the organization is open to take chances. Errors are not seen as personal failure, and the risk is focused on the project, and not the person behind it. (Ekvall, 1996)

With a low score in risk-taking, the organization is more hesitant and will try to avoid risks by slowing down processes. New decisions are not made until risks are either reduced or eliminated. (Ekvall, 1996)

### **3.6.10 | IDEA TIME**

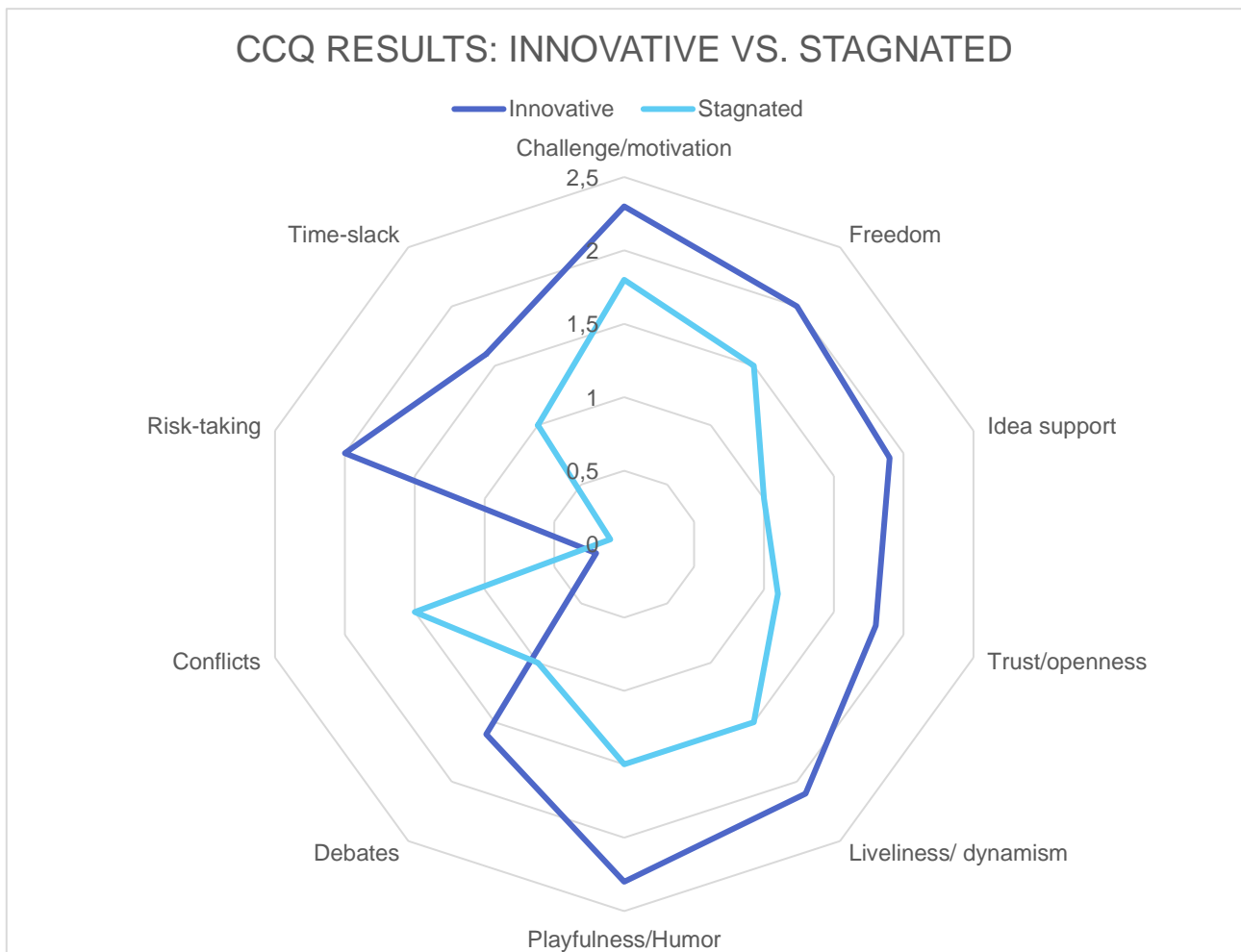
In climates with a high degree of idea time, the organization supports that employee discuss new ideas, even if it is not part of normal work. (Ekvall, 1996) This type of organization is characterized by impulsiveness and employees are given the opportunity to explore, test and experiment as part of work. (Ekvall, 1996)

When there is a low degree of idea time, there is no time set aside for employees to generate and analyze new ideas. (Ekvall, 1996)

### 3.7 | CCQ RESULTS

Through his intensive research, Ekvall aggregated the results of all companies that he had observed, and this way defined a measure that can be used by firms to determine whether they are either innovative or stagnated within each of the ten variables that relates to the creative climate, see figure 19. This aggregate will be used to measure whether Bankdata is innovative or stagnated within each of the ten variables that relates to a creative climate.

*Figure 19 - Illustrates the difference between a stagnated and innovative creative climate*



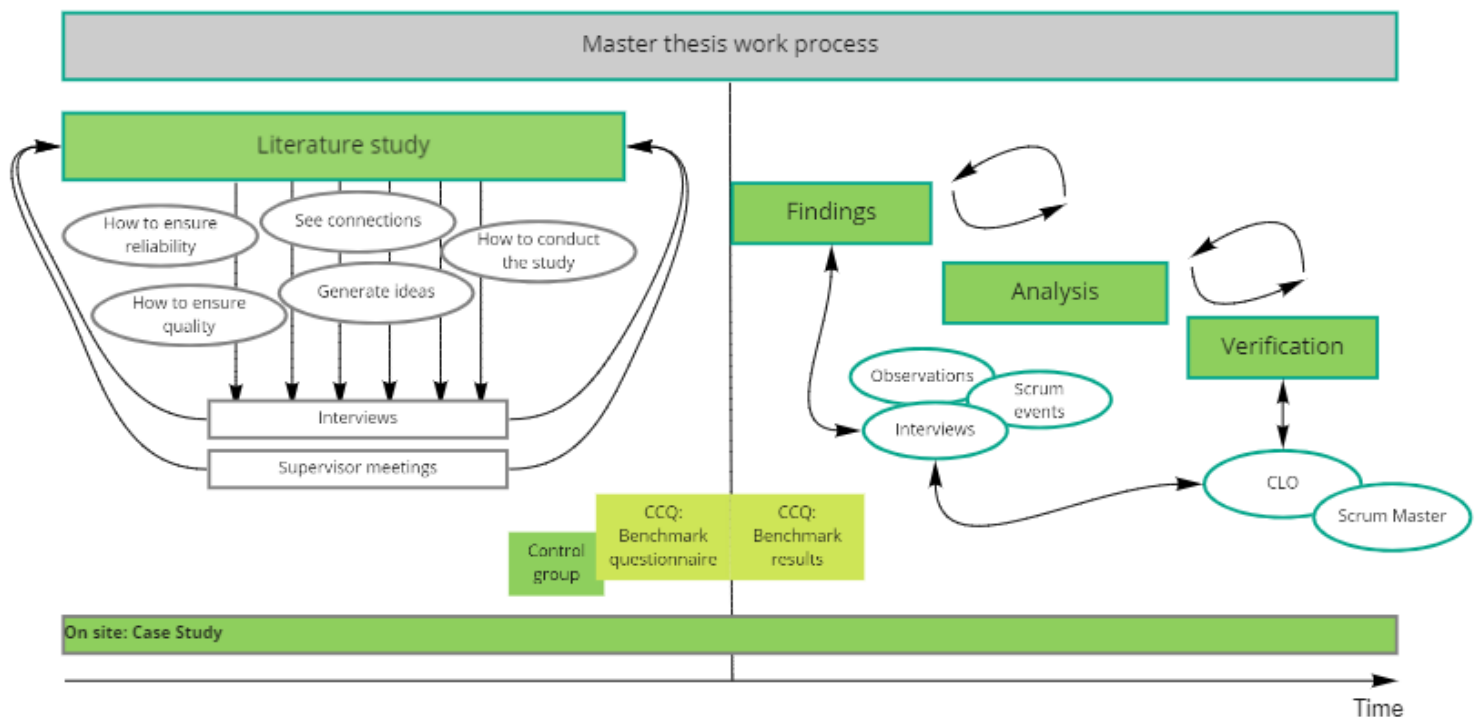
## 4 | METHOD

### 4.1 | RESEARCH METHODOLOGY

The thesis work process has been divided into two parts, where the first part is theoretical, and the other part is empirical. The theoretical part explores research that has already been made within the domain of this project. Here, the literature study considers the interplay between culture, agility, innovation, creativity and socio-cultural collaboration.

The empirical part relies on the case study which has been conducted partly by interviewing the Chief Liaison Officer (CLO), partly by observing three Scrum teams of Indian and Danish employees that collaborate together on a daily-basis, and partly by distributing the creative climate questionnaire to the teams that were observed. The master thesis work process, as well as schematic map of this study can be seen in figure 20 below.

Figure 20 - Master thesis work process



Semester projects at Aalborg University have fixed time-horizons, meaning that all projects span over the duration of a semester. This limits our scope from making longitudinal studies, and instead it encourages us to get the most out of the short time that we have. Following Saunders et. al. 2008, this project utilizes techniques and procedures from both qualitative and quantitative research methods to collect and analyze data. (Saunders, 2008)

The project can be considered an embedded case study, because more than one sub-unit within the organization will be observed, and a mixed-methods approach has been chosen due to the nature of management and business research. (Saunders, 2008)

Business and management research is often transdisciplinary, meaning that it is very likely that multiple studies are involved. (Saunders, 2008) Theories as well as methods must therefore be accurate, and of practical relevance in the business world. (Saunders, 2008)

The project can also be considered descript to-explanatory. It is explanatory in the sense that the goal is to understand and describe Bankdata's way of doing things in the collaboration between Danes and Indians.

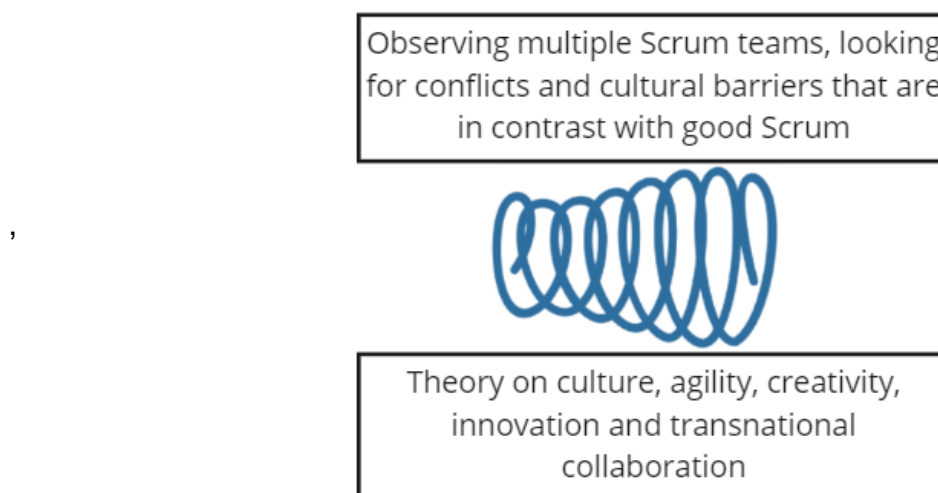
This study is also descriptive as the project seeks to acquire an accurate profile of Bankdata's way of how things are done. Studies that do not balance between descript-to-explanatory may become too descriptive, leading to worthless outcomes. (Saunders, 2008) To avoid this issue, the project conducts both descriptive and explanatory research. Surveys are often used in descript to-explanatory studies because questionnaires make it possible to collect and analyze data quantitatively, using descriptive statistics. (Saunders, 2008)



The subject of interest in this report is to investigate the role of culture in remote agile transnational-cultural collaborations. The takeaways from this study may lead to a better understanding of what to do and not to do when Scandinavian firms want to offshore their operations to India. Studies show that many firms fail to establish operations in India, including Bankdata in their very first attempt. (ŠMite et al., 2021)

The project also relies on both inductive and deductive research. The research is inductive in its early phases because existing studies on the role of culture and its effect on creativity and agility is rather limited, especially in the context of collaborations between Denmark and India. The research is also deductive, as it confirms or invalidates the theory that was developed in the inductive phase. (Saunders, 2008) Deductive reasoning is based on the testing of a theory (Saunders, 2008), which in this case will be based on the testing of culture and innovativeness using the creative climate survey. The project navigates between empirical and theoretical knowledge as illustrated in figure 21, and is at the intersection between what Bankdata wants, and what the study program requires of OIM students. Knowledge gathering for this project balances between insights from the real world and theoretical knowledge from the domain of OIM.

*Figure 21 - A visual illustration of how knowledge was gathered in this project - adapted from (Stingl, n.d.)*



## 4.2 | RESEARCH DESIGN

The research design presented in this chapter is a single case study. The research field at the intersection of cultures role on creativity in agile software development is little explored, and case studies are useful as a starting point to enriching this field. The case study was conducted with a mixed-methods approach where the quantitative data (questionnaire) was complemented with qualitative data (observations). (Saunders, 2008)

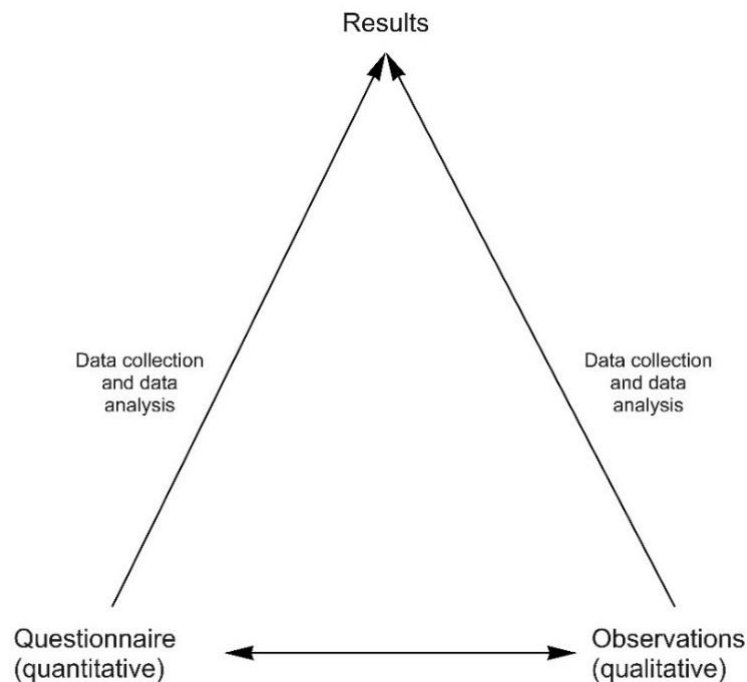
The choice of research method was considered appropriate in order to get a wide and profound understanding of how Bankdata operates in collaboration with 7N India, using their remote setup of distributed and collocated teams. The creative climate questionnaire was used to broaden our understanding of how Bankdata's organizational culture supports creativity in their trans-national collaboration.

A mixed-methods approach towards data collection was thought appropriate, as it allows for both depth and breadth. (Saunders, 2008) Linking quantitative data with qualitative data can be complementary and provide a more accurate image of the studied phenomena. (Saunders, 2008)

Qualitative data will be used to explore the subjective meanings of certain creative climate aspects, and to get insight into how things are done at Bankdata. Quantitative data will be used to get a glimpse of the creative climate at Bankdata, and together these two approaches to data collection will thus complement and enhance each other. In qualitative research, the researcher is very close to the data. (Saunders, 2008) The consequence in such situations, is that subjectivity is relatively high, making the researcher prone to more errors and biases. (Saunders, 2008) To make the qualitative observations more credible, triangulation and mixed methods can be used to add more depth to the study, adding dimensions such as objectivity and credibility. (Saunders, 2008; del Ra, 2011)

There are countless ways of triangulating, but the approach chosen for this report is illustrated in figure 22, below

*Figure 22 - Illustrates how this study triangulates between different types of data collection methods adapted from (del Ra, 2011)*



#### **4.3 | DATA COLLECTION AND DATA ANALYSIS**

Observations can be very subjective, so to avoid relying on one single source of data, this study triangulates between qualitative (observations and few interviews) and quantitative data (creative climate questionnaire).

The qualitative data in this report is based on observations that were noted into a document as things happened in real-time. While noting, the focus was on understanding how things were done for both collocated and distributed teams, while looking for disparities caused by cultural barriers. Since the effectiveness of Scrum can be reduced by a lack of transparency, adaptation and inspection, findings from my observations will be coded using these three characteristics.

Data collected from the creative climate questionnaire was aggregated using statistical analysis, to measure the overall working climate at Bankdata. The questionnaire was distributed to a total of 20 respondents (see appendix A). All twenty respondents were stakeholders from the Scrum teams that were observed in connection with this research project. The questionnaire was distributed to respondents with the assistance of the department manager (CLO), as his words and actions ensured that employees knew that this activity was approved by the management. The CCQ results had a 95% completion rate, and all respondents went through the questionnaire before the deadline was due. One participant only answered some of the questions but stopped half-way through the survey. His answers could have been used to enrich the dataset, but to avoid any biases, it was decided that his answers should not take part in the data analysis. For each of the 50 items in the CCQ, respondents could answer either “Fully Agree “, “Somewhat Agree “, “Somewhat Disagree “, or “Fully Disagree “. In order to do statistical analysis on the data, each of these options were coded into numbers using the likert scale which is appropriate when measuring the strength of attitudes towards statements. (*Likert-skala: Hvad er det, og hvordan bruges den*, n.d.) In this case: fully agree = 3, somewhat agree = 2, somewhat disagree = 1, and fully disagree = 0

#### Place of residence

Table 3 - CCQ Completion Rate

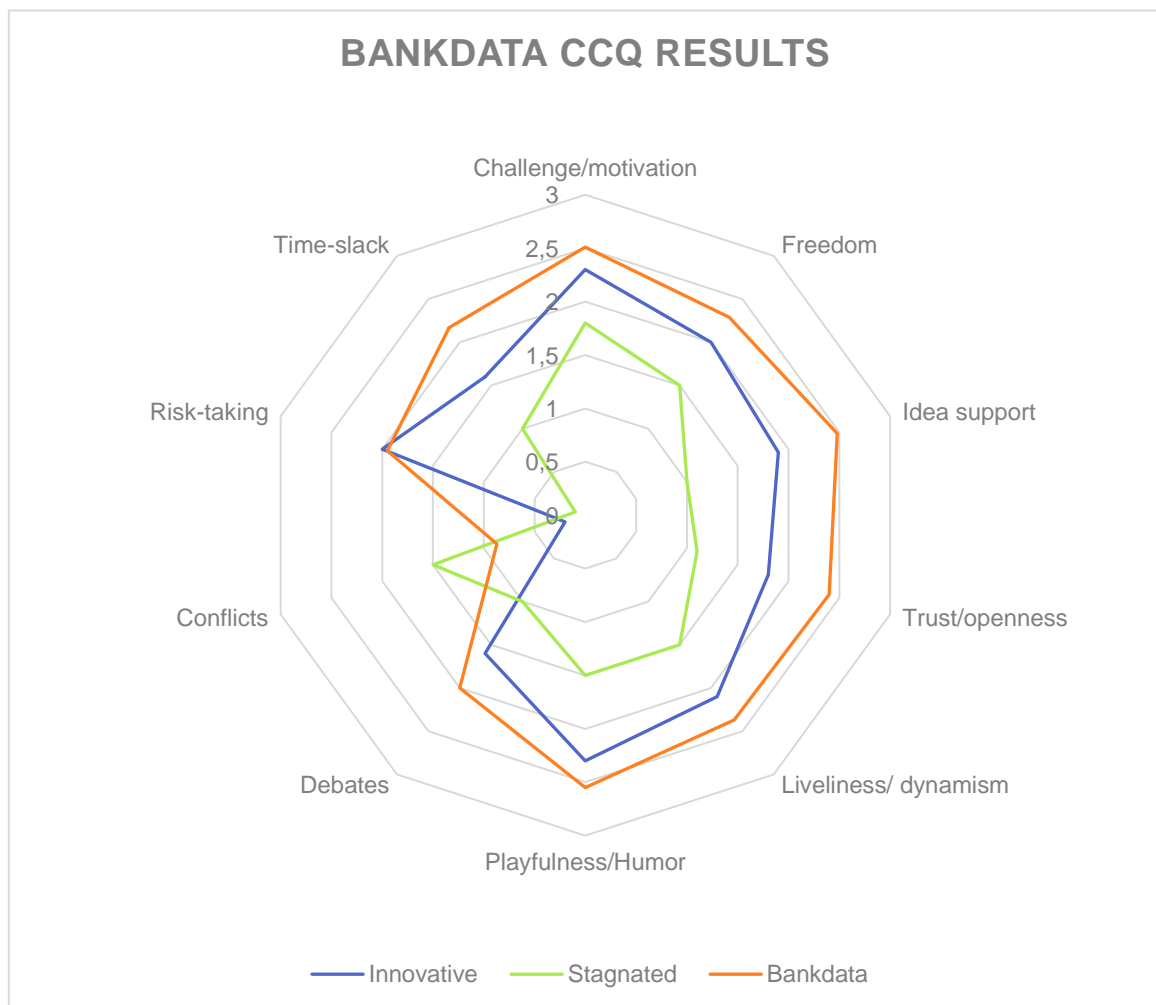
	India	Denmark	Total
Some answers	0	1	5,0%
Completed	11	8	95,0%
Absence	0	0	0,0%
In total	11	9	20

The most common stakeholders involved in this sample were: Senior software engineers, Scrum Masters, Product Owners, Senior Consultants, Tech leads and Software developers. There was a wide range of respondents, with varying roles, competencies and responsibilities. A diverse sample such as this can contribute to painting a more accurate picture of the creative climate at Bankdata..

## 5 | RESULTS

Using statistical analysis on the dataset (see appendix C) , the average results from the data have been used to construct a spider chart. The diagram visualizes how Bankdata measures in terms of innovativeness and stagnation in the ten variables that the creative climate questionnaire is based upon. Results from the questionnaire can be seen in figure 23, below.

*Figure 23 – A spider chart that visualizes the CCQ-results.*



Looking closer at the creative climate questionnaire results, it is very clear that Bankdata is highly innovative in their ways of operating. Bankdata's creative climate is innovative within all ten dimensions, showing no signs of stagnation at all.

As this thesis project focuses on the collaboration between India and Denmark, it is also relevant to compare the mean results of the Indian staff with those of the Danes (see figure 24).



Figure 24 - A spider chart that visualizes the CCQ results for Indian vs. Danish employees

Figure 24 indicate that Indian and Danish employees are somewhat aligned, sharing very similar opinions throughout the majority of all the CCQ-variables. The main thing to notice here is the degree of conflicts as it indicates that Indian employees experience slightly more conflicts in their work climate compared to Danish employees.

	<b>Bankdata: Creative Climate</b>
<b>Challenge/motivation</b>	With a high score in challenge/motivation, Bankdata employees are in general very committed to their work. An innovative score in this dimension means that most people enjoy contributing to the success of the company, and that employees strive to do a good job.
<b>Freedom</b>	Based on the results, Bankdata has a high degree of freedom, meaning that people make decisions on their own to a fairly large extent and people seek information in the company on their own initiative to solve problems.
<b>Idea support</b>	Bankdata has a high degree of idea support, meaning that people support and encourage each other to share opinions, and present new ideas. People generally take the risk to share ideas because they are listened to and encouraged by the management as well as colleagues.
<b>Trust/openness</b>	With a high score in trust/openness it is somewhat clear that people trust each other and that the communication between employees is somewhat transparent, open, and very straightforward.
<b>Liveliness/dynamism</b>	When a company scores innovative in the dimension of liveliness/dynamism the atmosphere is lively, and a lot of activities are going on. People are full of ideas, and they are open to changes in the way of operating and thinking. Bankdata has a high score in this dimension, meaning there is a lot of energy and push in their operations.
<b>Playfulness/Humor</b>	Bankdata has a very playful atmosphere where people tend to joke quite a bit. Humor is not taken for granted and can really be felt during daily meetings.
<b>Debates</b>	With a high score in debates, there are many points of views expressed at Bankdata, and many new ideas are floating around. People are not anxious to talk about new ideas, and managers support that everyone is being heard.
<b>Conflicts</b>	In terms of conflicts, Bankdata can also be considered innovative. People tolerate each other, and do not plot behind each other's backs, nor are there prestige conflicts and power/territorial struggles in the Scrum teams that have taken part in this study.
<b>Risk-taking</b>	In terms of risk-taking, the score suggests that people are confident and act quickly, and there is a great follow through on ideas. However, most respondents feel like there is not a clear tendency for risk-taking at Bankdata, meaning that people do not dare to take initiative if outcomes are uncertain.
<b>Time-slack</b>	Bankdata also scores high in the dimension of time-slack meaning that people have time to think through new ideas. The pace of the work allows testing of new ideas, but one does not have enough to stop work in order to test new ideas.

## 5.1 | OBSERVATIONS

Findings from my observations were coded using the three pillars of empiricism in Scrum. (Gonçalves, 2021) These are three characteristics that can weaken the effectiveness of Scrum: transparency, adaptation, and inspections. (Nettleton, 2011; Gonçalves, 2021) The three pillars of empiricism are characteristics associated with good Scrum and essential for agile teams in order for them to thrive and perform well. (Nettleton, 2011)

In regard to *transparency*, it was very clear from the very first Scrum event that the Indian staff is respected and listened to by their Danish colleagues, and that the atmosphere is very constructive and positive in both team compositions. This set the perfect boundaries for transparency in the collaboration. However, I noticed that the Indian staff was in general much more vocal and confident when discussing anything technical-related. When discussions concerned what could have been done differently, or what could we have done better they were not as transparent and active in the open debates.

The first sign of *adaptation* I saw was in the distributed setup. During a Daily Scrum, the Scrum Master was absent, and one of the Indian employees was very quick to take over the Scrum Master role. This was done intuitively without any internal coordination in the team, which shows signs of strong adaptation, as well as initiative-taking.

During a Sprint retrospective in one of the collocated teams, I also experienced signs of voting pressure. When voting on what lacked during a Sprint, and on what the team had learned, some employees were much faster and more constructive than others. The Indian staff were in general very competitive, and as this voting process is time-sensitive, some Indians may have felt the pressure to just adapt and vote what the first-person with the strongest opinion votes, or what the majority votes.



Another observation related to adaptation was the dependency on other units from Bankdata. Some tasks could not be carried out without the involvement of other stakeholders, and this became a notable issue, as some of these teams were not always available.

There were many Scrum events that started a little bit later than what was planned for. Being late was a common issue in collocated teams, however in most cases it was just concerning a few minutes. There were a few meetings that were stalled for more than 5-15 minutes because of absence. Punctualities are in general taken very lightly in India, and this could be felt during the meetings. At times, the Scrum Master did not know how to adapt to absence, considering whether to start the meeting or continue waiting for the last ones to connect.

Since Bankdata face cultural barriers that relates to transparency, they also face challenges that are related to *inspections*. Frequent inspections are needed to ensure that Indian engineers ensure that what they carry out is in alignment with what is needed.

The Indian staff is generally more involved with the technology rather than the business part, which creates some barriers when it comes to understanding what needs to be developed. Not many Indian employees are allowed to see the customers on a weekly basis, which can be motivating for those who do and demotivating for those who do not.

The cultural barriers identified in this study were derived from a literature study along with multiple observations that took place in connection with this project. A table has been made to compare the cultural barriers that have been derived from the literature study (left column), with the cultural barriers that have been derived from my observations (right column), illustrated in table 4, on the next page.

Table 4 - Cultural barriers derived from literature vs. cultural barriers seen at Bankdata

Cultural barriers derived from literature	Cultural barriers derived from observing
<p>Members from strong hierarchical cultures are known for not taking initiative – awaiting to do what they are told</p> <p>Members from strong hierarchical cultures are often reluctant to discuss failure</p> <p>Members from strong hierarchical cultures are reluctant to warn about non-feasible deadlines</p> <p>Members from strong hierarchical cultures are reluctant to reveal a lack of understanding</p> <p>Members from strong hierarchical cultures are known for settling into established habits, following routines and roles without questioning</p> <p>Talkback approach is often needed to ensure that Indian engineers are in alignment with what is needed to be done</p>	<p>Members from strong hierarchical cultures are often reluctant to discuss failure</p> <p>Members from strong hierarchical cultures are reluctant to warn about non-feasible deadlines</p> <p>Members from strong hierarchical cultures are reluctant to reveal a lack of understanding</p> <p>Talkback approach is often needed to ensure that Indian engineers are in alignment with what is needed to be done</p> <p>Members from strong hierarchical cultures are known for not being as technically competent as Scandinavian engineers</p> <p>Members from strong hierarchical cultures are known for not thinking as abstract as Scandinavian engineers would do</p>

## 5.2 | OTHER FINDINGS

When Bankdata started operating in India, two Indian employees were equivalent to one Danish employee in terms of salary. However, there is a major ongoing shift in India, as their economy is in rapid growth. Many firms around the world reap the benefits of operating in India, making it more attractive for Western countries to hire Indian engineers. The high demand on Indian engineers leaves newly educated engineering students with plenty of options. This is an issue for Western firms, as Indians are known for bargaining and going for the best option (often with 2-3 offers in hand). Going back and forth from company to company, Indians will negotiate by putting 20-30% on top because they've gotten a better offer. In addition, there is no guarantee whether they will actually show up to work on their first day. From the department managers experience, the closer they get to the start day, the more bargaining they will do. In Denmark, you are bound when you sign the contract, but the same rules don't apply in India. As a matter of fact, the CLO mentioned in an interview that in the process of hiring, they had written 10-15 contracts with Indian applicants, but only 3 showed up on their first day.

Those that didn't show up used 7N/Bankdata for bargaining to obtain higher salaries at another company. Bankdata/7N is relatively small compared to some of the larger businesses in India. Opportunities are much greater in large companies, which is why newly trained IT-developers prefer to work in such places. 7N with whom Bankdata collaborates with is also relatively small, making it very difficult for them to hire new employees – especially in times like these where the job market is exploding in India. The situation makes it very difficult for Bankdata to thrive in this rapidly changing environment. Considering that one Indian employee is soon equivalent to one Dane in terms of salary, and that Indians may at times not be as technically competent as Danes, it requires a lot of work and effort to make the collaboration work. Bankdata may therefore have to look inwards and consider whether it is still worth it to operate with India.

The department manager expressed that as a result of the explosive job market in India, they have been seeing an increasing amount of Indians leaving Bankdata (30% resignation). What used to be 106 employees is now 80 today, and the future looks very uncertain. If they were to be effective with the setup in India, they would need to hire more employees and scale. Bankdata tried that, but during the corona pandemic they have just not been good enough at onboarding new employees.

As mentioned earlier in the report, Bankdata used to have a manager on-site in India, but as a result of coronavirus, he returned to Denmark, and Bankdata has since not had any Danish employees offshore. It has been difficult for them to onboard new employees, and to keep those that they have employed because they were too loosely attached as a result of no physical meetings.

If they wanted to scale, Bankdata should have outsourced entire system responsibilities, giving the Indians responsibilities for system areas. But in order to do so, it requires stability in the teams that are given those responsibilities. From their experience so far, that dream seems very distant as the Indian employees have proven not to be stable enough to do so. More than four fully manned teams have disappeared after four months. If those employees had system responsibilities and slipped in the same way, then it would have become a critical issue for Bankdata.

Collaborations with such difficult circumstances can be tiring, especially when the economic incentive of operating in India is disappearing. Bankdata is well-established in Denmark and collaborate with multiple universities as well as forums. Hiring new talents is no issue for them whatsoever and having full Danish teams would save them a lot of money from costs related to overcoming cultural barriers and uncertainties involved with rapid environmental changes in India.

## 6 | DISCUSSION

The first research question (RQ1) in this report focused on the role of culture in the collaboration between Bankdata and 7N, India. Since culture can have a big effect on Scrum effectiveness (transparency, adaptation, and inspection), it was found relevant that this thesis should investigate the role of culture with focus on understanding how culture can either strengthen or weaken trans-national collaborations, and how culture can be used to set the framework for a healthy and creative climate in the organization.

<b>RQ1</b>	The role of culture in agile software development environments, where Scandinavian firms collaborate remotely with members from strong hierarchical cultures
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Insights from this study indicate that culture has an important role to play in agile contexts where Scandinavian firms collaborate with members from strong hierarchical cultures. Findings from the CCQ suggest that because Bankdata is a firm that pays close attention to the cultural training and socialization of their Indian employees, which is one of the reasons as to why their creative climate result was innovative, showing almost no signs of stagnation in both collocated and distributed teams. There is no one-size-fits all approach for neither Scrum nor for bettering the creative climate but using Ekvall’s dimensions to get a glimpse into the current climate, is a practical way of understanding and improving the overall climate for creativity. An interesting finding in this study was that the CCQ results were so identical in terms of how the Indian staff scored vs. the Danish staff, which is in contrast to many of those national differences introduced in the theory chapter. It may be because Bankdata has been extremely good at onboarding and socializing their Indian staff, setting the cultural framework for a good collaboration. It may also be because the Scrum framework contributes to mitigating cultural barriers, and it may even be because Indians believe that they are performing

better than they actually do. To begin with, my assumption was that it could be because they were answering what the management wanted to hear, but not what they were actually feeling/thinking. This idea was presented to a Danish Scrum Master during an interview, who thought that it was probably more because Indians abstract things differently. In their perspective, it may be that they feel that the work they carry out is on point. Indians have a different view and curiosity about how things should happen, and it is some of those details that have not been captured in the questionnaire and the observations. Šmite et al., 2021 found that behavior can change when engineers are exposed to culturally distinct environments. Even when hierarchical culture is present, the behavior of Indians can change over time. Some researchers suggest that certain cultural barriers will remain forever because of the major differences in culture. Through the context of Bankdata, my data suggests that when Indian engineers are exercised by the Danish management, it becomes easier for the Indian engineers to let go of habits affiliated with hierarchical culture such as the reluctance to discuss failure, and not taking initiatives.

According to Amabile, the intrinsic motivation is what flourishes creativity, and this is relevant to my findings, because organizations can stimulate and re-shape their organizational culture to increase the intrinsic motivation for both the Indian and Danish staff. (Amabile, 1998) I learned that Bankdata does this with creative activities that break the ice between the Indian and Danish staff. For example, some teams had integrated fun activities as part of their scrum events. It is said that Indians by nature love competition, so small creative competitive games can stimulate trust, playfulness, and unity in these self-organizing Scrum teams.

As each Scrum teams is interdisciplinary, it is important that team members can thrive with each other. It can be difficult to develop friendships through a computer screen that is permanently mounted on your desktop. In such cases, creative activities such as Kahoot! quizzes can bring more life to the fixed work structures that have been established to, of course, keep control of all activities.

However, my findings also suggest that even when Bankdata has a developed a strong culture as well as habits that supports cultural differences, there are still certain cultural barriers they cannot just change overnight, and firms must therefore carefully consider and outweigh whether it is actually worth it for them to engage in such trans-national collaborations or not.

<b>RQ2</b>	What can a firm and its self-organizing teams do to overcome obstacles caused by cultural barriers?
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As an extension to the first research question, RQ2 is focused on what other Scandinavian firms can learn from the case of Bankdata, and how these findings may help them in either establishing or improving existing operations with India. RQ2 will be answered by analyzing studies and practices that have already contributed to a reduction of cultural barriers and will draw knowledge from the observations that were made in connection along with theoretical knowledge attained from the literature study.

A firm and its self-organizing team must first and foremost establish a strong and transparent organization culture that supports cultural differences. Since transnational collaborations involve multiple cultures, the Scandinavian firm must be able to recognize differences and find creative ways of mitigating barriers along the way. Bankdata does this using the DCI DNA when recruiting new engineers. The DCI DNA makes it easier to onboard employees, as it trains them to think and act according to Bankdata's values and needs. In addition, there are four GPS conversations a year, and these are used to ensure that the learning curve is continuous, making sure that employees make commitments towards new skills that they want to learn. To guide Scandinavian firms in either establishing operations in India, or improving existing operations, a list of recommendations has been made based on findings from this study.

## RECOMMENDATIONS FOR SCANDINAVIAN FIRMS

- Management should be established on-site in the country you offshore to. Having one of your managers to stay with the locals of the country you operate with, will bring you closer to your partners and thereby give you better control of your offshore operations.
- Establish management as well as “hierarchy” in the country you offshore to. Locals should be trained to fulfil their roles as if they were from your own country. Consider assigning few “Tribe leaders”, local Scrum Masters that are each responsible of managing collocated sub-units of their own.
- Establish different types of teams. Bankdata balances between distributed (in-house Danish team along with a couple of Indian engineers) and collocated teams (remote teams with many Indians and few Danish stakeholders). Team compositions should of course vary depending on the complexity and nature of tasks needed to be done.
- Create a flow of knowledge-sharing between different roles from different teams so that they can share experiences with each other. As each unit is self-organizing, some teams will thrive better than others. Bankdata has established an event where every once in a while, the Scrum masters from different teams are gathered into one meeting, facilitating knowledge-sharing for the Scrum Masters, allowing them to share experiences, trade methods as well as practices.
- Establish trust by encouraging the local staff to be transparent, open and straightforward. Bankdata does this using techniques such as gamification, humor and playfulness in meetings and daily events, stimulating creativity and unity which all contributes to “breaking the ice” before important discussions take place.



## 6.1 | LIMITATIONS

The study was based on well-functioning teams that have collaborated for a long period of time. There are examples of fully manned Scrum teams at Bankdata where whole teams have disappeared all at once, and maybe there are teams where everything does not work nearly as well as the ones in this sample. So even though the sample may represent the typical collocated / distributed team, it would have been more reliable and paint a more realistic picture if all DCI related scrum teams took part in the creative climate questionnaire.

Furthermore, the creative climate questionnaire results may be biased if Indian or Danish employees has answered what their leaders want to hear, but not what they mean from the heart. It is not something that this study will focus on, but it is of course mentioning worthy. Cultural barriers between Danes and Indians in the level of abstraction should not be overlooked. It may be that Indians believe they are doing better than what they really are, because Indians abstract things differently. Indians may believe they are performing better than what the Danes actually expect of them. What would be interesting is if someone conducts a similar report, but from the perspective of India. There are always two sides to one coin, and this report has not been able to cover both sides of the story.

Another delimitation worthy of mentioning is the lack of qualitative interviews with both Danish and Indian employees. Due to the constraint of time, it was decided that enough data had already been collected through the questionnaire and observations. Had this been a longer study, there could have been multiple interviews with both Danish and Indian employees of different roles e.g., Scrum Masters, Tribe Leaders, Product owners, Business analysts and Scrum team members. The CCQ ensured that the voices of all stakeholders were heard, so it was decided that it was not necessary to conduct too many interviews in connection with this project.

All observations were semi-structured, meaning there was no template nor systematic approach for noting down what went on during every meeting. It would have been more appropriate with a structured template or with video-recordings of every meeting. Having those videos stored up in a database, would have allowed me to rewind back in time and look for things that may have been overseen in real-time.

Another finding was that the mixed-methods approach towards data collection, balancing observations with the questionnaire was not enough to identify underlying issues that would not reach the surface in this report, if it hadn't been for a couple of follow-up interviews. The methods used in this report for data collection only captures what is happening in the moment, and not how employees communicate and solve tasks internally after meetings. As part of this study, it could have been interesting to get a deeper understanding of challenges that arise before and after the Scrum events take place.

## 7 | CONCLUSION

This thesis project sought to investigate the role of culture in trans-national collaborations where Indians and Danes work together in remote agile software development environments. The conclusion of this study is that organizational culture sets the framework for establishing a healthy trans-national collaboration, and culture can be used to foster an innovative climate that supports creativity. With proper strategy, an organization can create the rules for playing, but it is culture that defines the commitment and passion that employees show when executing tasks. (Tomkowiak, 2010)

“Culture eats strategy for breakfast”

A company can have many visions, and solid strategies in making these visions into reality, however even the best plan can fail if the staff is not enthusiastic or passionate about their firm’s vision. (Tomkowiak, 2010; Coffman & Sorensen, 2013) The people that are responsible of bringing the vision to life are therefore also the ones responsible for its success or failure. (Tomkowiak, 2010) Many firms fail to incorporate appropriate culture in such trans-national collaborations, making it very difficult for them to thrive (Coffman & Sorensen, 2013)

The CCQ results indicate that there are no differences between the Danish staff vs. the Indian. This aligns with what Geert Hofstede found, that Danes do not lead but instead coach and empower employees by treating them with respect, equal rights, increasing independency and accessible superiors. (Hofstede Insights, n.d.) Many European firms fail to establish operations in India, often caused by a lack of acknowledgement around the fact that other cultures may intuitively behave differently than what is expected of them.

My findings from the CCQ result proves that Bankdata has been able to develop a strong organizational culture that fosters a healthy and innovative creative climate. Bankdata has been able to overcome the majority of cultural barriers through a continuous learning process, but there are still certain characteristics rooted into the way Indians think and solve problems that are in contrast with good Scrum. It requires a lot of resources to change strong hierarchical behavior, and in some cases the change may never come. Culture therefore has an important role to play in such trans-national collaborations, because it sets the parameters and framework for establishing either a strong or weak collaboration.

Scandinavian companies must therefore carefully consider their possibilities before offshoring to India, looking inwards to recognize whether their organizational culture is solid enough to support cultural differences. The job market is exploding in India, and from the case of Bankdata, it is pretty clear that there are many risks involved with operating in India – especially in times of a pandemic.

# SOURCES

## BOOKS

Burnett, K., Moore, Z., Moore, S., & Lennon, T. (2014). *Creative Climate Change: For innovation producers, facilitators and stewards*. Comscientia.

Daft, R. L. (2020). *Organization Theory & Design* (13th ed.). Cengage Learning.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and Organizations: Software of the Mind, Third Edition* (3rd ed.). McGraw-Hill Education.

Nettleton, C. E. N. (2011). *Fourteen Observations of Good Scrum Practice by Carlton E Nettleton (2011-07-20)* [E-book]. Look Forward Consulting, Inc.

Saunders, M. (2008). *Research Methods for Business Students* (6th ed.). Pearson Custom Publishing.

Tidd, J., & Bessant, J. R. (2013). *Managing Innovation: Integrating Technological, Market and Organizational Change* (5th ed.). Wiley.

## CONFERENCE PAPERS

Ayed, H., Vanderose, B., & Habra, N. (2017, May). Agile cultural challenges in Europe and Asia: insights from practitioners. *2017 IEEE/ACM 39th International Conference on Software Engineering: Software Engineering in Practice Track (ICSE-SEIP)*. <https://doi.org/10.1109/icse-seip.2017.33>

Dorairaj, S., & Noble, J. (2013, August). Agile Software Development with Distributed Teams: Agility, Distribution and Trust. *2013 Agile Conference*. <https://doi.org/10.1109/agile.2013.7>

Mendes, E., Viana, D., Datta Vishnubhotla, S., & Lundberg, L. (2018, August). Realising Individual and Team Capability in Agile Software Development: A Qualitative Investigation. *2018 44th Euromicro Conference on Software Engineering and Advanced Applications (SEAA)*. <https://doi.org/10.1109/seaa.2018.00037>

Summers, M. (2008). Insights into an Agile Adventure with Offshore Partners. *Agile 2008 Conference*. <https://doi.org/10.1109/agile.2008.37>

## JOURNAL ARTICLES

Ali, A. (2015). An ANP Approach Towards Analysis of Socio-Culture Distance Risks During Control of GSD Projects. *Journal of Industrial and Intelligent Information*, 3(4). <https://doi.org/10.12720/jiii.3.4.299-304>

del Ra, W. (2011). Usability testing essentials. *ACM SIGSOFT Software Engineering Notes*, 36(5), 49–50. <https://doi.org/10.1145/2020976.2021001>

Ekvall, G. (1996). Organizational climate for creativity and innovation. *European Journal of Work and Organizational Psychology*, 5(1), 105–123.  
<https://doi.org/10.1080/13594329608414845>

Isaksen, S. G. (1999). Situational Outlook Questionnaire: A Measure Of The Climate For Creativity And Change. *Psychological Reports*, 85(6), 665.  
<https://doi.org/10.2466/Pr0.85.6.665-674>

Isaksen, S. G., Lauer, K. J., Ekvall, G., & Britz, A. (2001). Perceptions of the Best and Worst Climates for Creativity: Preliminary Validation Evidence for the Situational

Outlook Questionnaire. *Creativity Research Journal*, 13(2), 171–184.

[https://doi.org/10.1207/s15326934crj1302\\_5](https://doi.org/10.1207/s15326934crj1302_5)

Parjanen, S. (2012). Experiencing Creativity in the Organization: From Individual Creativity to Collective Creativity. *Interdisciplinary Journal of Information, Knowledge, and Management*, 7, 109–128. <https://doi.org/10.28945/1580>

Šmite, D., Moe, N. B., & Gonzalez-Huerta, J. (2021). Overcoming cultural barriers to being agile in distributed teams. *Information and Software Technology*, 138, 106612. <https://doi.org/10.1016/j.infsof.2021.106612>

Tomkowiak, J. (2010). Culture Eats Strategy for Lunch. *Journal of Physical Therapy Education*, 24(1), 4–5. <https://doi.org/10.1097/00001416-201010000-00002>

Yström, A., Aspenberg, H., & Kumlin, A. (2015). Exploring the creative climate in an open innovation arena. *European Journal of Innovation Management*, 18(1), 70–85. <https://doi.org/10.1108/ejim-08-2013-0085>

## WEBPAGES

7N. (2019). “With 7N we have been able to customize the A-Z process to our needs.” <https://www.7n.com/news/4540>

Amabile, T. M. (1998, September 1). *How to Kill Creativity*. Harvard Business Review. Retrieved January 2, 2022, from <https://hbr.org/1998/09/how-to-kill-creativity>

Bankdata. (n.d.). Bankdata website. <https://www.bankdata.dk/>

Gonçalves, L. (2021, April 13). *Understanding the Scrum Pillars - Transparency, Inspection and Adaptation*. ADAPT METHODOLOGY®. Retrieved January 22, 2022, from <https://adaptmethodology.com/scrum-pillars/Home> - Hofstede Insights Organisational Culture Consulting. (2021, November 17). Hofstede Insights. <https://www.hofstede-insights.com/>

JIRA Waterfall Model - Javatpoint. (n.d.). Wwww.Javatpoint.Com. Retrieved January 13, 2022, from <https://www.javatpoint.com/jira-waterfall-model>

Likert-skala: Hvad er det, og hvordan bruges den. (n.d.). SurveyMonkey. Retrieved January 23, 2022, from <https://da.surveymonkey.com/mp/likert-scale/>

Manifesto for Agile Software Development. (n.d.). Agile Manifesto. Retrieved January 2, 2022, from <https://agilemanifesto.org/>

The Roles – ScrumMaster.dk. (n.d.). ScrumMaster. Retrieved January 23, 2022, from <https://scrummaster.dk/en/sc/scrum-moenstre/rollerne>

Scrum Alliance Certification | Transform your workplace. (n.d.). Scrum Alliance. Retrieved January 2, 2022, from <https://www.scrumalliance.org/>

ScrumMaster.dk – Alt om Scrum, uddannelse og ressourcer. (n.d.). Scrummaster.dk. Retrieved January 2, 2022, from <https://scrummaster.dk/>

Stingl, V. S. (n.d.). *OIM - Project Supervision Resources*. Aalborg University. Retrieved January 21, 2022, from <https://aaudk.sharepoint.com/sites/OIM-ProjectSupervisionResources/SitePages/Gathering-knowledge-for-analyzing-your-problem.aspx>

Sutherland, J. S., & Schwaber, K. S. (n.d.). *Home | Scrum Guides*. Scrum Guide. <https://scrumguides.org/>





# APPENDIX

A:

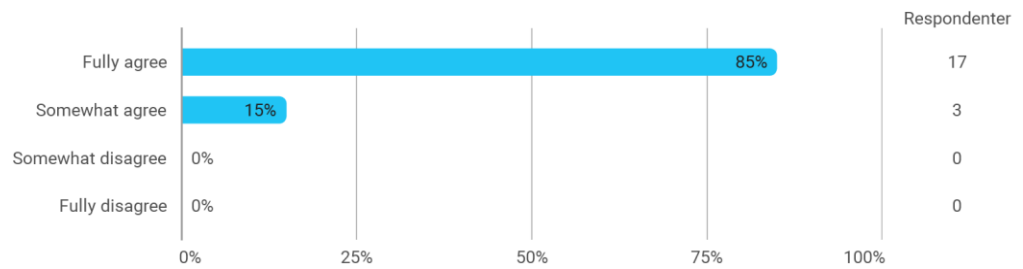
Company name	Citizenship	Team involvement	Position
Bankdata	India	Collocated	Developer
7N	India	Distributed	Senior software engineer
Bankdata	Denmark	Distributed	Business consultant
7N	India	Collocated	Senior software engineer
7N	India	Distributed	Senior Software Engineer
Bankdata	Denmark	Distributed	Scrum Master
Bankdata	India	Distributed	Senior Software Engineer
Bankdata	Denmark	Collocated	Product Owner
Bankdata	India	Collocated	Scrum Master
7N	India	Collocated/Distributed	Senior Software Engineer
Bankdata	Denmark	Distributed	Senior Consultant
Bankdata	Denmark	Distributed	Department Leader
Bankdata	Denmark	Collocated/Distributed	Tech Lead
Bankdata	India	Distributed	Senior Software Engineer
Bankdata	India	Collocated	Senior Software Engineer
Bankdata	India	Distributed	Senior Consultant
Bankdata	India	Collocated	Software Developer
Bankdata	Denmark	Distributed	Senior Consultant
Bankdata	Denmark	Distributed	CLO
Bankdata	Denmark	Distributed	Product Owner

B:

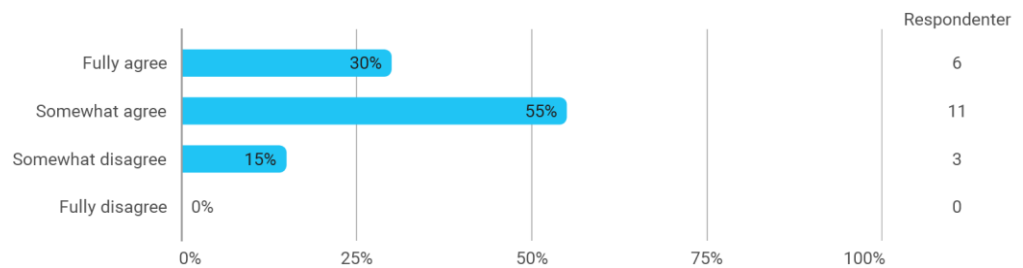
Variable	Innovative	Stagnated	Bankdata
Challenge/motivation	2,3	1,8	2,51
Freedom	2	1,5	2,29
Idea support	1,9	1	2,48
Trust/openness	1,8	1,1	2,4
Liveliness/ dynamism	2,1	1,5	2,37
Playfulness/Humor	2,3	1,5	2,55
Debates	1,6	1	2
Conflicts	0,2	1,5	0,87
Risk-taking	2	0,1	1,95
Time-slack	1,6	1	2,17

C:

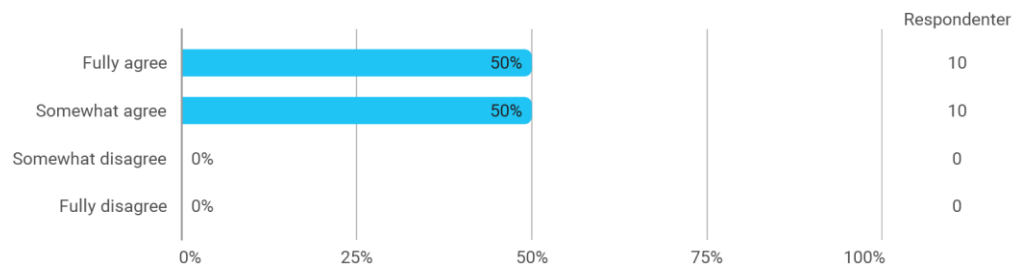
**Most people here enjoy contributing to the success of the company.**



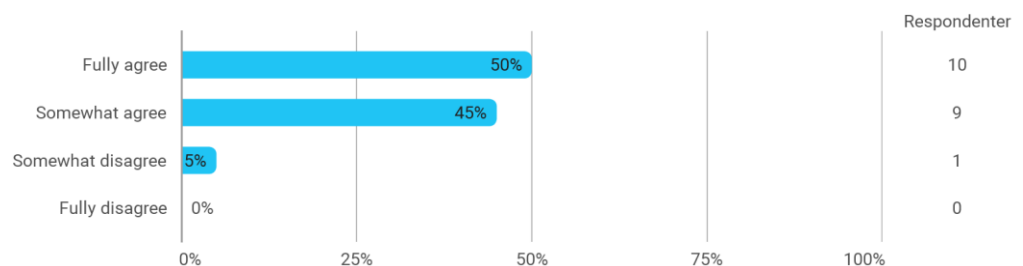
**People here make decision on their own to a fairly large extent.**



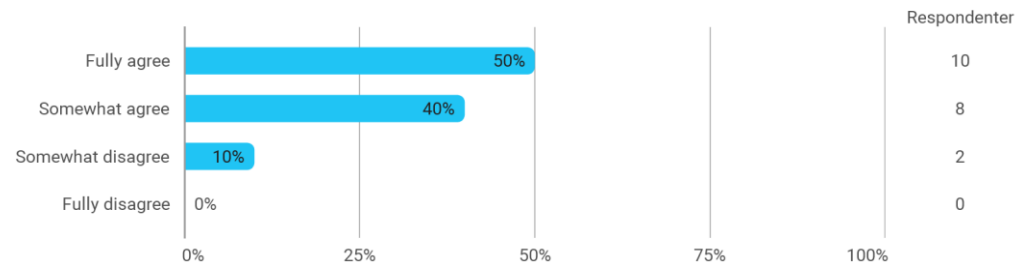
**People are generally taking the risk to share their ideas because they are listened to and encouraged.**



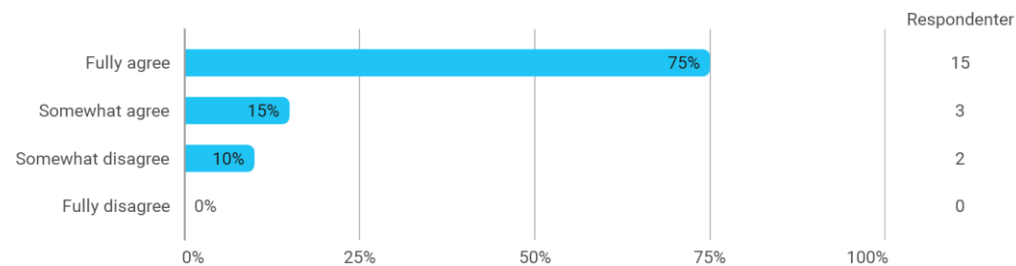
**There is no fear of being stabbed in the back.**



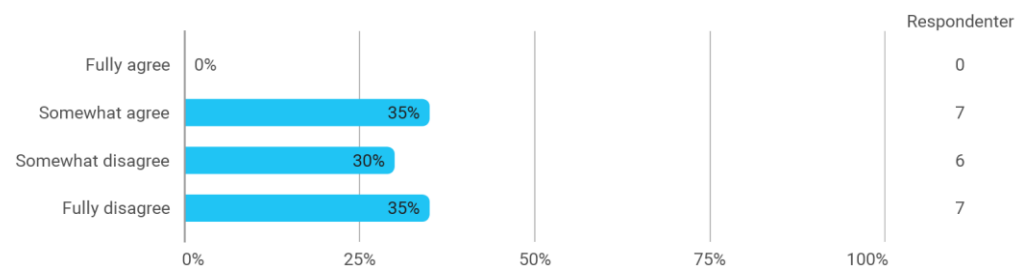
Most people have time to think through new ideas here.



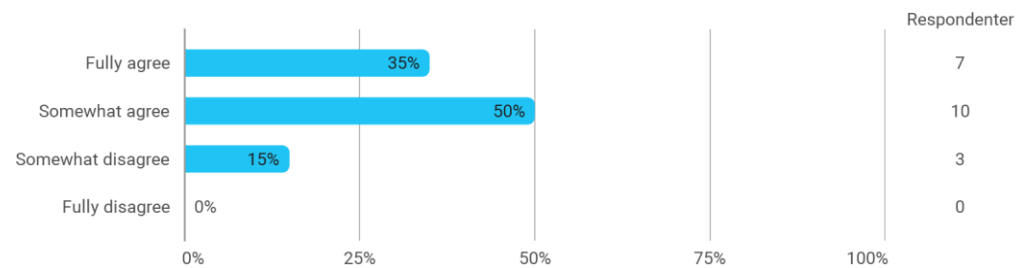
There is a lot of activity here



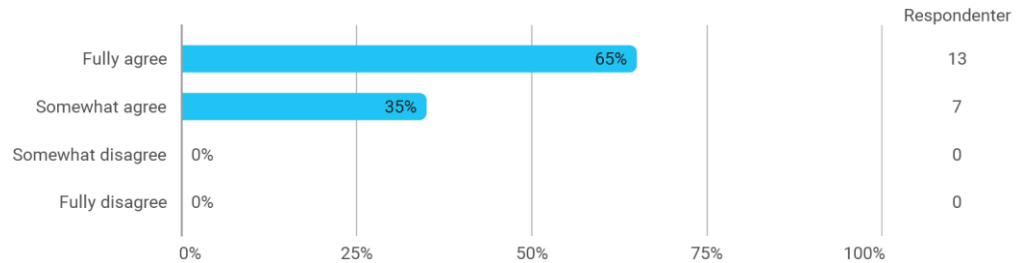
There is a good deal of tension here due to prestige conflicts.



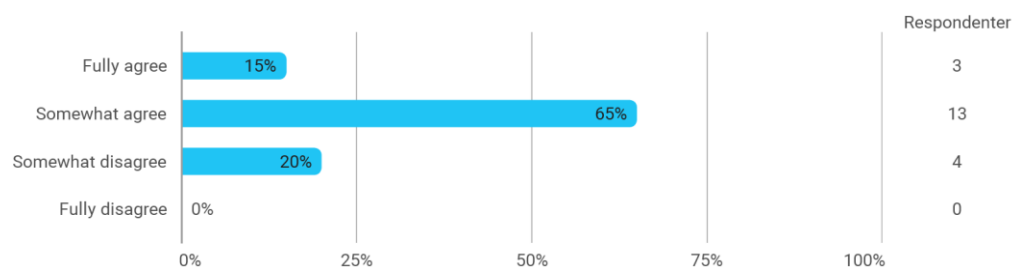
There are many new ideas floating around here.



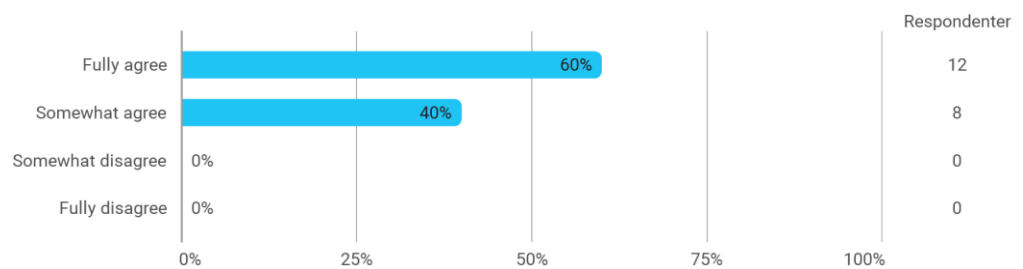
**A playful atmosphere is prevailing here.**



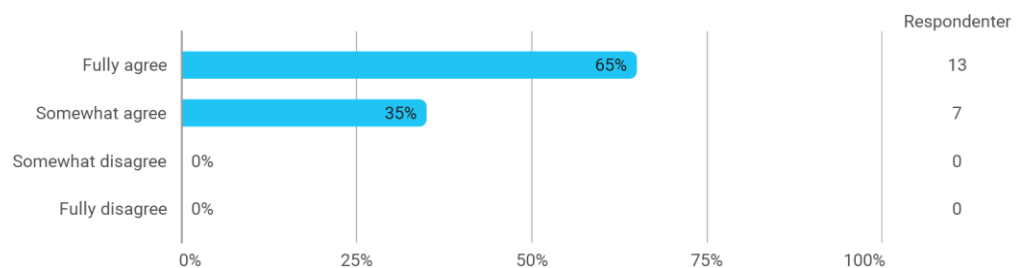
**Novel ideas are quickly adopted into the operation.**



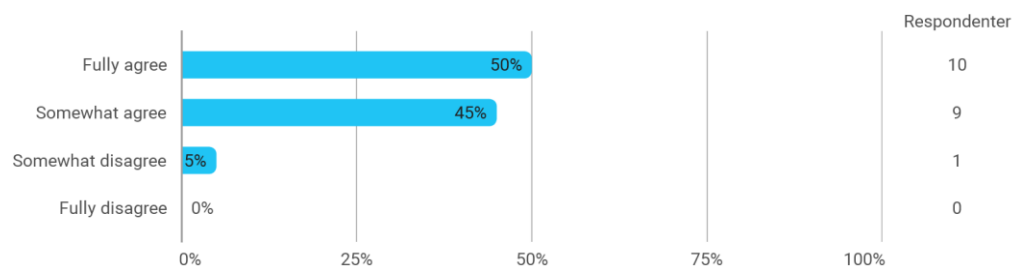
**People here usually enjoy their jobs.**



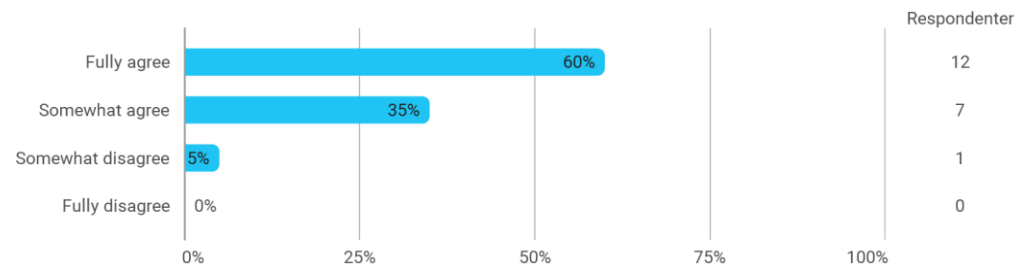
**People here take the time to discuss ideas.**



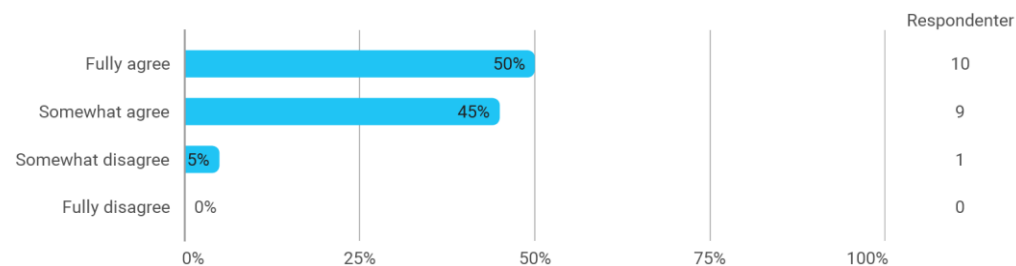
**Most people here prioritize their work themselves to a rather large extent.**



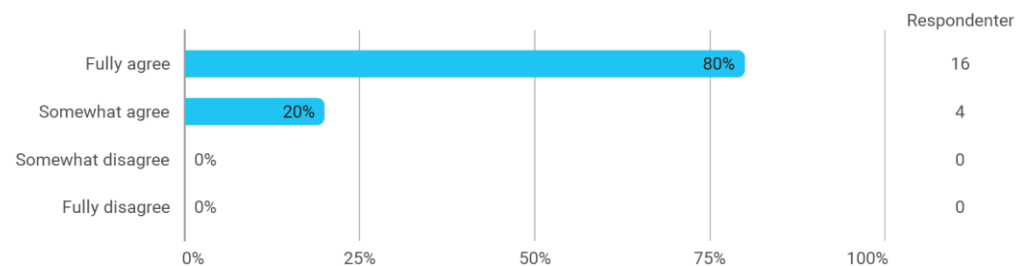
**Initiative often receives a favorable response, so people feel encourage to generate new ideas.**



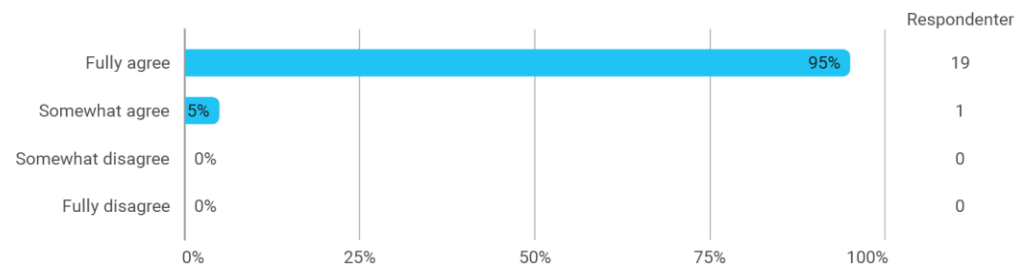
**People do not talk behind each others' backs.**



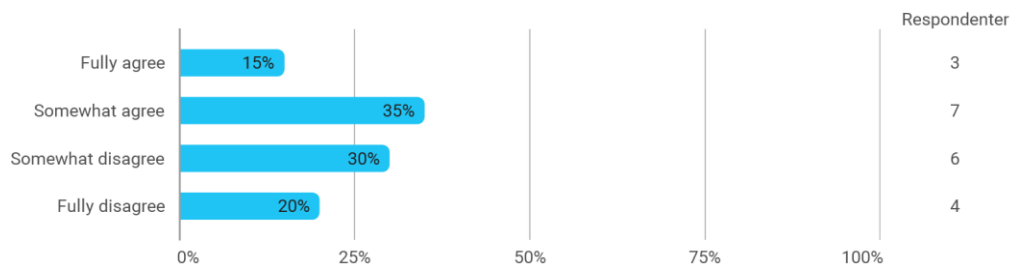
**A lively atmosphere prevails here.**



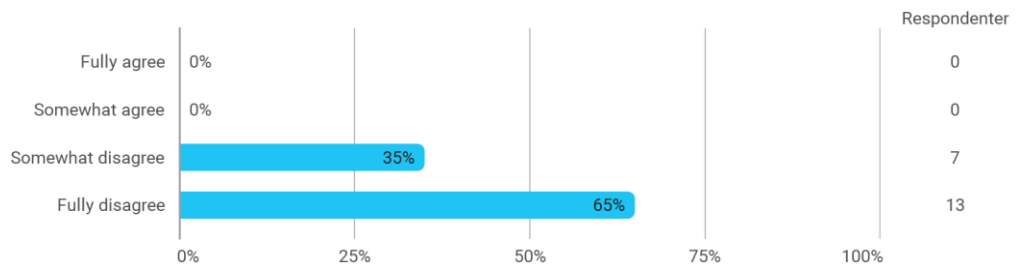
**One can usually see many cheerful faces here.**



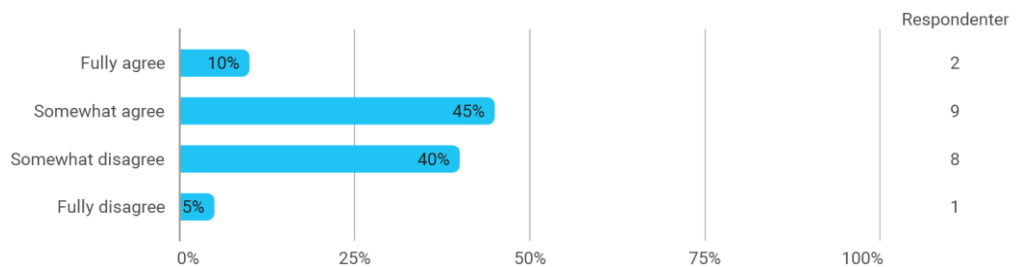
**People here are anxious to talk about their ideas.**



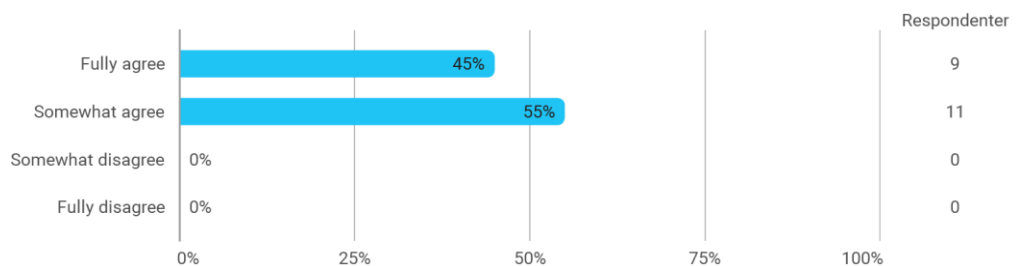
**It is common here to have people plot against each other.**



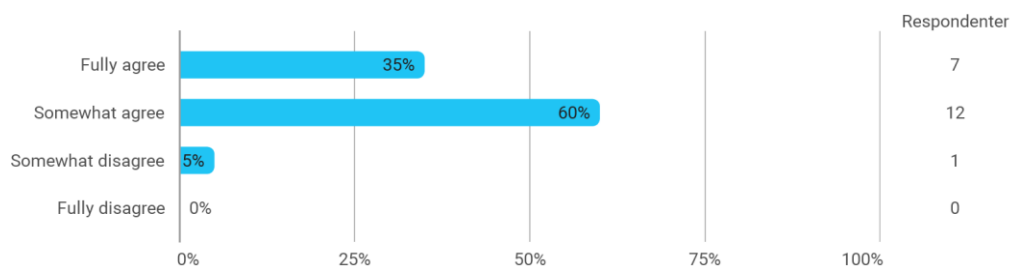
**There is a clear tendency for risk-taking here.**



**Most people here consider their work meaningful and stimulating.**

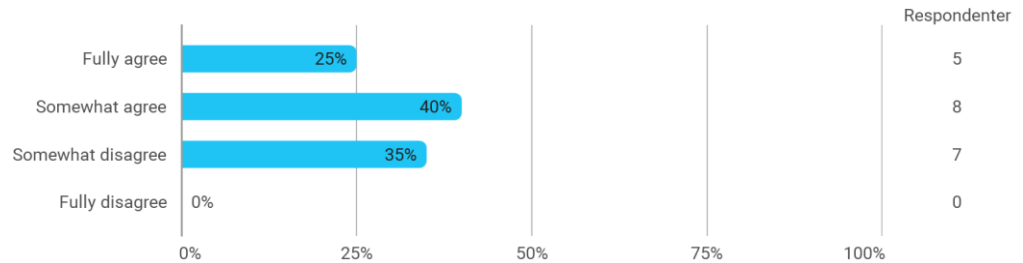


**People here seek information in the company on their own initiative to solve problems.**

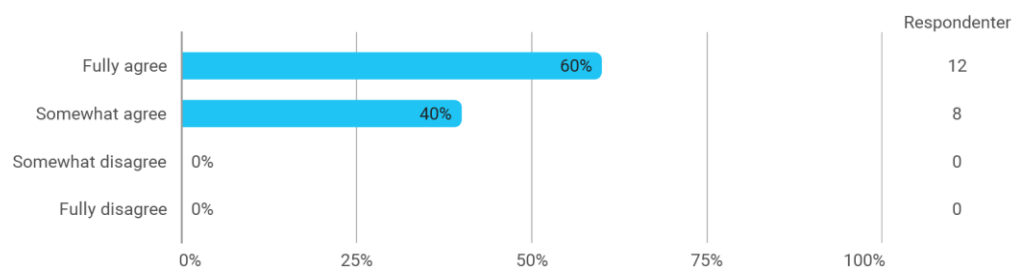




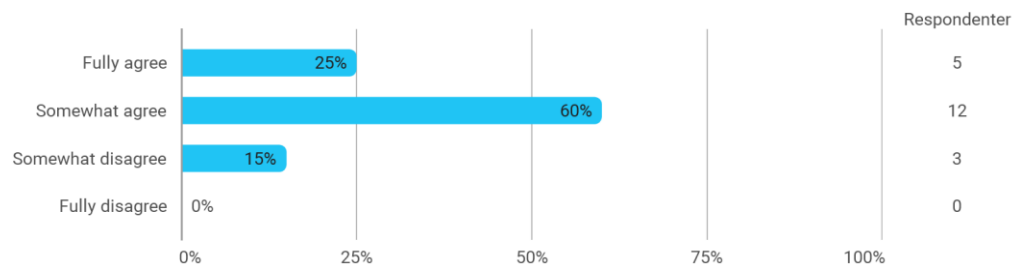
**People here dare to take the initiative, even if the outcome is uncertain.**



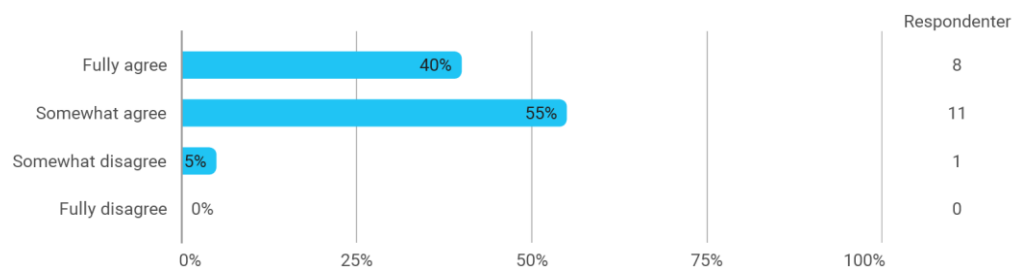
**You will receive support and encouragement if you present new ideas.**



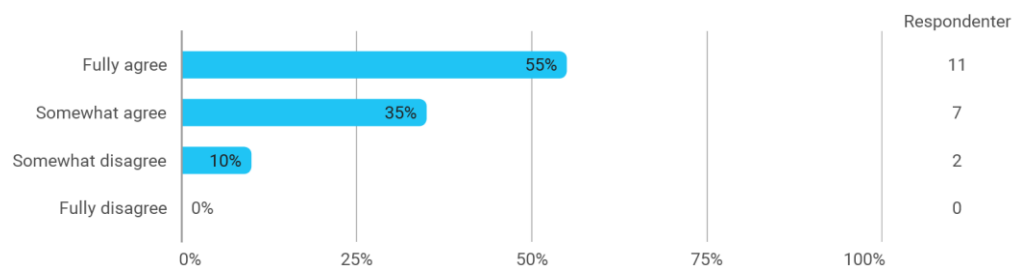
**People here are confident and act quickly.**



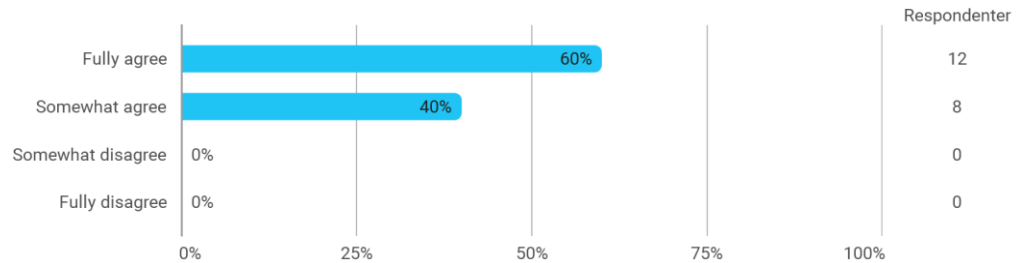
**People trust each other.**



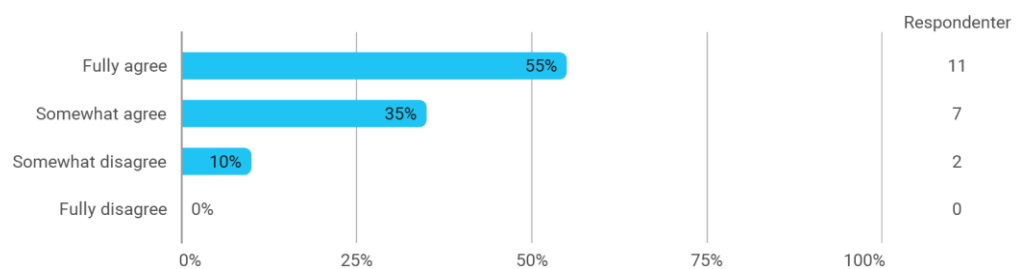
**The atmosphere here is exciting.**



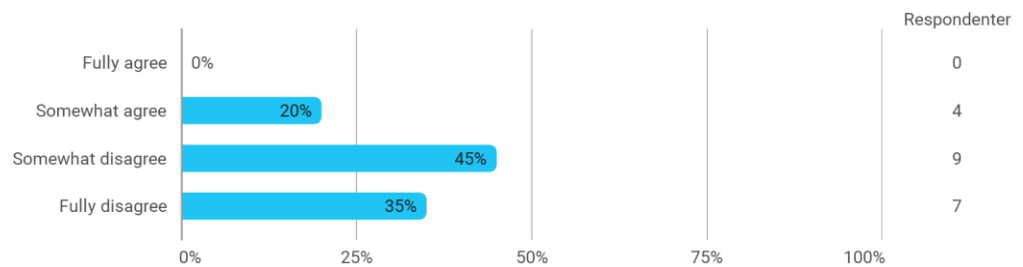
**You feel welcome when presentation new ideas.**



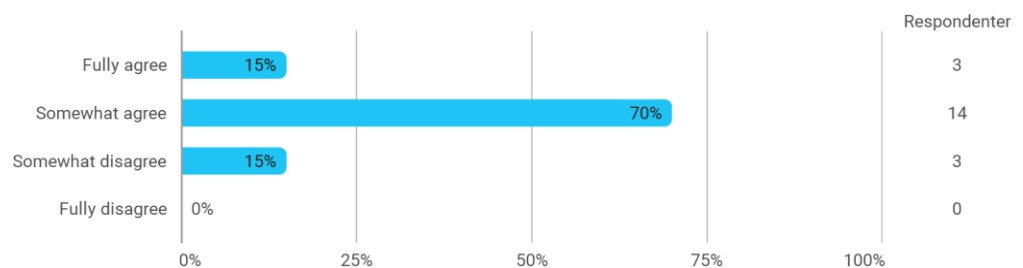
**Many different points of view are expressed here.**



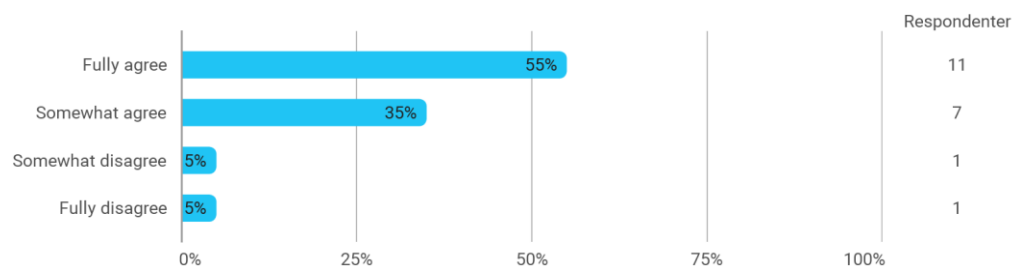
**There are power and territorial struggles in my unit.**



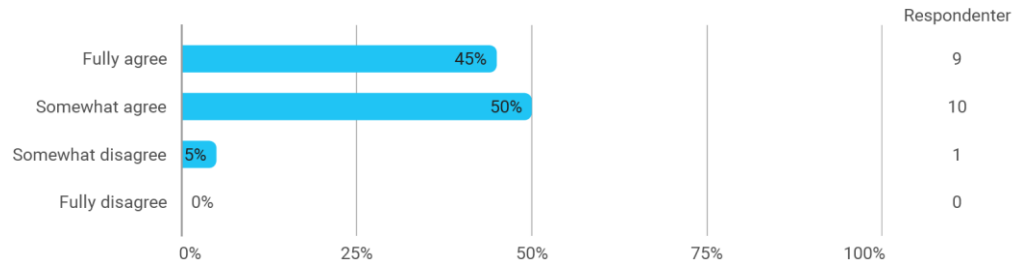
**The pace of work allows for the testing of new ideas.**



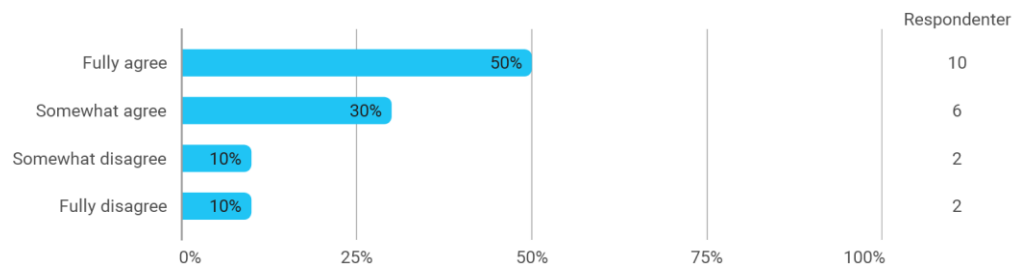
**Most people here strive to do a good job.**



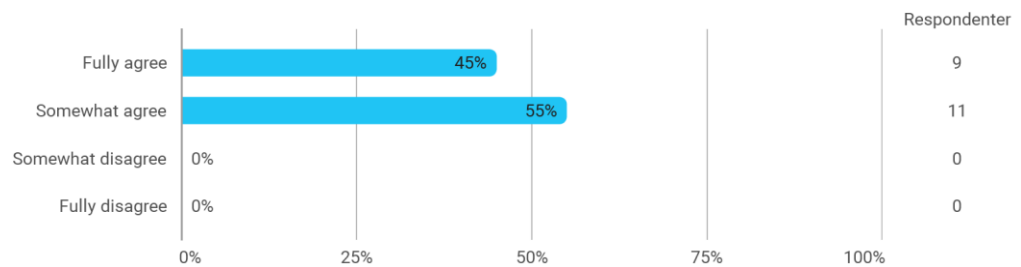
**It is common for people here to take the initiative to solve problems.**



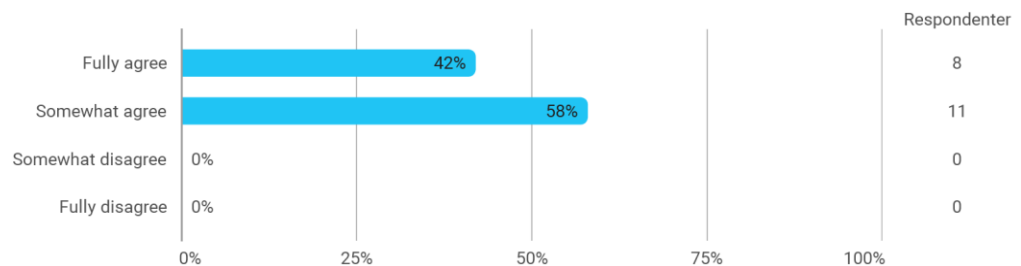
**There is an informal atmosphere here.**



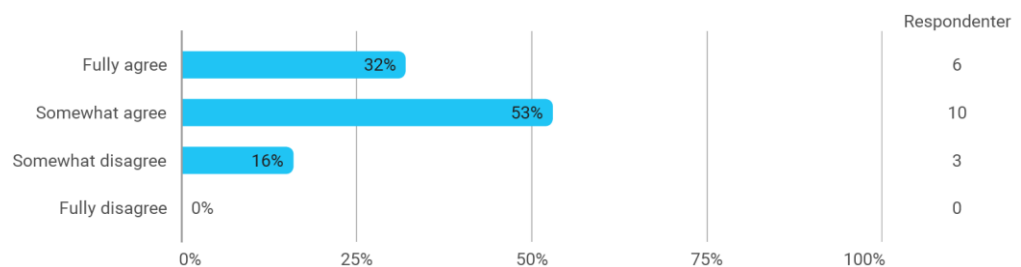
**Conflicts and opposition are dealt with openly and usually solved that way.**



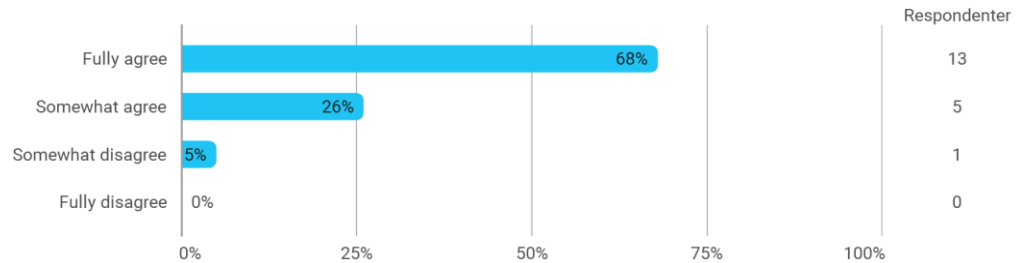
**To come up with ideas is looked upon as an important part of the operation here.**



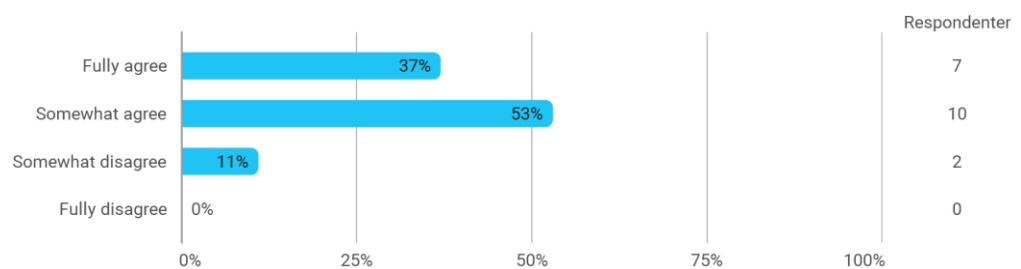
**There is a lot of energy and push in the operation.**



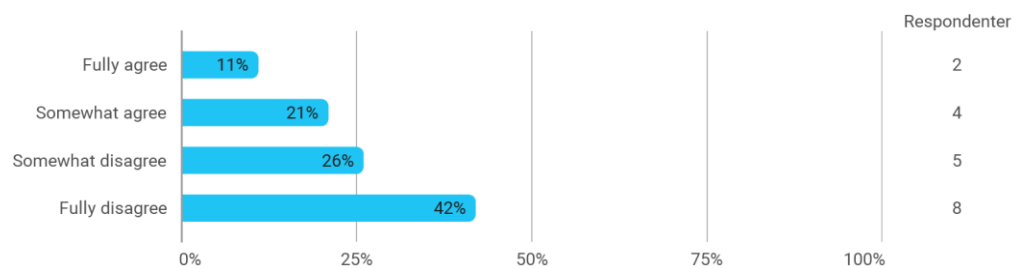
**People tend to joke quite a bit.**



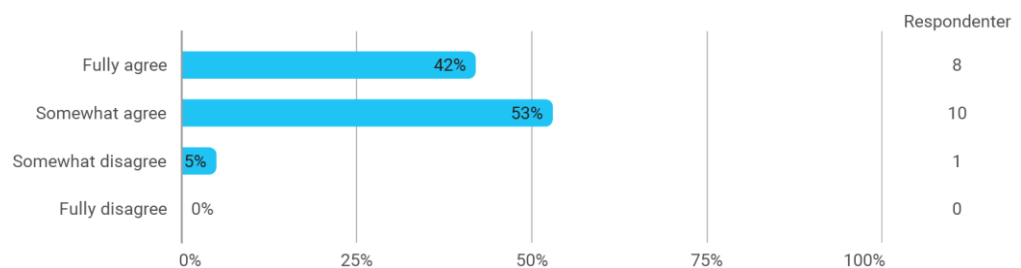
**There is a great variety of views here.**



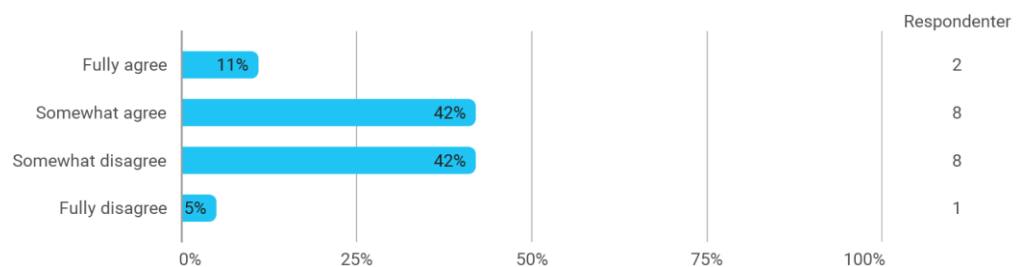
**There are quite a few people who cannot tolerate one another.**



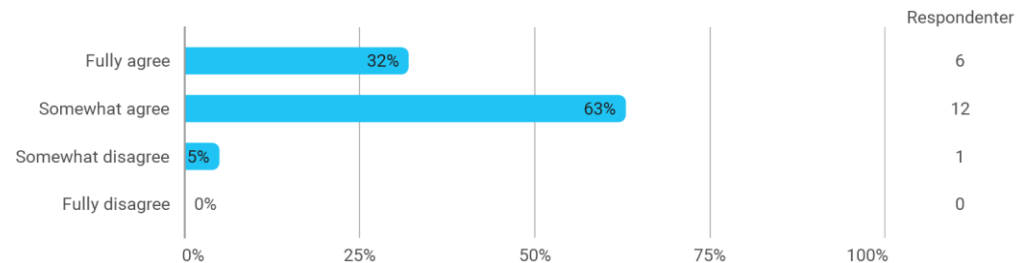
**People feel deeply committed to their jobs.**



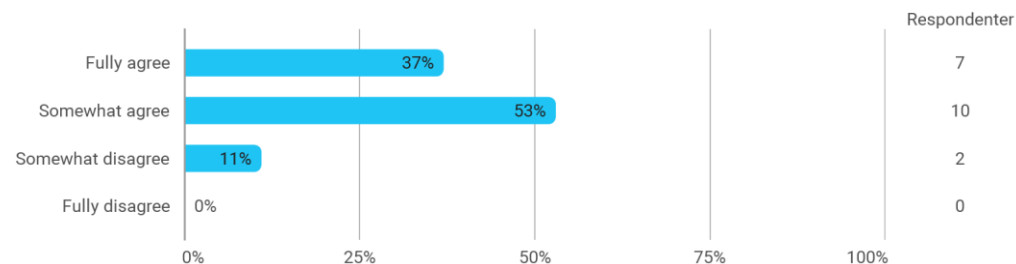
**One has the opportunity to stop work in order to test new ideas.**



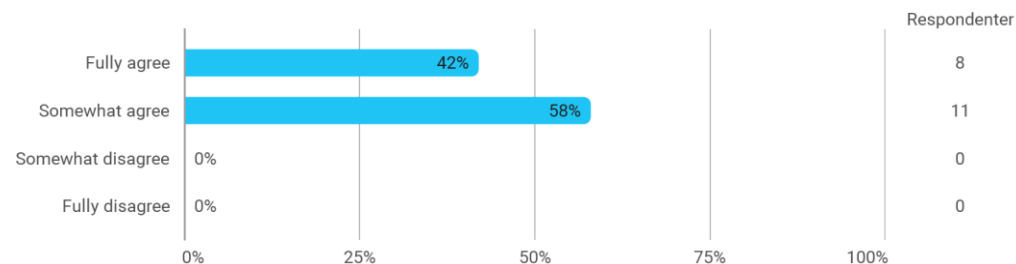
**There is quite a lot of freedom here.**



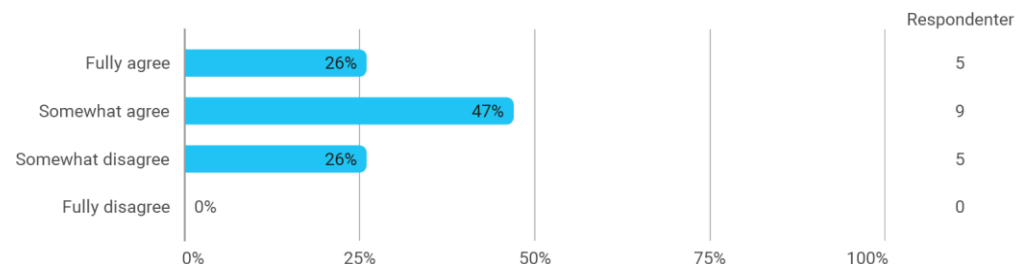
**This unit is usually accepting new ideas.**



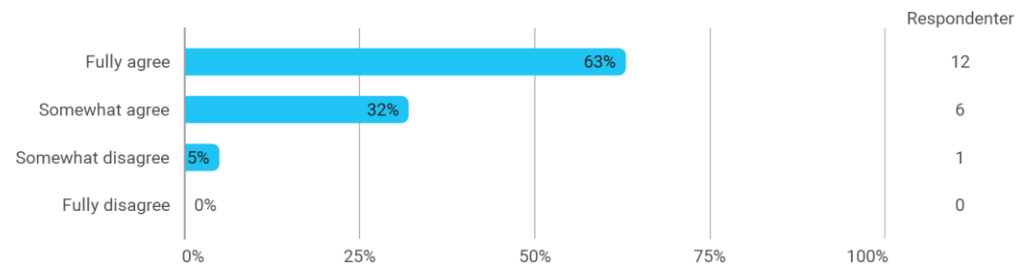
**The communication between people is open and straight forward.**



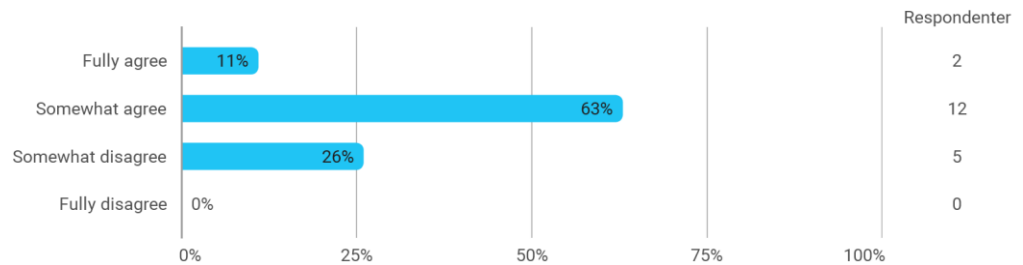
**There are many people here who are full of ideas.**



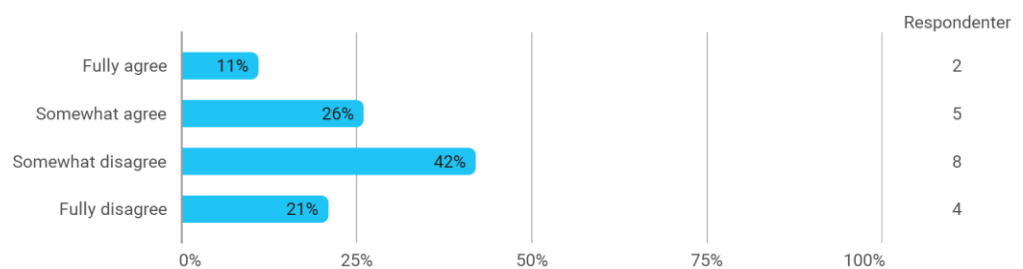
**People here have a sense of humor.**



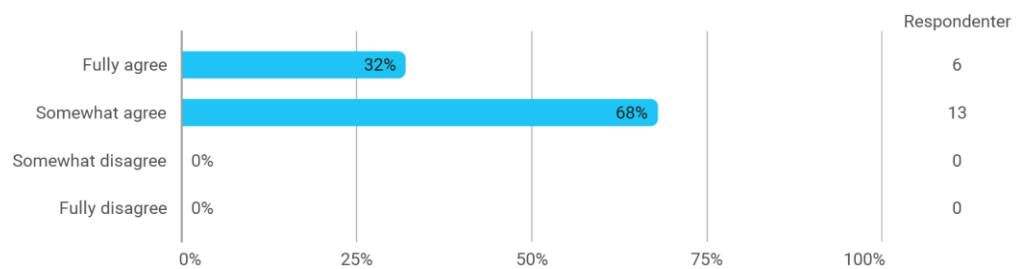
## Unusual ideas often come up in discussions.



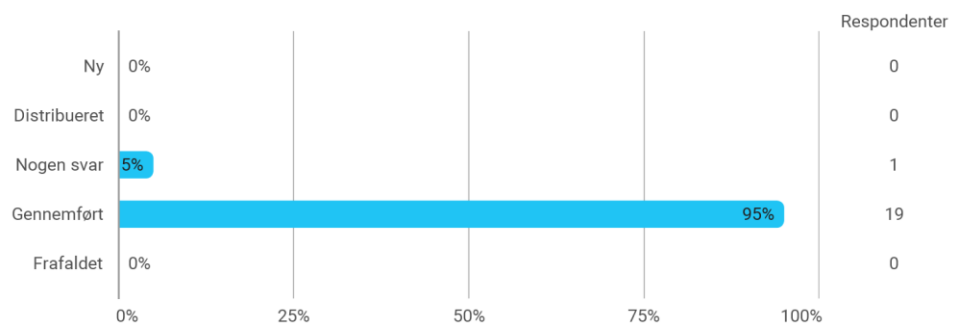
## There are quite a few personal conflicts here.



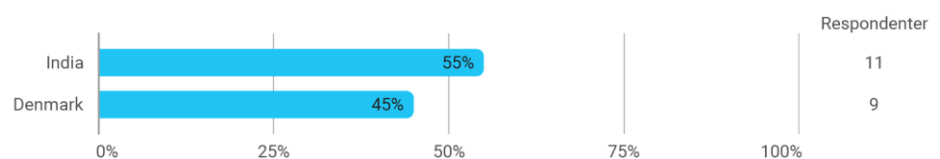
## There is follow-through on new ideas here.



## Samlet status



## Place of residence



Team involvement(s)

