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ICT in Business

Agile Leadership, Shared Leadership, or No Leadership: Understanding the Balance of Leadership Styles and Decision Making Responsibilities in Agile Organizations

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MASTER'S THESIS

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Executive summary

Using agile approaches to managing projects in organizations has an impact on leadership. Literature implies that organizations transitioning from a traditional project management environment to an agile way of working change processes, values and organizational structure (Stettina & Hörz, 2015). An impact on leadership is suggested, however, not well understood. In hierarchical organizations a project manager with a strong top-down orientation often coordinates both the processes and content decisions. Agile methods such as Scrum (Schwaber, 2004) divide this ownership of process and content decisions through the roles of the Product Owner, Scrum Master and a self-managing team (Stettina & Heijstek, 2011). An impact on the balance between person-centered or vertical leadership (Turner & Müller, 2006) and team-centered, or horizontal leadership approaches (Lindgren & Packendorff, 2009) thus can be expected.

The aim of our study is to provide an understanding of (a) the impact of agile transformations on the balance of person-centered and team-centered leadership in teams, and (b) the re-distribution of responsibility and authority in decision making in and across teams. We aim to help managers and teams better understand the impact on their ways of working and the required leadership style in context. To academia we want to provide models for future research.

We conducted a multiple-case study with 20 senior project managers and team members following agile as well as traditional project management methods in five large organizations engaged in an agile transformation. We applied a grounded theory-like coding process using open, axial and selective coding following Miles and Huberman (1994). Open coding identified the main categories. Then we visually clustered the codes so we could see the main themes appearing as gestalt. Lastly, using selective coding we focused on the main categories in order to arrive at our main themes.

Our results contribute to the understanding of leadership and decision making responsibilities in organizations applying agile project management, through: (1) a decision making responsibility model, (2) team efficacy leadership model, and (3) barriers and enablers to leadership in organizations applying agile methods. First, through our analysis we discovered the division of decision responsibility in organizations based on content and process dimensions. Content and process decisions which have an impact on the whole organization should be done by the management inside organizations while the same decisions which have an impact on team level can be decided on a team level. Our model helps individual team members to understand the overview of decision-making responsibility and have them understand what decision they can make. On the other side it will help managers and business leaders set up clear responsibilities for the team and improve the effectiveness of decision making as a whole in organizations. Second, our team efficacy leadership model is a leadership guide for processes coaches (e.g. Scrum Master). The model explains what leadership style the process coach could exercise based

on the team efficacy level. For example, when a team is just formed or re-composed inside an organization, the members are not used to each other yet and have low trust. In this case the process coach could exercise a rather directive leadership style in order to guide the team. When the team exposes each other's expertise and experience through working together, the team increases in efficacy and the trust will increase and they are aware of each other's abilities which is a big enabler in team leadership or decision making. In this case the process coach could adapt his leadership style to a more supportive one. Our team efficacy leadership model provides practitioners indicators when to switch leadership style and improves awareness in organizations. Lastly, agile leadership has various barriers and enablers when trying to operationalize. Barriers such as strong hierarchy, no goal or vision and low management trust are disabling the full potential of agile leadership while, enablers such as clear purpose and vision, high management trust and freedom of decision making stimulate agile leadership.

We conclude that agile transformations shift the balance towards team-based leadership approaches. Especially when moving towards more mature agile organizations with large team efficacy, it is important for managers to understand the different leadership approaches and switch from a directive to a supportive leadership style. In this paper we present two models that help teams as well as managers to better understand the requirements for leadership styles during an agile transformation as well as the decision responsibilities involved.

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1 Problem statement

1.1 Introduction

Organizations are becoming more project-based as the markets are fast-changing and product complexity increases (Hobday, 2000). With the introduction of agile methods, the traditional person-centered or vertical leadership approaches (Turner & Müller, 2006) are being increasingly supplemented by team-centered, horizontal, or shared leadership approaches (Lindgren & Packendorff, 2009). Person-centered leadership “stems from an appointed or formal leader of a team” while team-centered leadership “is a group process in which leadership is distributed among, and stems from, team members” (Pearce & Sims, 2002).

Related studies in both fields tend to focus mainly on one side instead of integrating both areas into one whole understanding of leadership in projects. This focus on mainly one side is neither of practical value, because both forms exist in projects, nor on academic value for understanding the extended role of leadership in projects. Moreover, the introduction of agile methods asks for a new leadership style in project-based organizations. Vertical leadership is now being challenged by the horizontal leadership style, because of the origin of management in organizations of being in control is changing. Furthermore, recent developments in general management shift their focus to understanding the relationship between people-centered and team-centered leadership and the balance of these approaches in the business (Burke, Fiore, & Salas, 2003).

Using a case study in both agile and waterfall approaches, the balance between person-centered and team centered leadership can be identified through examples in practice. By using the multiple-case study approach at three different companies, these examples will be collected. Moreover, with the use of interviews with people who have experience in agile and waterfall project approaches, the difference can be identified.

At the end, this research is focused on getting to an understanding of the impact of agile transformations on the balance of person-centered and team-centered leadership in projects. The findings of this study will contribute to practice because it will provide models which can be used by business leaders in different context so they can see what leadership style suits their project team(s). Furthermore, it will contribute to academia because it will provide new theory and models on leadership which can be used for further research.

1.2 Problem domain

The aim of this study is to find the right balance between person-centered and team-centered leadership in agile organizations in order to increase project success. This research is done in the area of project teams within organizations which have stable and temporary teams and span over different departments.

On the basis of this background, the research questions which are formed to answer this:

RQ1: What is the impact of agile transformations on the balance of person-centered and team-centered leadership in projects?

In current literature different situations have been analyzed to see which type of leadership fits best. An example is that emergency situations tend to be best lead by a person-centered approach (Goleman, Boyatzis, & McKee, 2002), while change management projects can be best lead by a team-centered approach (Pearce & Sims, 2000). There are few studies done on the distribution of responsibilities in decision making in project teams to enhance the effectiveness, so we ask:

RQ2: What is the impact of agile transformations on the distribution of responsibility and authority in decision making across teams and management?

The final result of this research will identify the balance of the two leadership approaches in agile projects as well as the redistribution of responsibility and authority regarding decision making. The importance of leadership in project success is of significance of this study. Recent studies have shown how leadership can have an impact on project success in different kinds of projects (Turner & Müller, 2006).

1.3 Scope

This study is focused on getting a deeper understanding of both person-centered and team-centered leadership in projects due to agile transformations. We will try to identify the right balance of leadership in project-based organizations in different projects. The focus will primarily be on value-driven and plan-driven projects within the organization and its leadership style within these projects.

Topic	In scope of the thesis	Not in scope of the thesis
Leadership	• Leadership in project-based organizations • Vertical and horizontal leadership	• Leadership in organizations and its best application
Project management	• Value-driven and plan-driven project management in project-based organizations	• Detailed project management methods in other kinds of organizations
Project success	• Impact of leadership on project success	• General project success of different project management approaches

Table 1 Scope of the thesis

- Identification of the nature and balance of person and team-centric leadership in projects, which can be used by project managers in order to be applied in different leadership situations in projects.
- The distribution of responsibility and authority of decision making in project teams.

2 Theoretical framework

Leadership is a topic that has been discussed quite some time (Kotter, 1990; Bass, 1990). However, leadership in project-based organizations is quite new (Havermans, 2014). More and more organizations are changing to project-based organizations (Hobday, 2000) and the need for the right leadership style to the right project is required (Turner & Müller, 2006). Although the literature covers a wide variety of such theories, this review will focus on the combined impact on team-centric leadership and person centric leadership in order to drive project success. The most important themes that will be covered in this literature review are: (1) project-based organizations, (2) project management methods, and (3) leadership. Although the literature presents these topics in a variety of contexts, this paper will primarily focus on the application of shared leadership and its project success.

2.1 Project-based organizations

The project-based organization (PBO) is becoming increasingly important for “managing increasing product complexity, fast changing markets, cross-functional business expertise, customer focused innovation and market” (Hobday, 2000). Sydow et al. (2004) says: “Project-based organizations refer to a variety of organizational forms that involve the creation of temporary systems for the performance of project tasks”. According to the study of Hobday, this is mainly the case complex products. Also in the area of new product development (NPD) the PBO is increasingly popular which shifts the focus more to the project instead of the firm.

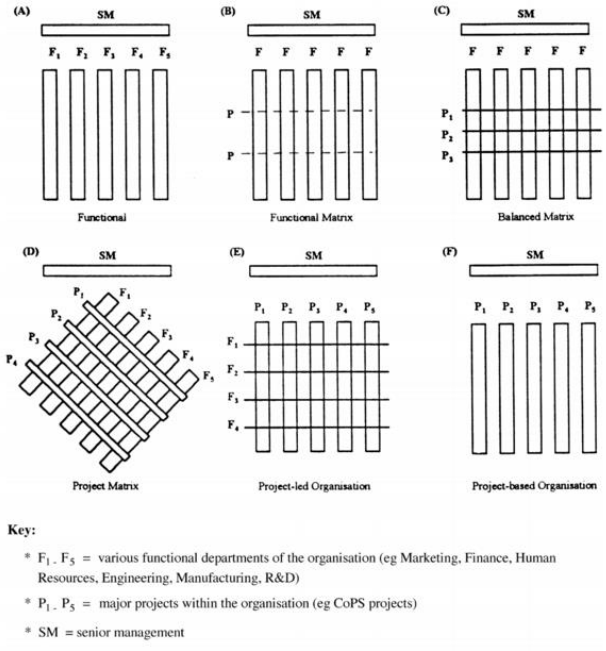

Figure 1 Overview of different types of organizations (Hobday, 2000)

In contrast with, for example, a matrix organization (figure 1) or other forms is that in a PBO the project is the main focus for innovation, production and competition (Hobday, 2000). The projects in such organizations are stretched across multiple or all business functions and the project managers typically have high status and direct control over these business functions, personnel, and other resources. Furthermore, because the project is a temporary form, the PBO is very flexible and adaptable to their surroundings in comparison with traditional hierarchical organizations.

One of the key points in PBO projects is that the customer is highly involved in the process as the result need to maximize performance, business function, and profitability of the user. PBOs organize themselves around the need of projects which in that case cross traditional boundaries and industries.

The difference between the types of organizations is explained by Galbraith (1971). He described organizational forms from pure functional form to pure product form. Within a pure functional organization, senior management is on top and the organization consists of various functional departments (eg Marketing, Finance, and Engineering). In comparison, a pure product form has senior management on top but the organization has various major projects below them instead of functional departments. These projects cross multiple functional departments at once.

The negative side of the PBO is that it has weak coordinating processes, resources and capabilities across the organization according to the study of Hobday (2000). The learning process, which are functional departments, are not present in the PBO and this results in low technical leadership and direction, which normally is occupied by engineers and R&D managers in functional and matrix organizations.

2.1.1 Leadership in project-based organizations and its impact on project success

Because project-based organizations are focused on temporary projects and moving from one project to another, a new leadership style is needed (Hobday, 2000). For project-based organizations to be successful over a long period of time, they have to be adaptable and efficient at the same time in order to explore new possibilities, as explained by March (1991) using the efficiency-adaptability paradox. Havermans (2014) explores this area of these paradoxical demands in order to see what leadership should be in project-based organizations.

The right leadership is necessary to balance between adaptability and efficiency. According to the study of Havermans (2014) leaders in project-based organizations use a combination of complexity absorption and complexity reduction to create the right balance between adaptability and efficiency. In her study, she conducted 48 semi-structured interviews among 20 separate projects to see how project managers, line managers and team members look at these paradoxical demands in project-based organizations.

Furthermore, Hobday (2000) researched several projects in different organizational structures and mentioned that in a project-based organization, every new project had a new team and the project manager was in close contact with the members and other relevant contacts of the project. In this case trust and respect can rise and used to streamline projects and stakeholders.

More research is necessary to understand what kind of leadership is necessary and how it can be best applied, especially in short projects with temporary team members.

2.2 Project management

Projects and project management can be found back in our history with multiple examples. From building pyramids to World War mass production (Coppens, 2007; Kozak-Holland, 2013). All have in common that it is based on a limited time and scope. Furthermore, the term project-based organization is increasingly becoming important due to the short time to market and the need for constant innovation (Hobday, 2000). In this chapter both terms will be more investigated using theory from different researchers.

Project management is defined by Munns & Bjeirmi (1996), as: “the process of controlling the achievement of the project objectives”. They argue that a project cannot be compared to project management as each is different to measure. At the end, project management includes a definition of the work, identifying the extent of work, resource allocation, planning the work, monitoring progress and adjusting possible deviations. On the other side, the project itself is a definition of a task which at the end could benefit the company.

The Project Management Institute (PMI) defines further that project management is an “application of knowledge, skills, tools, and techniques to project activities to meet the project requirements”. PMI has grouped all the knowledge in the *Project Management Body of Knowledge* (PMBOK) which states five processes of project management as named: 1) Initiating, 2) Planning, 3) Executing, 4) Monitoring & Controlling, and 5) Closing.

Furthermore, they have classified all project management knowledge in: (1) scope management, (2) quality management, (3) time management, (4) cost management, (5) risk management, (6) human resource management, (7) contract/procurement management, and (8) communication management.

In an early research done by Randolph & Posner (1988) they mention that effective project managers are in a continuous loop of planning and managing until the project is done. Effective project managers know how to plan and to involve a large number of people. They try to get to an agreement with the people onboard and to project a goal in front of people. In order to be an effective project manager, Randolph &

Posner (1988) created 10 principles, divided into Planning and Managing (clear goal setting, identify project objectives, create checkpoints/milestones/relationships, create a project schedule, direct people individually, create excitement and commitment, keep the members connected, establish agreements with members, empower members, support risk taking and creativity).

Randolph & Posner (1988) discovered that it is vital for project success to create a sound plan at the beginning and excite the team members onboard. Furthermore, they say that managing the project on continuous basis is key for success and also create an environment in which the team members are empowered and take risk which could lead to innovation.

Within the spectrum of project management, there is plan-driven and value-driven project management. The former is oriented on planning and has a very structured approach of project management, while the latter is oriented on incremental project management with changing requirements (Boehm et al., 2002). The figure below gives an overview of the differences between value-driven and plan-driven project management.

Project characteristics	Agile home ground	Plan-driven home ground
Application		
Primary goals	Rapid value, responding to change	Predictability, stability, high assurance
Size	Smaller teams and projects	Larger teams and projects
Environment	Turbulent, high change, project focused	Stable, low change, project and organization focused
Management		
Customer relations	Dedicated onsite customers, focused on prioritized increments	As-needed customer interactions, focused on contract provisions
Planning and control	Internalized plans, qualitative control	Documented plans, quantitative control
Communications	Tacit interpersonal knowledge	Explicit documented knowledge
Technical		
Requirements	Prioritized informal stories and test cases, undergoing unforeseeable change	Formalized project, capability, interface, quality, foreseeable evolution requirements
Development	Simple design, short increments, refactoring assumed inexpensive	Extensive design, longer increments, refactoring assumed expensive
Test	Executable test cases define requirements, testing	Documented test plans and procedures
Personnel		
Customers	Dedicated, colocated Crack* performers	Crack* performers, not always colocated
Developers	At least 30% full-time Cockburn Level 2 and 3 experts; no Level 1B or Level –1 personnel**	50% Cockburn Level 3s early; 10% throughout; 30% Level 1B's workable; no Level –1s**
Culture	Comfort and empowerment via many degrees of freedom (thriving on chaos)	Comfort and empowerment via framework of policies and procedures (thriving on order)

* Collaborative, representative, authorized, committed, and knowledgeable.
** See the "Cockburn's Three Levels of Software Understanding, Slightly Revised" sidebar. These numbers will vary with the application's complexity.

Figure 2 Agile and plan-driven differences (Boehm & Turner, 2003)

Agile is aimed at the weaknesses of traditional plan-driven models (Petersen & Wohlin, 2009, 1). The main assumptions of: 1) well-defined requirements upfront, 2) manageable changes, 3) delivering on

time, are not the same assumptions of agile methods (Leffingwell, 2007, 26). As Eckstein (2004, 13) mentions: agile methods are bound to the highest business value to the customer at any given time, by creating something of value after every iteration based on the prioritized requirements of the customer (Leffingwell, 2007, 14). While traditional plan-driven methods assume there is only something of value at the end of the project has agile methods something of value throughout the whole project trajectory (Figure 2). Thus, faster return on investment.

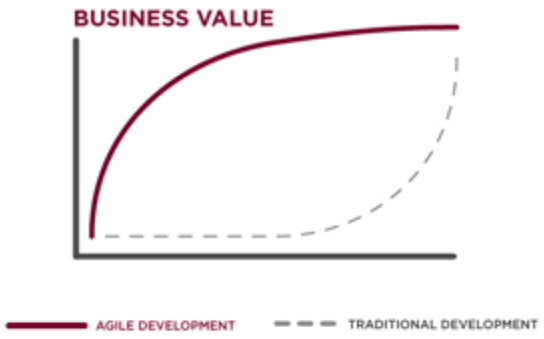

Figure 3 Agile vs waterfall methods in terms of business value

One other aspect of agile methodologies is that is has a higher degree of visibility. The principles and practices which belong to agile such as, frequent feedback loops, requirement backlogs and sprint reviews shows the work already done and what is coming (Abrahamsson et al., 2002, 29, 33). If we compare this with the traditional plan-driven approach which lacks feedback loops or transparency of project progress only delivers this at the end of the cycle (Figure 3**).**

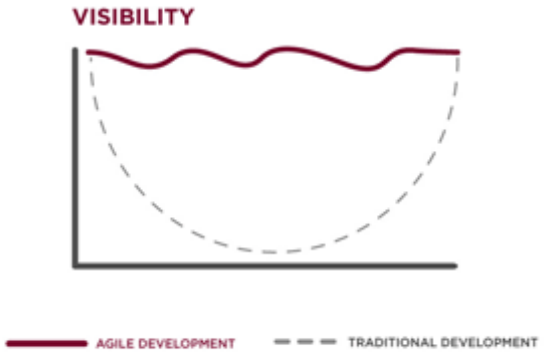

Figure 4 Agile vs waterfall methods in terms of visibility

The main thing of agile development is that the resources and planning are fixed and requirements are the only thing that changes throughout the project (Figure 4). This means that through the development cycle, the resources and planning are fixed and when some functionality is released the requirements can

be changed depending on the needs (Eckstein, 2004, 13). This is a different mindset than traditional software development in which what will be delivered is not exactly known (Leffingwell, 2007, 68).

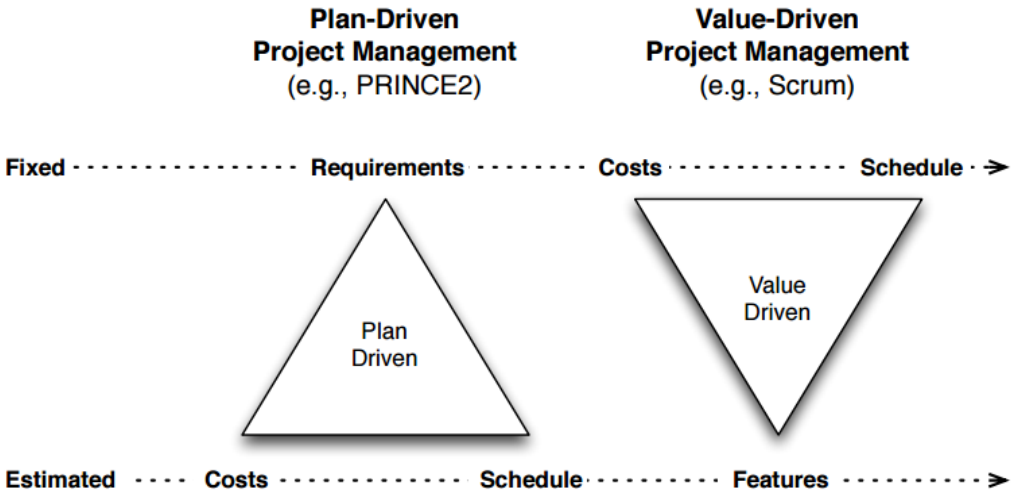

Figure 5 Plan-driven vs value-driven methods (Stettina, 2015, adapted from Leffingwell, 2010)

As further explained in figure 2, does traditional software development depend on up-front requirements analysis and breaking it down in milestones and success measures, while agile development focuses on delivering the right value based on a prioritized requirements backlog. The traditional documented milestones are replaced by testing and working of the functionality and a more fluid way of changing requirements.

The field of agile development stretches even further than just software development. Currently the agile method is also being implemented at other kinds of projects in organizations. According to the study of Stettina & Hörz (2014), organizations use project portfolio management as an opportunity in order to increase agility outside of the projects. Project portfolio management provides an overview of resources and their distribution across the different projects. They conclude their research with the fact when organizations want to learn fast and be more creative, they need to overcome challenges like silo thinking and be aware of how to allocate their resources.

Value-driven project management is focused on the people instead of relying on the processes (Boehm, 2002; Dybå, 2000). Uncertainty and unpredictability thrive within this approach. Fast changing markets and shorter time to markets require flexible organizations. These organizations are called project-based organizations which core is projects and focus is innovation (Hobday, 2000).

2.2.1 Waterfall method (plan-driven)

Plan-driven project management brings stability and predictability in a project (Boehm & Turner, 2003). Various project management methods are based on this approach like the ones below:

- Rational Unified Process (RUP)
- V-model
- PRINCE2

Plan-driven project management has a very structured approach of managing a project with the help of several phases as mentioned in the PMBOK. One way how plan-driven project management is also being described is as a 'Waterfall' approach. Within this approach, one phase does not start until the previous phase is completed (Sumrell, 2007). Within the waterfall development, the user requirements need to be known beforehand and a detailed plan should be constructed at the start of the project until the end. As well as the rigorous change of requirements that can only be implemented at the end (Peterson & Wohlin, 2010). This typical approach takes a lot of time and the first time a customer can experience something of value, is at the very end of this process.

One of the very first papers which described this approach dates from 1970. In this paper, all the different steps of the plan-driven approach are mentioned on how it can have a benefit for software development (Royce, 1970). He says that the very basics of software development consist of the following steps:

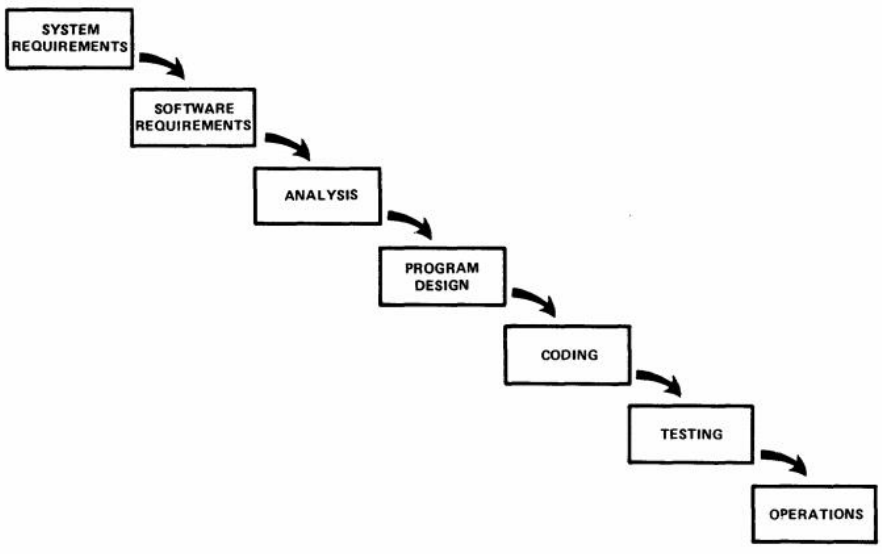

Figure 6 Waterfall approach (Royce, 1970)

Each phase as shown in the figure is being started when the previous phase is completed. Royce (1970) also mentions that a lot of documentation is being generated in the different phases as he states in his article with the following: “how much documentation? My own view is quite a lot” and “Management of software is simply impossible without a very high degree of documentation.” Although he describes very detailed the different steps of the process, he recommends that the model should be applied after the prototyping phase which I think is misinterpreted.

Larman & Basili (2003, 55) talk about the early adaption of plan-driven methodologies in the field of software development which rely on simple method: first acquire the requirements, then design and implementation. This gives the illusion that it is an ordered, accountable and measurable process with simple to follow milestones. As plan-driven project management has long periods of not delivering and is very static in gathering requirements which need to be known upfront (Royce, 1970). Generally, we can assume this project management style tend to be linked to top-down hierarchical organizations or matrix organizations. This can be seen as the flexibility of these organizations styles is very low and the ideas start at the top and work their way down.

Even if the plan-driven approach accomplished a lot of projects, many projects also failed because of the low predictability of when quality software would be delivered. Some of the solutions which are proposed after the project are generally late and not really address the customer’s needs (Leffingwell, 2007, 17-20; Petersen & Wohlin, 2010, 657). Even Royce (1970, 329) mentioned that developing software based on the waterfall approach is risky and prone to failure. Another aspect of the waterfall approach is that it also includes a heavy amount of documentation which is not always relevant to the situation (Khalifa & Verner, 2000, 360-361). The main reason why traditional development methods aren’t suitable in the current time is due to fact that it is ambiguous and complex in nature (Pich et al. 2002, 1010). Today’s market asks for quick decision making and changing requirements throughout the project as it is unknown if the requirements which are present at the beginning are still suited at the end. Traditional project methods lack dynamic adjustments or quick adaption (Fernandez & Fernandez, 2009, 10; Leffingwell, 2007, 20-26).

Roles

The roles within plan-driven project management differ from value-driven project management. The main difference between plan-driven project management and value-driven project management is the role of the project manager. Within a traditional project management setting, the command and control mechanism thrives and team members follow it (Tripathi & Goyal, 2014). This same can be said for the approach of management. In traditional organizations and projects, the top down approach is heavily practiced. This means that all the orders, estimation, budgeting, prioritization etc. comes from the top (Tripathi & Goyal, 2014).

In general, the main team composition of the traditional waterfall (e.g. PRINCE 2) approach contains a lot of roles and different responsibilities (Figure 3). As explained earlier by Tripathi & Goyal (2014), the typical approach of management is top-down which means that all control and decisions are made at the top and are being executed by the team members.

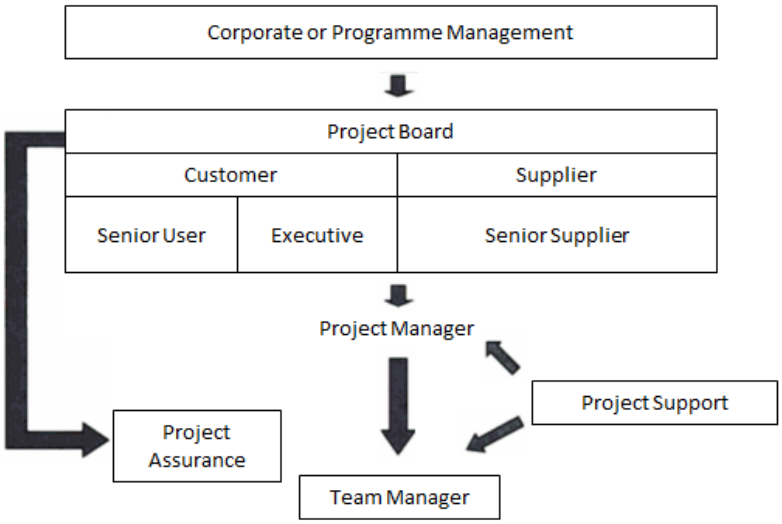

Figure 7 PRINCE2 Project structure (adapted from Bentley, 2005)

As the above figure explains, it is clearly visible that the project managers and team managers are in control and in direct contact with users, the business and project board. This is very typical to the traditional approach of project management, in which the project manager gives the team instructions on what work has to be done and where no direct customer involvement is at hand until the point of acceptance testing (Tripathi & Goyal, 2014).

Lastly, a lot of projects today still hang on the plan-driven approach and the concept still can be found in a lot of other models but the application of these concepts have changed dramatically over the years (Leffingwell, 2007). Value-driven is such a model which uses the concepts of plan-driven but applies it differently.

2.2.2 Agile methods (value-driven)

Within the field of value-driven project management, the success factor is not focused on the triple constraints of time, quality and costs. However, it is focused on the added value of the project itself within the imposed constraints and assumptions. Added value can be of any perception from stakeholder, user, business owner etc. (Kerzner, 2008). The below overview of different types of value explains it further.

- Economic value
- Theoretical value
- Social value
- Religious value
- Aesthetic value
- Political value

So the value of each project differs for each stakeholder and this should be managed throughout the whole project.

Barry Boehm (1988) is one of the practitioners who talked about the spiral model development and strived to create a model which helped to produce better outcomes. Also Larman (2004) describes many basic principles of software agility as being used in the different agile and iterative methods. As we know by now, the most common value-driven (a.k.a. agile) software development methods are:

- Scrum
- Extreme programming (XP)
- Lean software development
- Lean startup

Scrum

An approach used in project management situations where it is difficult to have a full detailed planning. This approach uses regular feedback loops to adjust where needed. The team consists of self-organizing members and work in so-called “sprints”. It first starts with planning and ends with a review of the work. All the requirements which are known are stored in a backlog and the product owner decides which item on the backlog should be developed in the next sprint. During the daily stand-up meetings, the members of the team coordinate their own work in the sprint. The scrum master takes care of possible problems which could affect the work of the team (Schwaber & Beedle, 2001). In figure 7 the Scrum cycle (a.k.a. skeleton) is shown to show how Scrum iterations are structured.

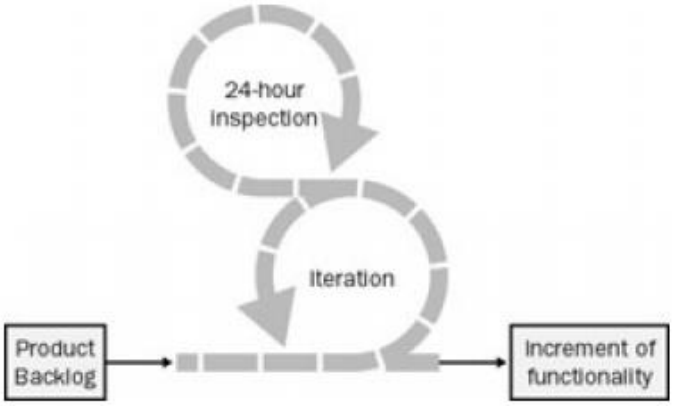

Figure 8 Scrum skeleton (Schwaber, 2004)

The skeleton operates as follows: at the start of an iteration, a review of the team is conducted to see what it must do. The team decides on what it believes it can deliver into a potentially shippable functionality at the end of the iteration. The team works solely on the decided work for the rest of the iteration. When the iteration is finished, the team presents the increment of functionality to the stakeholders so they can inspect the functionality and adjust anything when needed (Schwaber, 2004).

Scrum roles

Within Scrum there are three defined roles, namely the Product Owner, the Team, and the Scrum Master. There is no central management responsibility assigned to one of the roles within Scrum. All management responsibility is divided over the three roles (Schwaber, 2004). In comparison with traditional project management is that there is no project manager involved in Scrum. The specification of each role is:

Roles	**Responsibilities**
Product Owner	Uses the Product Backlog to decide what valuable functionality should be produced next. The Product Backlog is prioritized frequently so the most valuable requirements are collected for the next iteration.
The Team	Is responsible for developing the functionality. The Team is self-managing, self-organizing, cross-functional and is responsible to turn the Product Backlog into functionalities within each iteration and manage their work in order to achieve this. The Team is collectively responsible for the success of every iteration and the whole project.
Scrum Master	Is responsible for the whole Scrum process, for teaching Scrum to everyone involved, implementing Scrum into the organization so it fits the culture and still deliver the expected quality. And lastly, it also makes sure that everyone follows Scrum rules and practices.

Table 2 Scrum Roles (Schwaber, 2004)

Extreme programming (XP)

This approach is focused on the best practice for software development. It consists of twelve practices which can be used depending on the situation: 1) planning game, 2) small releases, 3) metaphor, 4) simple design, 5) testing, 6) refactoring, 7) pair programming, 8) collective ownership, 9) continuous integration, 10) 40-hour week, 11) on-site customers, 12) coding standards (Beck, 2000).

Lean software development

This is an adaptation from lean production which is a derivative of the Toyota production system. It consists of seven principles: 1) eliminate waste, 2) amplify learning, 3) decide as late as possible, 4) deliver as fast as possible, 5) empower the team, 6) build integrity and 7) see the whole (Poppendieck & Poppendieck, 2003).

Lean startup

Based on the innovation of startups but necessarily don't need to be working in a garage startup. This approach consists of five principles: 1) entrepreneurs are everywhere, 2) entrepreneurship is management, 3) validated learning, 4) build-measure-learn, 5) innovation accounting (Ries, 2011).

The most well-known agile project management method is probably Scrum which is design-oriented and has frequent feedback loops based on recurring project cycles (e.g. intermediate results) (Dybå and Dingsøyr, 2008). The main difference is that the traditional approach of project management is based on extensive planning, processes and constant checks to make it predictable and efficient (Boehm, 2002), while agile project management is focused on an unpredictable world and relying on people instead of processes (Dybå, 2000; Nerur et al., 2007).

2.2.3 Project success

The initial narrow field of project success starts with The Iron Triangle, which is focused on the triple constraints of time, quality and costs (Atkinson, 1999). He proposes a new way of measuring success called The Square Route which takes into account the benefits of both organizational and stakeholders for the use of the new information system. He says that to measure success more accurately, more factors should be taken into account. The below figure explains the extended list of success factors which start at time, quality and costs.

Iron Triangle	The information system	Benefits (organisation)	Benefits (stakeholder community)
Cost	Maintainability	Improved efficiency	Satisfied users
Quality	Reliability	Improved effectiveness	Social and
Time	Validity	Increased profits	Environmental impact
	Information–quality use	Strategic goals	Personal development
		Organisational-learning	Professional learning, contractors profits
			Capital suppliers, content project team, economic impact to
		Reduced waste	surrounding community.

Figure 9 Extended success criteria (Atkinson, 1999)

Moving further through the research about project success, we see that the field broadens to frameworks of project success. Additional success factors have been defined by (Pinto & Slevin, 1987) which considerably increase the success of a project. They identified 10 key factors (as shown in figure 4) which a project manager can take into account for improving its project success. They even argue that they can relate 61% of project success to these ten factors. After all they mention that communication, clear goal setting, monitoring and management support are very important to drive success rate of projects.

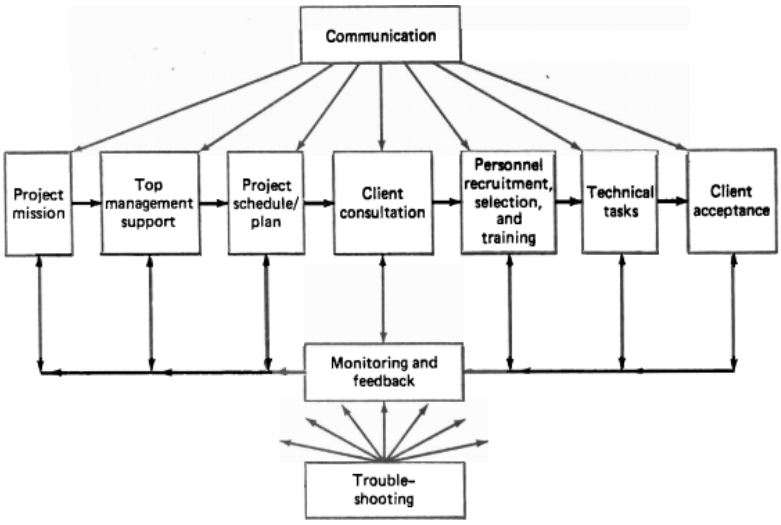

Figure 10 Key success factors defined by Pinto & Slevin (1987)

Furthermore, more recent studies talk about Critical Success Factors (CSFs) instead of project success factors which need to be part of not only the project but also through the product life cycle. CSFs are the "elements required to create an environment where projects are managed consistently with excellence" (Kerzner, 1987, p. 32). Jugdev & Müller (2005) created a retrospective look at the evolving project success and found out that CSFs are of high importance for a success. They provide a framework in order for project managers to more effectively managing their projects:

- Think at the start of the project about CSFs and think about using categories within each CSF in order to guide development.
- Develop a list of all stakeholders at the start of the project and connect each success category to a stakeholder which they fit into.
- Avoid using single-point indicators of project success. These indicators should include efficiency and effectiveness measures of the course of the project.
- Keep in mind that success measures change during the project and that some indicators at the start are different than at the end.
- Think about what you want to measure which are key to the project and don't come up with a long list of non-measured indicators.
- Create a stable and clear communication plan with stakeholders and project sponsors.

In order to create these CSFs into a generalizable set of factors, research has increased in this topic. Project success however can be only partly measured and judged objectively because it depends on the different views on the project if it is a success or not (Müller & Jugdev, 2012).

Another perspective of project success factors is described by McLeod & MacDonell (2011). They describe four major dimensions which each contain a number of factors. These four dimensions are connected to each other and influence the project trajectory and eventually outcome. Figure 5 below shows the four dimensions with each factor included.

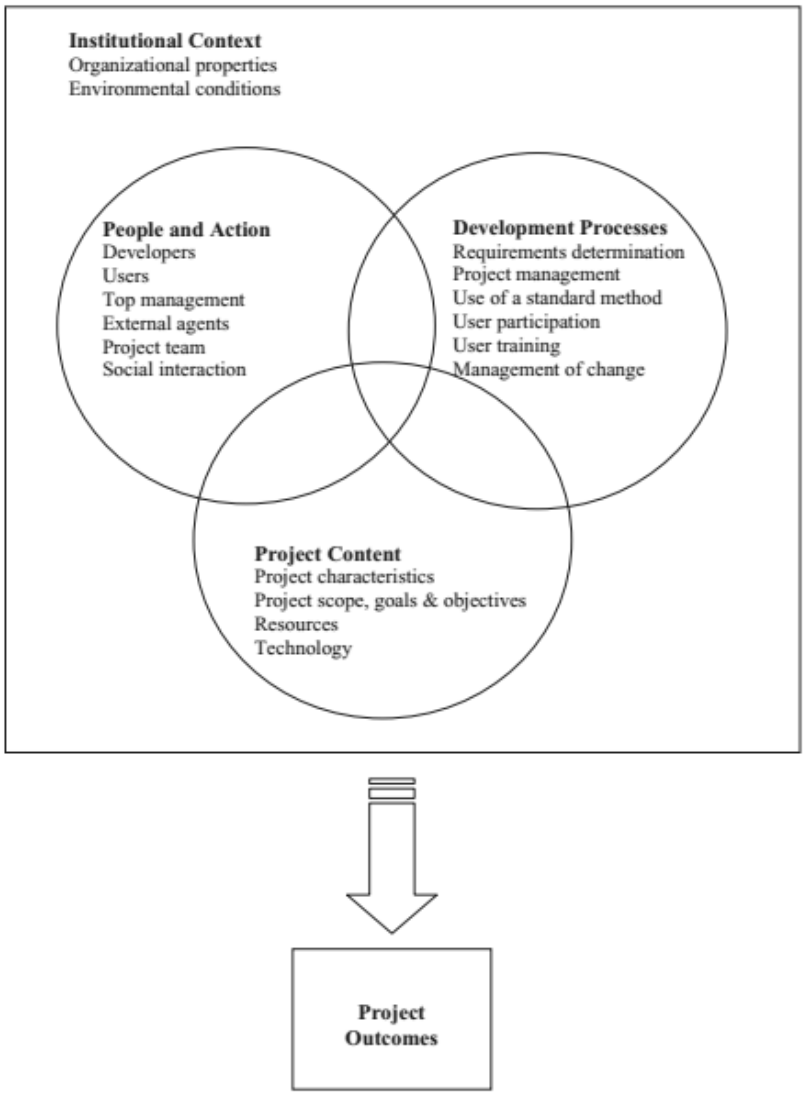

Figure 11 Four dimensions of project success factors (McLeod & MacDonell, 2011)

The factors that are showed respectively mean the following:

Project Content

The factors which are included here are typically related to the project itself and everything which has relation to the project like hardware, software, budget, resources etc.

Development processes

This dimension includes all the activities needed for the project like methods, change management, user involvement etc. Typically, this dimension is for the control of the project and activities in order to create input for the project.

Institutional context

This dimension refers to the organizational context of the project. The history of project management in the organization and socioeconomic context in which it operates for example. This dimension can influence the project and could be a threat of the project.

People and action

One of the most important factors is the people and groups that are involved in the project or interested in the result. Their individual characteristics, actions, interactions and relationships affect the project trajectory and outcome, so a clear understanding of their roles and interests is necessary during the project.

The model that McLeod & MacDonell (2011) formed is a result of an extensive survey and a synthesis of literature which addresses factors of project success. It reflects that development and project management is a multidimensional process which includes people and technology. Taking these dimensions into consideration most likely will result in a better project outcome and stable project trajectory.

2.3 Leadership

Within this section, leadership is being described as it is one of the main topics which the study is about. At first a general background of what leadership is, is being described and the following sections will deep dive in different aspects of leadership. Figure … describes the topics and the structure in which leadership is being described and presented.

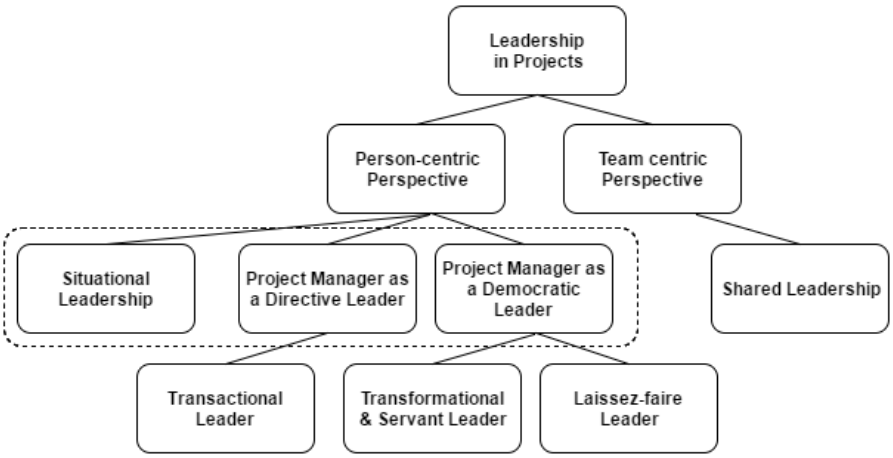

Figure 12 Leadership topic breakdown

There are two main streams of leadership theories. The first is that leadership is seen as a trait and people are born with natural talents as being tall, extrovert, speaking well etc. (Bryman, 1992). The other stream however, sees leadership as a process and believes that everyone is capable of being a leader by learning from other leaders (Daft, 2005).

In the 19th and early 20th centuries, leadership theories were thought to be inherited. No such thing as learning to lead but being born with such skills and qualities (Locke et al. 1991). In their study, they mention that leaders are not for everyone and some key leader traits should be possessed in order to create leadership, these traits are: motivation, ambition, energy, tenacity, and initiative. Moreover, should a leader have a desire to lead and not to seek power and act with honesty, integrity, self-confidence, cognitive ability, and knowledge of the business (Locke et al. 1991).

Yukl (2006) describes leadership as “the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives”. Most of the definitions have several elements in common. These elements have been identified by Rowe & Guerrero (2011) namely: “1) leadership is a process, 2) leadership involves influencing others, 3) leadership happens within the context of a group, 3) leadership involves goal attainment, and 4) these goals are shared by leaders and their followers.” The fact that Rowe & Guerrero (2011) state that leadership is a process implies that it isn't a characteristic or trait received at birth.

“Good management controls complexity; effective leadership produces useful change.” (Kotter, 1990). With this line John P. Kotter starts his article about effective leadership. Successful organizations seek for potential leaders and support them to follow a certain career path to develop this skill. It should be seen as complementary instead of solely picking for management or leadership. Kotter (1990) further mentions that good management results in order and consistency in key elements of the business, like quality and profitability of products. In contrast, leadership copes with change which is necessary in the more demanding environment of business, changing technology, deregulation of markets etc. Good leaders also tend to follow the transformational style of leadership instead of the transactional style of leadership (Bass, 1990). Transformational leaders are inspiring and challenge their followers to think in innovation and seeking the barriers to cross them, while transactional leaders are more focused on solely results. As Bass (1990) says, transactional leaders focus on targets and when it is reached they will recognize the employee who is responsible for the result.

Within value-driven and plan-driven projects, the leadership approach varies a lot. In plan-driven projects, the project manager is in control and carries all responsibility while in value-driven projects the control and responsibility is distributed over the three different roles. The tables on the next page show the main differences between the plan-driven (PRINCE2) approach and value-driven (Scrum) approach in terms of project approach.

	Scrum (Agile)	PRINCE2 (Traditional)
Management approach	Bottom-up	Top-down
Leadership style	Team collaboration is key, every decision is made with the team	Command and control and all decisions are made by the project manager
Decision making	Use of lightweight documentation, early feedback, customer involvement, and self-managing teams	Project manager directs team, gives instructions and no direct customer involvement. This depends however on the project manager.
Stakeholders	Product owner is part of the development process, can decide what to build, and accepts or rejects the result	No direct stakeholder involvement but status updates are send by the project manager to keep them informed. This depends however on the project manager.
Project approach	Delivering high value features first as early as possible and shown to the customer	First develop a plan, follow plan and show result at the very end
Customer involvement	After each sprint, the improvement and progress is shown to the customer	The completion of each task specified in the project plan is shown, but how it looks like and works will be shown at the end

Table 3 Team-centric vs. person-centric leadership

	Team-centric	Person-centric
Leadership focus	Team oriented	Project manager oriented
Working culture	Self-managing	Directive
Management style	Bottom-up	Top-down
Project approach	Value-driven (agile)	Plan-driven (traditional)

Table 4 Scrum vs. PRINCE2 approach (adapted from Tripathi & Goyal, 2014)

2.3.1 Team-centric perspective

Within the topic of team-centric leadership there are several topics which influence this area. The most important one is shared leadership among the team members in order to create empowerment and autonomy. Furthermore, the topic of mental models support leadership on the fact that the shared thoughts of the group should be shared among the team members as this is key to create shared leadership in the group. Moreover, the last part will be focused on shared understanding which will be used to create a stable level of communication in the group to support shared leadership as well.

The term shared leadership is known as: “a dynamic exchange of lateral influence among peers rather than simply relying on vertical, downward influence by an appointed leader” (Cox, Pearce, & Perry, 2003). Example studies on new product development (NPD) projects show that because the knowledge and skill level is high in the teams that shared leadership might contribute the most. They work in cross-functional teams and each member has complementary skills to collaborate in order to create a new product. Because of the temporary basis on which these NPD teams exist, you’ll have performance and leadership challenges. In a research among 40 NPD teams done by Sawyer & Guinan (1998), they discovered that human interaction is of significance on NPD effectiveness. Communication accounted for a fully 25 percent of the variance in product quality in their research.

2.3.1.1 Shared leadership

When a team of developers will have the frontline empowerment, they create an environment in which communication, adjustment, coordination and accountability is distributed among the peers (Pearce & Sims, 2002). Shared leadership is not centrally controlled and can have a positive impact on development costs, customer satisfaction and quality (Janz, 1999). In order to have the right environment, Pearce & Sims (2000) defined three key conditions which need to be met.

1. Members of the team must understand that lateral influence is a performance expectation.
2. The members must accept responsibility for providing and responding to leadership from their peers.
3. The team members must develop skills for effective leadership and as followers.

These three conditions must be granted by the vertical leader like a project manager in order to support empowerment among the members. Barry (1991) argued that purely relying on the vertical leader can ignore the team dynamics on leadership in group context. Thus, purely relying on the supervisor for insight and support, the team members themselves share in leadership and address affected issues in their work.

Mental models

While shared leadership can be achieved using certain conditions and a level of self-management and empowerment, the team coordination can be done through shared mental models (Cox, Pearce, & Perry, 2003). Mental models are cognitive structures containing knowledge of equipment, task, team, and situation according to Burke et al. (2003). In terms of shared leadership, it is vital that not only the members possess mental models, but they must also be shared. This is key because it allows members to operate under a set of assumptions. To promote shared leadership in these situations, there need to be at least two key conditions installed (Klimoski & Mohammed, 1994).

1. The team members must be aware that expectations from mental models must be shared otherwise they could not act on these expectations.

This means that once a certain situation arises where team member A should take a leadership function, the other members can assume this will be done without communication.

2. Some degree of flexible shared mental models must be possessed by the team in order not to fall into traps and thinking there is only one right way.

This means that whenever in a situation one member needs to take the leadership functions but is overloaded; another team member takes the role in order to safeguard progression.

There are a lot of mental models which are aimed at improving the performance of a team. The two that are most relevant are 1) the team mental model, which contains declarative, procedural and strategic knowledge (Converse & Kahler, 1992). 2) the situation mental model is important because it is about the team collective understanding of the situation when leadership should be transferred (Cooke, Salas, Cannon-Bowers & Stout, 2000).

Shared understanding

In order to create a shared understanding and to improve shared leadership, Scharmer (2001) created a four-step process. Using this framework, teams and groups can evaluate the quality of their social interaction. Only when the communication within a group is clear and understandable for everyone, then a shared understanding can arise. In his research he explains that there are four kinds of dialogues in group interaction. It starts with “talking nice”, “talking tough”, “reflective dialogue” and “generative dialogue”. Each phase has its own unique habit of conversation.

Talking nice

The initial start of a conversation always starts with the usual question and answer of polite things. People ask expected questions and in return expect an expected answer. This can be something like: “How are you doing? I am fine, thank you.” Nothing out of the ordinary really. You can’t imagine that someone says something like: “I don’t believe this nonsense.” This phase is typical and nobody really share their ideas, principles or argue about something. To create shared understanding, this initial phase is good as startup. However, shared leadership can’t be initiated because the group doesn’t know their common tasks.

Talking though

The next phase is a little different than the previous one. When this phase is initiated, there needs to happen something. What needs to happen is that someone in the group steps away of repeating norms and don’t do the expected things. The most important factor which appears is that the level of authenticity increases. This results in that people will speak their minds and often start a debate or conflict. Scharmer says that this vital step is necessary to create shared understanding as it is a prerequisite that members of a group articulate their views and opinions. The next step, reflective dialogue, is crucial to further increase shared leadership and understanding which includes co-creation and shared responsibility.

Reflective Dialogue

In this phase the most important factor is being able just listen to each other. Instead of having a conversation and constantly think about how to react, the participants listen carefully to others and try to really understand what the other one says. In this phase the members of a team start to use self-reflection and create a perception of the common tasks in the group. This phase really supports the shared leadership within the group as it includes learning and understanding. Scharmer argues that without these abilities, shared leadership cannot occur.

Generative Dialogue

In this final phase of social interaction, the most important factors are that there is mutual trust and openness. The group as a whole takes issues, problems and solutions which is mandatory in shared leadership. The team consists of members but act as whole where common tasks and shared responsibility are at hand and where the team constantly improves their ability to cooperate. As a group they are able to explore new ideas and chart its way forward.

As explained in the different phases, in order to create shared leadership and understanding there are several conditions which need to be met. It isn't just about saying that you want shared leadership but to create an environment in which the members of a team feel comfortable and express their vision and listen carefully to other members to support this shared understanding. Only then a team is able to grow into a shared leadership form and where new ideas can be explored and new ways of solving issues can emerge.

Lastly, this leadership style tends to focus on the team-centered level as project members of value-driven projects are aware of how they can help each other (Cox, Pearce, & Perry, 2003). This leadership style is most likely connected to value-driven project management as this project approach, as explained earlier, is focused on the people instead of the processes (Boehm, 2002; Dybå, 2000).

2.3.2 Person-centric perspective

Person-centric leadership is leadership exercised by the project manager. Within the field of leadership, there are multiple researches done. (Keegan & Den Hartog, 2004; Clarke & Howell, 2009; Goleman, 2011; Turner & Müller, 2006).

2.3.2.1 Situational Leadership

Leadership which depends on the type of project but also on the type of team members is also being called situational leadership. This theory presents that effective leadership needs a rational understanding of a typical situation and which also require a suited response, instead of a charismatic leader with a large group of followers (Graeff, 1997; Grint, 2011). Originally the situational leadership or Situational Leadership Theory (SLT) comes from a task-oriented versus people-oriented leadership continuum (Bass, 2008; Graeff, 1997; Lorsch, 2010). This continuum represents how the leader focuses on the task which needs to be done or the relationship with their followers. This SLT model was originally developed by Hersey and Blanchard (1993). The SLT model describes the leadership style which is suited to the maturity level of the followers in the team. While task-oriented leaders are focused on the task at hand and define roles for followers, give instructions, create organizational patterns, and setting up formal communication channels (Bass, 2008; Blanchard et al., 1993) does the relation-oriented leader focus on the emotional side of the followers like building strong relationships, equal participation (Bass, 2008; Blanchard et al. 1993; Shin, Heath, & Lee, 2011).

2.3.2.2 Transactional Leader

One field of study is focused on the transformational and transactional leadership styles. As Bass (1990) says, transactional managers explain what needs to be done and what can be received when the tasks are done. Most transactional leaders will install incentives like pay increases, advancement for well performing employees, promises of recognition etc. This is typically a sort of exchange game between management and their subordinates in order to drive sales or revenue. Most of the time this leadership style is complemented with management-by-exception when something is going wrong and needs attention.

2.3.2.3 Transformational Leader

The other leadership style is the transformational style. These types of leaders are charismatic to their followers and inspire them. They inspire, energize, and intellectually stimulate their employees as Bass (1990) researched. Transformational leaders are able to make a big difference in the organization's performance at all levels. The management-by-walking-around is heavily practiced by the transformational leader. At the end, transactional leaders are focused on solely the result while transformational leaders are in the employee's eyes the leader and inspirational pillar. Moreover, this leadership style is possible to be thought and it also should be embedded in the organization's management approach.

2.3.2.4 Servant Leader

Within the transformational style, there is also servant leadership which the main objective is to serve others and their motivation lies within this concept to help and guide others (Russell & Stone, 2002). They are focused on developing people so they are able to perform better and flourish (McMinn, 2001). Servant leaders also provide a direction and vision which creates followers (Farling et al., 1999).

2.3.2.5 Laissez-faire Leader

Bass and Avolio (1990) describe this leadership style as: “the absence of leadership, the avoidance of intervention, or both. With Laissez-faire (avoiding) leadership, there are generally neither transactions nor agreements with followers. Decisions are often delayed; feedback, rewards, and involvement are absent; and there is no attempt to motivate followers or to recognize and satisfy their needs” (p. 20). Another aspect of this leadership style is described by Lewin, Lippitt, and White (1939) who say that laissez-faire leadership is leadership appointed to someone in a typical leader position of which the person itself

abdicates the role and responsibilities that come along with it. At the end laissez-fare leadership is not really a leadership style but more or less a leaders' behavior which doesn't fit the description of a real leader and where the subordinates have a complete other expectation.

2.3.3 Leadership application

If we zoom in on the different kind of leadership styles and type of project, we see that there is a difference in type of leadership which suits the type of project best (Turner & Müller, 2006). Transactional leadership is more suited for high complexity projects as organizational change projects, while transactional leadership is more suited for low to medium complexity projects. Turner & Müller (2006) suggest that organizations should develop a pool of different kinds of managers. Each project should have the most appropriate manager based on their type of leadership and competencies. Within this type of approach, every leadership approach should have various competencies as different types of projects require different kind of competencies. For example, on medium complexity projects, communication and emotional flexibility is required (Turner & Müller, 2006).

In the study of Dulewicz & Higgs (2003) there are a total of 15 competencies discovered categorized in Emotional, Managerial and Intellectual (respectively, EQ, MQ and IQ).

As Goleman et al. (2002) mentions in the article they published, besides intelligence of the managers, they should as well be able to emotionally respond to situations. They identified four components of Emotional Intelligence:

1. Self-Awareness
2. Self-Management
3. Social Awareness
4. Relationship Management

They also suggest six management styles which effective leaders use depending on the situation:

1. Visionary
2. Coaching
3. Affiliative
4. Democratic
5. Place-setting
6. Commanding

Using a survey of 2000 managers they discovered situations in which each style is appropriate. According to Goleman et al. (2002), the more styles a leader can deploy, the better it is. The most effective leaders tend to have mastered four or more styles. They are able to scan people through their EQ and adjust their style to be suited best.

According to the study of Dulewicz & Higgs (2003) they identified fifteen competencies which influence the performance of leadership. They grouped the fifteen competencies in three main categories intellectual (IQ), managerial (MQ) and emotional (EQ). Each category contains the appropriate competencies which an effective leader should have. Furthermore, they identified three leadership styles: Goal Oriented, Involving and Engaging. Each style is appropriate for a different project environment. Goal Oriented leaders are best suited on low complexity projects in a stable organization, involving leaders perform best on medium complexity projects in a transitional organization and Engaging leaders are best on high complexity projects in a highly transformational context.

Also Prabhakar (2005) discovered in his study that the right balance of theory, skills and knowledge need to fit the situation. The ‘carrot and stick’ approach should be replaced by a more humane style. After all, the right leadership is about the way of behaving to influence a group of people in order to achieve the desired goals. He explains two important points which are vital for project success:

Leaders who inspire and motivate others by challenging their followers work and provide meaning will have more project success. In projects where the leader supports team spirit have higher enthusiasm and optimism.

Pinto & Slevin (1988) stated that project managers who employ transformational leadership in combination with a relationship-oriented approach will experience more project success. Lastly, as this leadership style is more focused on project managers instead of the team members, this style could be linked more too plan-driven project management in which the culture and empowerment are controlled through a framework of policies and procedures (Boehm & Turner, 2003).

3 Methodology

3.1 Research approach

During the research we will primarily use qualitative methods in order to collect the data, because we want to understand a new phenomenon in leadership in agile organizations. As Creswell (1994) explained in his distinction between quantitative and qualitative, quantitative is focused on numbers, while qualitative is focused on the analysis of words. We will conduct a two-step study, starting with a literature review to build a solid overview of people-centered and team-centered leadership in combination with different situations to gather the right level of understanding. The next step will be a case study based on the multiple-case design by Yin (2009).

There are various research methods to be used for conducting a research. Each method has its own characteristics but there is in some way overlap between them all. In some cases, it could be wise to mix different methods to come to the right conclusion. The five main methods are experiment, surveys, archival analysis, histories and case studies. Yin (2009) states these five methods (Figure 13) in a table to see the differences and more easily be able to pick a certain research method.

METHOD	Form of Research Question	Requires Control of Behavioral Events?	Focuses on Contemporary Events?
Experiment	How, why?	Yes	Yes
Survey	Who, what, where, how many, how much?	No	Yes
Archival Analysis	Who, what, where, how may, how much?	No	Yes / No
History	How, why?	No	No
Case Study	How, why?	No	Yes

Figure 13 The five different research methods (Yin, 2009)

In this research we will be using the case study method as we think is most suited to this type of research. On both areas (person and team-centered leadership) research has developed quite a lot of knowledge. However, the combined impact together with agile transformations hasn't been fully researched yet and to generate a complete view, a case study seems to be most appropriate. To extend it further, a multiple-case study is chosen in order to have different perspectives and to see if there is difference between an Agile and traditional project team and between stable and temporary teams in terms of leadership. According to Herriot & Firestone (1983), in order to deliver a more solid conclusion and evidence, the multiple-case study is a more robust approach instead of a single-case study.

3.2 Case study

A case study has been used in different areas and researches such as strategy, information systems, innovation and organizational change. This research is focused on the impact of agile transformations on the balance of leadership and a case study is best suited to test the right balance. A case study has different data sources and the one we will use is in-depth interviews to collect the data.

Using Yin's (2009) approach of multiple-case design we will conduct four in-depth interviews at each case company to test the created proposition developed at the previous phase. Within the case company there are several project methods being used with different types of teams (stable and temporary). With the help of the interviews we will able to generate a view of the different leadership style per project and per type of team. The interviews will be done face-to-face with project managers and team members. The structure of the interview can be found in Appendix 1.

3.3 Coding

Once the interviews are fully transcribed we are going to analyze the interviews using open, axial and selective coding based on the grounded theory approach of Miles & Huberman (1994). By open coding we are going to categorize, compare and sort the transcripts line by line into a code. An example of a code is: *decision_making_pm_scope_of_decision_making_project_boundaries.* The second step will be to axial code the transcripts using visual mind maps and clustering them to central themes and creating subcategories. The last step will be the selective coding process where the central themes of the study are visible. The visual mind map can also be found in Appendix 3 together with the codebook in Appendix 2.

3.4 Case selection

For conducting the case study approach we will need to have cases in order to derive the required data and form conclusions. A total of three cases will be used to derive the data needed for the results. The cases will be selected based on different industry. Yin (2009) mentions that the selection in a multi-case study design should be based on either a literal or theoretical selection logic. Criteria of a case that lead to the same results follow the literal approach while criteria of a case that lead to contrasting results follow the theoretical approach (Dubé and Paré, 2003). Our approach in selecting the cases is based on the literal approach in order to come to generalizable results and use different settings of the cases to see if findings are applicable in several settings.

Within the case organization we try to look for two senior project managers and two senior team members who have experience in both traditional and agile project methods per company and will be used in order

to generate results from various settings and context. The cases are a mix of agile and traditional project methods and stable and temporary teams.

The interviews should be held with the people who are connected to the project teams like team members, project managers and line managers. A total of 4 members per case will be selected (2 project managers and 2 team members) and the choice will be based on seniority to ensure that the experience of the participant includes multiple projects.

3.5 Data collection

According to the study of Yin (2009) are interviews an essential sources of a case study approach. The guided conversation, which is basically a semi-structured form of interviews, seems to be most appropriate. Other forms of data collection are less suited as they could lead to socially desirable answers which could lead to a misinterpreted conclusion. One of the good sides of semi-structured interviews is that it leaves room for opinions so the interviewees feel more comfortable to talk about their projects. On the other side leaves structure for interviewees which do not seem to be knowledgeable about the topic.

The general structure of the interview questions is divided in the three topics namely, general questions about the company, leadership and some enablers about the use of leadership styles.

3.6 Literature review

Using a literature review we will gather information which is linked to this field of study in order to create a solid level of literature. The literature will be drawn from project management related research journals, like IEEE Transactions on Engineering Management, International Journal of Project Management, Project Management Journal, and International Journal of Managing Projects in Business. The keywords which were used to find relevant literature were: “project success”, “horizontal leadership”, “vertical leadership”, “leadership”, “project-based organization”, “value-driven project management” and “plan-driven project management”. Besides looking for relevant literature using these keywords, I also did a backward and forward search in order to derive more articles and more information from the literature and to gain a wider view on the topic. This approach is based on the one of Webster & Watson (2002).

4 Results

In this section the quantitative analysis of the findings will be presented of the data which is collected through in the interviews. In table 5 you can find an overview of the organizations and their characteristics such as Industry and Scope of operations. This is included to give an overview of what the context is of the gathered data through the interviews. Due to privacy reasons and ethical considerations the data is completely anonymized as this doesn't add any further value to the results and main findings later on. The cases will be identified using respectively numbers 1 – 3.

	Case 1	Case 2	Case 3
Industry	Aviation	Finance	Utility
Employees	36,000	15,000	6,000
Scope of operations	International	Mainly national	National
Number of interviews	6	3	4
Roles interviewed	Project Managers (3) Project Team Members (3)	Project Manager (1) Project Team Member (1) Scrum Master (1)	Senior Project Manager (1) Project Team Members (3)

Table 5 Case organizations

4.1 Case organizations

As seen in table 5 each case conducts its business in a different industry and differ in size according to the number of employees. Most of the organizations do their business locally with one exception of the aviation organization which is internationally focused.

Case 1

This organization conducts its business in the aviation industry and has a strong focus on international business. The 36,000 employees are spread throughout the world with the biggest amount in the Netherlands. We interviewed in total 6 employees spreading across several business units within the organization namely (3) project managers and (3) project team members. The organization was at the time of the interviews in a strong focus of reorganization and agile was being adopted slowly starting at the bottom.

Case 2

This case does its business in the financial sector and does its business mainly in the Netherlands but has some operations across the border. Most of the employees are located in the Netherlands in several offices throughout the country. At this organization we interviewed in total 3 employees across two different business units. We interviewed (1) project manager, (1) Scrum Master and (1) project team

member. The organization is adopting at the moment agile methods but also has a high adoption rate of LEAN as they are trying to work in a more efficient way to stay competitive.

Case 3

Probably the biggest utility organization in the Netherlands with a national scope of operations. In total 6,000 employees work at the organization. We interviewed in total 4 employees which can be split up in (1) senior project manager and (3) project team members. The adoption of agile is quite high and this year they started with stable agile teams in the organization which mean that these teams are fixed throughout the year and the works comes to the teams.

4.2 Themes

After all the 13 interviews were transcribed we had a total of 130 pages of transcripts which we visually coded and clustered so we could see on a higher level the connections of all the different data. The coding process is based on the grounded theory of Miles & Huberman (1994) and uses open, axial and selective coding to build a reliable theoretical framework. At first we open coded all the transcripts and compared them so we could identify already categories. Secondly, we visually clustered the codes so we could see the main themes of the study and subcategorize to these teams. Lastly, the selective coding process is focused on the central categories or themes. In the following subsections we will elaborate on the main themes of the study which are 1) decision making and 2) leadership.

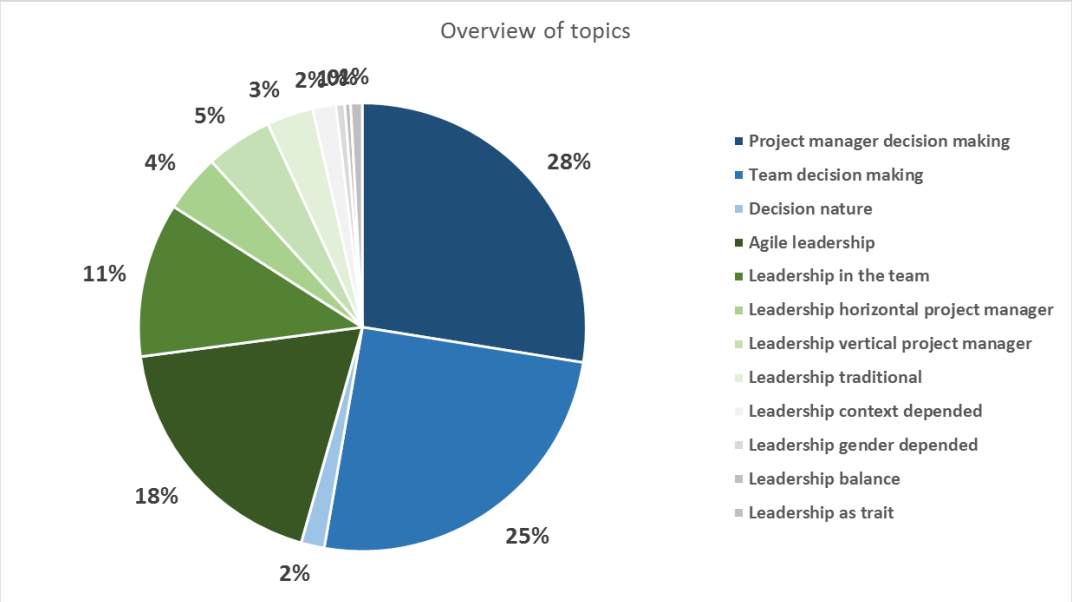

Figure 14 Overview of topics

4.2.1 Decision making topics

It this section, the most important decision making topics are presented. Through our analysis one of the main topics was decision making in terms of team decisions and project manager decisions. In figure 14 the all of the codes regarding decision making are shown while in this section the main ones are elaborated.

Decision making by the project manager. This category describes the decision making from the perspective of the vertical leader as being the project manager or scrum master. These decisions are categorized by the participants as (14) 'outside scope', (11) 'planning' and (61) 'project boundaries'. Moreover, most of the project managers mentioned that they would retain the right to make decisions when the it impacts the scope, planning or budget of the project as being expressed with the following quote:

> *"Yeah, I think so that if the decision impacts more than the team itself, so also impact other teams or the business itself. This probably are decisions which need to be well orchestrated, so it will be much more difficult to take such a decision out of a team organization." – participant 1 of case 1*

Decision making by the team. The second biggest category is decision making done by the team. This theme covers decisions on team level without influence of the project manager. The participants mentioned decisions like (14) 'solution', (18) 'technical' and (13) 'way of working'. The following quote explains the differentiation of decision making between the team and management:

> *"[T]he concept and direction of the company so more the long term goals and budget goals and all that kind of things [should be decided by the project manager]. The team decides mostly about how to reach a certain goal." – participant 1 of case 2*

Enablers. Also the (11) expertise of the team is being mentioned a lot times as an enabler of team decision making. Both project managers and team members mentioned this during the interviews as the following quote states:

> *"The team is the expert on the product. It maintains a product, it develops a product so it should be able to make all decision regarding the most effective way to work, but also the most effective way, most efficient way to develop the product." – participant 1 of case 3*

Nature of the decisions. The third important factor of who takes the decision at hand is the nature of the decision. Decisions which are tied to (6) 'timing', (3) 'scoping' or (1) 'project boundaries' are most of the time decisions which need to be taken by the project manager.

"Usually the speed of the project, so whenever that is involved [the project manager] is really keen on deciding." – participant 3 of case 3

Decisions that have a nature which is tied to (8) 'within scope', (14) 'solution-wise' are more or less left within the team as explained by the following quote:

"[The project manager] focus on my scope and on my costs and on my planning and I give the freedom, once that is determined, the freedom within that is the team's freedom." – participant 3 of case 1

4.2.2 Leadership

This section covers the leadership topic of our study. Different leadership topics are found through analyzing the data and using our coding techniques extracted out of the data. The most important leadership topics are presented below.

Agile leadership. Leadership which is linked to the agile method of project management is categorized by agile leadership. The participants mentioned terms like (5) 'empowerment', (11) 'work responsibility' or (5) 'freedom' when they talked about what agile leadership is according to them. The following quote states the above clearer:

"[I]t's really about creating teams that are able to empower themselves [..] I also learned that a real leader is starting to lead when he's gone, so try to really make the team responsible." - participant 6 of case 1

Leadership in the team. Leadership is something which can occur in the team when the right enablers are in place like (10) 'expertise', (7) 'responsibility' or (7) 'management trust'. These terms are mentioned numerous times by the participants when we talk about exercising leadership in teams. This type of leadership generally appears when a certain team member is convinced about a certain decision and because of his experience or expertise is being followed by his team members.

"Like simple issues, we have too much pollution in our logging and I said 'We can better use another framework to log every event of our action in our code' […] [S]o I proposed to use this

and usually they say it's ok and if they have some better options then I would like to hear that from them." – participant 5 of case 1

Leadership characteristics of a horizontal project manager. During the analysis of the interviews we discovered that there can be made a distinction between a horizontal and vertical project manager. The distinction is that the horizontal leader is much more an enabler of team leadership in comparison with the vertical project manager. Characteristics like (2) 'give power to the team', (5) 'shift responsibility' or (3) 'involve team in decision making' are differentiators to the more traditional vertical project manager.

"The business had an issue and they called me in to ask for guidance […] I will sit by not so much to provide information but to keep the responsibilities of the people in focus so that the information that you eventually you make a decision comes from the right people because everyone has an opinion." – participant 3 of case 1

"It's someone who makes you feel responsible for your own activities, who's motivating you and is able to give you a mirror to reflect on your own actions." – participant 4 of case 1

5 Discussion

In order to reflect on our findings, we focus on the main discussion points, which are 1) the impact of agile transformations on the balance of person-centered and team-centered leadership, specifically on 2) the distribution of responsibility and authority in decision making across teams and management in projects. This section provides the discussion about the findings and key discoveries of our study.

5.1 Impact of Agile transformations on leadership

In the following subsections the main findings will be explained. Based on the results in chapter 4 we discovered themes which are related to the research questions and relate to leadership changes in agile organizations. The main findings of the study will be presented as 1) impact on the team and the role of the project manager, 2) impact on organizational culture, 3) agile routines promote team based leadership through facilitation of learning and awareness of team members' capabilities, and 4) enablers and barriers to agile leadership.

5.1.1 Impact on the team and the role of the project manager

Our participants pointed at the distribution of content and process driving roles in agile methods while in traditional settings the content and process is tied to the project manager. When we talked with the participants about how the role of the traditional project manager changed in agile environments they made a distinction between what the role of the project manager should be versus the team. The main topics we found out were 1) redistribution of content and responsibility, 2) moving more content responsibility to the team and create more commitment and ownership, and 3) less pressure on the product owner as he makes the prioritization and does not decide on the content.

Redistribution of content and process responsibility

Through our analysis we discovered that 9 out of 13 participants said that in agile environments the team should decide on the content of the project. This means that they need to decide on the content of the sprint like which solution to take, what technical framework should be used, and how to approach the work.

> *"The team is the expert on the product. It maintains a product, it develops a product so it should be able to make all decision regarding the most effective way to work, but also the most effective way, most efficient way to develop the product." – participant 1 of case 3*

On the other side, the product owner should focus on prioritizing the work for the team and let them decide how to approach the prioritization. Lastly, the Scrum Master and needs to mind about the process

in order for the team to keep the focus on the content of the work and don't need to mind about the surrounding of the project like planning, budgeting and keeping the stakeholders updated. These role descriptions are proposed Scrum (Schwaber, 2004) who defines the same roles and says that the team needs to be self-managing, self-organizing, cross-functional and is responsible to turn the Product Backlog into functionalities. This is different compared to the traditional role of a project manager as stated by Tripathi & Goyal (2014), where both the process and content is decided. Below quote of one of the participants explains the influence of a project manager when decisions are impacting the scope of the project.

> *"I think for my case things that have to do with scope or money or planning. If something is going to impact those then those are the things, I definitely need feedback or to be kept informed." – participant 2 of case 1*

Moving more content responsibility to the team creates more commitment and ownership

In order to provide the team with making decisions on the content our participants said that they should get more responsibility over the actual quality of the product. When this is realized, the team will feel more freedom what will result in more commitment and ownership of the product. This will result in that the individual members take the product as something of their own and want to deliver something of high quality. Cockburn and Highsmith (2001) also mention that in order to innovate and to react to change, the team members should receive more decision power in order to improve the quality. So providing them with more responsibility will generate more commitment and ownership which results in a higher quality of the product.

> *"[I]t was also the responsibility that we gave them because we had one big project with seven scrum teams and for the first time we actually gave the mandate to certain process experts for example to be the product owner of those teams, they were not used to that so then you see that it really helps them to actually take the decision." – participant 4 of case 3*

Less pressure on the product owner as he is making the prioritization and not deciding the content

When decision making on team level is realized and the team is making decisions on the actual work the product owner will experience less pressure as the team is watching over the content and the product owner is focusing on the prioritization which can result in better sprints and better product.

5.1.2 Impact on organizational culture

Coming from a traditional management environment in organizations and changing towards an agile way of working not only changes something in the distribution of work and responsibility but also the culture is impacted due to this change. Through the analysis it became clear that 1) empowerment, 2) commitment and ownership, 3) proactive self-steering, 4) freedom, 5) work responsibility, 6) communication style, 7) clear vision, and 8) coaching culture is changing in terms of culture.

Through our analysis it became clear that agile leadership provides the team with responsibility, and the team will experience empowerment from management. Because of the responsibility on the actual content of the project, the team will also generate commitment and ownership over the product being developed. This gives the team next to empowerment also the feeling of owning a part of the product and taking a step further as they want to deliver something of high quality. These changes also generate more freedom for the team members as they can make their own choices on the content and how to develop the product. As the team gets the authority of making decisions about how to proceed with developing a product, they need to communicate more with each other as the team consists of different expertise which depend on each other in order to make good decisions. Also the product owner has a stake in the communication by providing a clear goal and purpose of the developed product which has an impact on the team commitment. Participants mentioned that when they see the purpose of the product it also makes more sense so the team members understand the context and make decisions in line with the purpose.

Lastly, the coaching culture is very important to agile leadership. One important factor is the coaching capacities of the Scrum Master but also of the team members. Decision making in the team can be fully operationalized when team members know each other's roles, expertise and capabilities. By sharing these in agile principles (retrospectives or daily standups) or during meetings the team can share knowledge and experiences with each other which improves decision making and what results in shared leadership. Moe et al. (2009) agree with this and state that agile leadership consists of single-loop and double-loop learning. Single-loop means that an individual receives feedback on the observed activities and double-loop learning means next to feedback that also the factors that influence the effects are understood. Shared leadership is about making decisions as a team and the team will only follow the guidance of a decision of one of the team members when they can trust him. This trust is based on that they know his experience and area of expertise (Langfred, 2000).

5.1.3 Agile routines promote team based leadership through facilitation of learning and awareness of team members' capabilities.

Muller et al. (2016) found that enablers for horizontal leadership include providing information and context. Our participants agree with this and actually agile methods support this with the use of routines which are part of agile methods like retrospectives, stand up meeting, and sprint reviews. In order to create and stimulate team based leadership, team members should be aware of each other's roles, knowledge and capabilities (Burke et al. 2003). According to the interviews, sharing of knowledge can be done through different ways and different settings, depending on the culture and work location but also on the knowledge sharing sessions which agile practices consist of. The study of Scharmer (2004) agrees with this and explains four kinds of dialogues in order to stimulate shared leadership.

> *'They try to know each other, so I think a part of being a real team is also doing a lot of activities and exercises to get to know each other better and to know each other's weaknesses and strengths. From that you also grow, but you also identify the different, strong capabilities.' – Participant 6 of case 1*

> *'The communication is very open for example we use a team collaboration tool and someone asks a question, which is an open question and everyone can pitch in and everyone can. There's peer coding, peer reviewing going on. And we offer people for example analysts to focus on specific topics.' – Participant 6 of case 1*

The participants said that through working together and seeing each other's experiences or skills, agile practices have an impact on building team based leadership and sharing of knowledge. While agile consists of several disciplines it also provides room for evaluation and sharing of experiences in, for example, retrospectives, stand up meetings etc. The team members are witnessing others' experiences and skills of how certain team members work on features in a particular sprint. So using these agile installments correctly impacts the awareness of the skills and knowledge of team members so team leadership or decision making in the team by a particular member of group is being accepted and followed by others.

5.1.4 Enablers and barriers to agile leadership

Our participants stretched out that moving from a traditional management culture to an agile leadership culture not only impacts the organization on several layers but also depends on other factors. The following enablers to agile leadership have been extracted from the analysis 1) having the right people, 2) clear purpose and goal, 3) freedom, and 4) management trust. On the other side barriers such as 1) strong hierarchy, 2) traditional management culture, and 3) no vision or purpose.

Enablers

To fully make use of agile leadership in organizations there are some factors which make stimulate this kind of leadership. At first having the right people on the team will have an impact on agile leadership exercised by the Scrum Master as well as shared leadership in teams. Also providing the teams with a clear purpose and goal to where the project is going so commitment and ownership can be stimulated in these teams. Moreover, the freedom to make decisions and have authority to do so is being said as important enabler to support agile leadership in teams and last but not least the trust of management in the teams and individuals so they the team members know they have the authority to actually make the decisions themselves. Our findings in this case are in line with those of Hackman (1986) where he describes the following enablers: a) clear, engaging direction, b) an enabling performing unit structure, c) a supportive organizational context, d) available, expert coaching and e) adequate resources.

Barriers

Next to enablers there are also some barriers which need to be taken into account. Participants said that a strong hierarchy inside the organization will influence team leadership and full potential because there is still top-down control and not really trust coming from the management. As addition the participants said that when there is still a traditional management culture inside the organization, so wanting agile leadership but still think and act in the old way of doing business, is influencing this transformation in a negative way. Lastly, having no proper vision or purpose of the project or organization will not realize commitment and ownership at the team levels.

According to the study of Stettina and Hörz (2015) do agile methods have a strong impact on structure, processes and culture within an organization. Characteristics of work across agile project teams such as (1) Transparency of resources and work items, (2) Close collaboration, (3) Commitment, to strategically managed portfolios, and (4) Team orientation, as identified by Stettina and Hörz (2015), require a change in leadership as identified by our participants.

Other factors which influence agile leadership

Another aspect of enabling agile leadership in organizations is a younger generation which can be defined by the Xers or 'dot com' generation (Solomon, 1992). New generations prefer working in an agile way compared to old generations which can be agreed by the study of Katzy et al. (2011). During the interviews we found out that this generation is embracing agile methods and its way of working much more than the older generation. To the younger generation it makes more sense and it is almost obvious that they want to give the team more freedom in making decisions as they are the ones who are the subject matter experts most of the time. The study of Keaveney (1997) argues that this younger generation wants more autonomy, flexibility and want less steering. Also young project managers tend to shift the responsibility more to the team and supports them in decision making by involving them in decisions.

> *"What I try to do is really give the people in the team more responsibility and try together with the scrum master of course to make the team more self-organized and more self-steering by giving them guidance on what I really find important." – participant 4 of case 3*

On the other side, the older people, the Baby Boomers (Solomon, 1992) are more used to the traditional way of steering and giving them task to work on but also gives them more security suits the older generation of workers inside organizations mostly better (Raths, 1999; Loomis, 2000). The participants said that they have to adjust themselves to the new way of working and question the fact if everyone is capable of doing that.

> *"There are a lot of older people here, like me, working here a lot of years, some are hierarchical steered so they like to be steered." – participant 4 of case 1*

Moreover, there is also a difference of approach in terms of gender. Female participants said that they exercise a more behavior related leadership style which focuses on the wellbeing of the team members and support them in bringing the best out of them. Female leaders tend to decide more as a group instead of on their own and involving the team in the decision making. On the other side the male leaders in organizations tend focus more on targets when working with a team and are less aware of the team mood and behavior. The study of Duff (2013) agrees with this that female leaders exercise in greater propensity the person-centered leadership style which includes transformational and servant leadership in comparison with male leaders.

5.2 Models for leadership and decision making in agile organizations

Stimulating shared leadership in organizations and implementing leadership has very much to do with the awareness of situational leadership in teams. As already researched by Blanchard et al. (1992) the Situational Leadership Theory (SLT) model describes that there is a different leadership style needed in the maturity or development level of the team. Our study agrees with this approach and we discovered that 1) decision making in the team and by the process coach need to be in balance as well as the 2) role of process coach in projects and 3) the acceptance of leadership in the team. In this chapter we propose two models for leadership and decision making in agile organizations. The first model (figure 15) is focused on the understanding of decision making responsibilities in agile organizations which shifts when coming from a traditional way of working. The second model (figure 16) is focused on operationalizing leadership in agile organizations with the distinction of process and content which is tied to the scrum framework as proposed by Schwaber (2004).

5.2.1 Decision making in the team and by the process coach

In line with Moe et. al. (2012) we found strong indications in our data that self-management and leadership is highly affected by the implementation of shared decision-making. As such we found the division of decision-making in teams. In this section we provide a model regarding decision-making in project teams.

In our study we talk about vertical and the horizontal leadership of a project. With vertical leadership we mean the project manager and management committees etc. and with horizontal leadership the team members. The steering and control clearly comes from the project manager who focuses on the process and content of the project (Tripathi & Goyal, 2014). In value-driven project methods like Scrum the process is managed by the Scrum Master and content decisions are done by the product owner and the team (Schwaber, 2004). In this section we propose our decision making model focused on the division of content and process but also on the level of the team and organization.

Through our interviews with participants and our analysis we see the division of the process and content in agile projects. For the sake of clarity, we introduce the process coach which is the person who has the decision making authority of the project boundaries and coaching the team in order to stimulate team leadership and decision making. Furthermore, our participants stretched out that there is for the team as well as the process coach a scope of decisions which can be seen in the results section and figure 14. Depending on the impact of the decisions at hand the quadrant in figure 15 makes a distinction between the organizations' scope of decisions and the teams' scope of decisions. On the left side the content wise decisions are represented and on the right side the process decisions are shown. The model is filled with examples so the application is visible.

The model in figure 15 is for leaders in organizations who want to have a better understanding of the division of decision making. Using the proposed model, they can see what decision making responsibility lies where and effectively give the teams the right decision making responsibility so the outcome of the project could lead to better results. The team members on the other hand are able to see if they want to make a decision if they can make the decision themselves or if the authority lies somewhere else.

Following the definitions of J. Hackman (1986) of (1) manager-led, (2) self-managing, (3) self-designing, and (4) self-governing teams, we saw self-managing and manager-led teams in our cases. Decisions regarding designing the teams was clearly understood as management responsibility. Moreover, on team level agile transformations are consistent with agile frameworks like scrum (Schwaber, 2004), while on organization level we found a variety of configurations like steering committees and traditional project management organizations (PMO). Also Moe et al. (2012) describe that when transferring to an agile organization, the decision-making process changes from a centralized approach to a decentralized and shared decision making process. As well as leadership which should be shared instead of exercised by a single person. Based on these findings we established the model in figure 15 divided in contend and process and organization-wide and team-wide.

We will now continue explaining the dimensions and components of the model more in-depth. First we provide you with two scenarios in order to explain how this model works in reality. The scenarios follow the quadrant in the model by giving examples on which decision should be taken by whom.

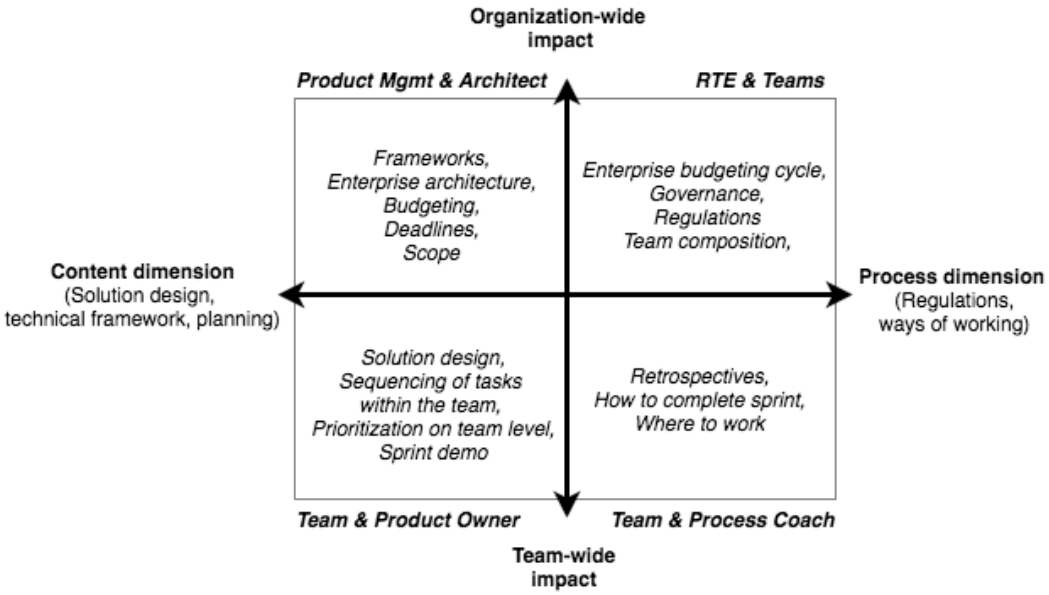

Figure 15 Decision making quadrant

Scenario: Banking team wants simple payments

Imagine that a large-scale bank has an innovation department focused on mobile payments. This department has the responsibility to come up with new cutting edge technologies or inventions to make payments more easy. That is their scope. The team which is working on that department is thinking of a technology which makes it possible for the client to make payments without using the personal code. The left bottom side of the model represents the team and the left upper side the organization. As a team they can make content decisions which are within their scope like design of the app, sequencing of tasks or coming up with a demo of the product. While on organizational level the architecture, planning sessions or frameworks are organized. The decision to make payments easier without using the personal code, impacts in this case the architecture of the organization. As the architecture of the organization is decided on organizational wide level, the team can't simply make this decision because it impacts the architectural standard. For this decision to make they need to include other departments or key people inside the organization to see if such an architectural decision can be made. If the decision is made in coordination with the department, the team can itself decide how to proceed with the development of the solution.

In a traditional organization such decisions are taken by the steering committees and project managers and even the tasks within the project are controlled by them. The team in that case is following up on the project manager while in agile organizations, like in this scenario, the team can decide everything which is in scope and only needs acceptance when something has to be decided out of their scope.

In order to have an understanding of the axes on the model, we will present now the explanation of those. Together with the above described scenario the model can be understood.

Organization-wide scope – content

The overall goal of the project and the standards on which the organization is working could be decided by the organizations' management. These decisions have a strategic nature and can be stretched over the coming months or years. In the figure we talk about a decision like the enterprise architecture which is something that is high in impact and a decision which is infrequent and that is applicable for the whole organization.

Organization-wide scope – process

The process structure of an organization consists of several aspects. When projects are run inside the organization, the process is generally on high level or milestones decided by the organization. The organization can decide on the budget cycling every period, set up governance or decide on the policies of the organization. Also these decisions have an impact on the whole organization and are in-line with the organizations' strategy.

Team-wide scope – content

Within the decided enterprise architecture of the organization, the team can decide how to develop in our case a mobile app. The outline or boundaries are set by the organization but within these boundaries the team can decide how to develop the product. These decisions are typically low in impact and can be decide on team level because of the expertise.

Team-wide scope – process

On team level in projects the team can decide mainly on the prioritization of the work which should be done. The organization gives the team the resources and structures around the team so the team can distribute the tasks of the project among each other. Also these decisions are low in impact but stimulate the team to deliver quality products as they are responsible in making the decisions because of expertise.

The division in decision making authority has also been argued by Reinertsen (2009). In his book he talks about the centralization and decentralization of decisions. He uses the Marine Corps as practical example of how and why some decisions need to be coordinated centralized and why some decentralized.

Centralization

When decisions are infrequent but the magnitude or impact of the decision is high, centralized control is best fitted. The reason is that on central level you have an overview and set up a strategy in order for the organization to move in a certain direction.

Decentralization

Small decisions which happen to be taken frequently and where the impact is local and where the local resources provide enough can be taken decentralized. Frequent decision making on central level takes very much time while the impact is quite low in comparison with strategic decision. The organization should provide on a local level the resources, information and authority so people can make decisions in-line with the strategic goals.

Hewitt & Walz (2005) also state that when it comes to decision making, the project manager makes decisions regarding the management of the project while the team is in the lead and responsible for decisions where they have the knowledge of and which also need to be shared.

5.2.2 Role of process coach in projects

According to our participants the efficacy level of the team members in the team is the indicator for the process coach to conduct a rather directive or supportive leadership style. In figure 16 we present a model that illustrates the relationship between the process coach and team efficacy. Process coaches said that they would trust the team in making decisions according to indicators like good communication, interaction, expertise, and good arguments. In order to improve the awareness among process coaches in organizations we propose a model to show the coaches what leadership style could be used in terms of the efficacy level of the team.

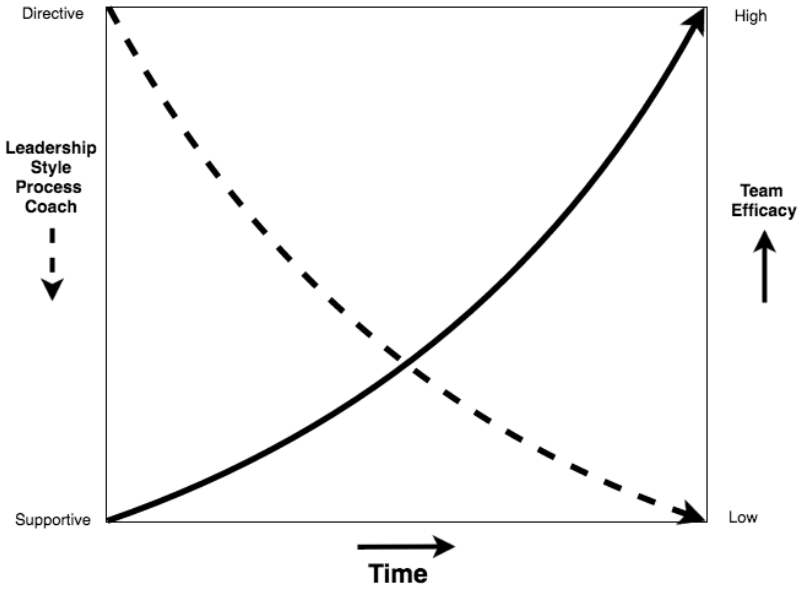

Figure 16 Team efficacy leadership model

The model shows the movement of the process coach from a directive to a supportive leadership style as the team efficacy level increases.

Scenario: Tech company wants to accelerate

An electronic company is starting a new project on consumer products. Therefor a new project team is being composed. An experienced Scrum Master is assigned to the team to get it up and running. The Scum Master meets the team and after the initial round of introduction, he sees that the team is quite hesitant about the product. He asks for certain details on how they feel and checks if they feel comfortable to start. He doesn't have the trust which is necessary to give the team freedom to start with the project. As he is aware of his leadership capabilities and efficacy level of the team he starts building trust by giving the team tasks which they can start working on. This is the so-called directive leadership style. Over the weeks after organizing sprint reviews, retrospectives etc. he sees that certain team

members are beginning to be confident about what they do and know their way around the project. The Scum Master sees this and adapts his leadership style to a less directive one as the team efficacy level is increasing. By providing more freedom for the team to move around and make decisions, the more the team is increasing in efficacy. Other team members consult the more confident team members in helping with their problems which results in higher efficacy and trust among the team members that they can actually work together. The Scrum Master actively supports this behavior and slowly steps back and change his leadership style into a supportive style so the team can make all the necessary decisions themselves and increase the quality of the project as they are the experts.

Below we will explain the terms which are presented in the model so the understanding of the model becomes clearer.

Team efficacy level

This line explains the efficacy level of the team. When a team is just formed or has been recomposed the teams shared understanding and leadership is low. The efficacy level of the team can be increased using knowledge sharing sessions such as 1) retrospectives, 2) daily stand-ups, 3) pair programming or 4) organized meetings. With the help of such sessions the teams understanding increases and the individual members are aware of each other's competences which will give them more trust towards each other. The trust is necessary to stimulate team leadership. This can be agreed by Burke et al. (2003) who talks about the mental models the team should be aware of to increase team leadership. Also Klimoski & Mohammed (1994) say that to improve team leadership, the metal models should be shared.

Process coach leadership style

Depending on the team efficacy level, the process coach should be aware of which style to use. The line of the process coach starts where the process coach uses a directive leadership style when the team efficacy level is low. When the team efficacy level increases, the leadership style of the process coach should move along with it to a more supporting style. One of the jobs of the process coach could be to stimulate knowledge sharing among the team members so the team efficacy increases and the process coach can adapt his leadership style. Moreover, the process coach should be aware of the content of the project. If the process coach is unaware of the content, he can't judge the expertise of the team members which they are expressing and therefore can't change his leadership style accordingly. So a mix of understanding the process but also being aware of what actually is being done otherwise the process coach is not able to estimate the efficacy or maturity level of the team and trust can't emerge.

> *"I think one typical thing is that I think project manager aren't only just managing the project as in the process of the project but they also involved in content wise so they are also kind of influencing the content of the project and influencing decision making in the*

project [..] So I think that is a typical thing and that is because the project manager I am working with they have a lot of knowledge and also very capable of switching to the content." – participant 3 of case 2

Indicators

For the process coach to adapt his leadership style according to the team efficacy level, there are some indicators which the process coach can look for to adapt the style. Through our analysis we found out that when the team 1) debates with good arguments, 2) healthy interactions, and 3) making content decisions themselves are indicators for the process coach to change his leadership style to a more supportive one. Another indicator is focused on Scrum teams. When the velocity of the team becomes predictable over time and the team is having less conflicts during grooming and planning sessions is a stable indicator for the process coach to take a step back and support the team.

The approach of the process coach towards the team has also been researched by Medinilla (2012) in steps named ScrumBut, Scrum and Agile Nirvana. He says that in terms of maturity of the Scrum Master (process coach) it goes through several stages. In the beginning when the Scum Master is quite immature, he does everything like scheduling meetings, list impediments etc. When the maturity of the Scrum Master grows to finally a Scrum Sensei he is more a coach and listens to the team, asks questions and be a mirror. In our model we agree with this approach but focus more on the efficacy of the team instead of solely focusing on the maturity of the Scrum Master or as we call it process coach.

5.2.3 Acceptance of team leadership

Team leadership or shared leadership needs to be accepted by the individual team members in the team otherwise shared leadership isn't working. Pearce & Sims (2000) already identified three key conditions which need to be met in order to stimulate shared leadership in teams. During the analysis we found out that trust in other members is vital for shared leadership to occur. This trust is based on factors like 1) experience, 2) expertise, 3) skills, and 4) knowledge of team members.

"If the team thinks he is an expert on that subject or he has done that before, that makes him a leader on that subject or that part." – participant 1 of case 2

"The trust and expertise. So what is your experience and what are your skills and then you indeed know also if the person can really say something about it or not." – participant 4 of case 3

6 Conclusions and recommendations

The goal of the thesis is to give answers on the impact of agile transformations on leadership. Specifically, we are interested in understanding the balance of person-centered and team-centered leadership and on the distribution of responsibility and authority in decision making across teams and management in projects. In total three case organizations offered their cooperation to conduct a multiple-case study. Using semi-structured interviews, we interviewed in total 13 people which led to a total amount of 780 minutes of recorded material and approximately 130 pages of transcripts and roughly 500 codes.

The main research questions which were formed to provide an understanding of the impact of agile transformations on leadership are presented below. These conclusions on both research questions are based on our main findings presented in the discussion section of this Thesis.

1) *What is the impact of agile transformations on the balance of person-centered and team-centered leadership in projects?* Agile transforms the traditional roles of project manager and team. Content decisions have a separate role as well as process decisions which challenges the usual way of making decisions and exercising leadership. We found out that the leadership style of the process coach should change depending on the efficacy level of the team and individual members. According to the indicators we found, leaders should be able to change their leadership style more accurately. The model we proposed in figure 16 could give leaders a hand in deciding which leadership style to take according to the indicators which the team members are expressing.

2) *What is the impact of agile transformations on the distribution of responsibility and authority in decision making across teams and management?* In traditional projects most of the content and process decisions are made through a top-down approach. Participants mentioned that decisions were first prepared by the project manager and made by the steering committee and then back to the teams. In agile however, the content and process decisions are split into two roles as Scrum Master and Product Owner. Our findings on this division is that due to agile transformations the team can decide both on process and on content but it depends on the impact of the decision if it can be made by the team or should be made by someone else. Figure 15 presents the division of decision making which can be used by team members as awareness of the organization and for managers to make decision making more effective.

This Thesis contributes to practice by providing indicators for business leaders to increase awareness to change leadership styles in projects. It also contributes to academia using our decision making model and team efficacy leadership model which can be used to further research changing leadership in agile organizations.

We conclude that agile transformations shift the balance towards team-based leadership. Through our study, managers in organizations who deal with different project teams and with various efficacy levels can understand the different leadership styles which can be exercised depending on the efficacy of the team. Moreover, by being aware of the indicators of which these teams are expressing, managers are able to exercise the right leadership style which has an impact of the success and effectiveness of the team.

6.1 Validity considerations

Considering the fact that even though the interviews took approximately one hour each, the semi structured form of the interviews combined with anonymity of the participants obviously provides room for frank conversations.

External validity. The fact that we interviewed all senior team members and project managers in each of the case organizations, the participants could have been a bit biased by the fact that they have experience for many years working in projects. This means that they could have a certain viewpoint on projects which they are convinced about is the truth. We addressed this external validity by having a mix of participants who work already several years and participants who worked a few years for the company.

Internal validity. The amount of the cases is suitable to give a view on how projects are run. However, we could have increased the amount of participants per interview so the organizational factors which influence the projects could have been much clearer. We have tried to mitigate this by scoping our research on project teams instead of the whole organization.

6.2 Recommendations for practice

Our study can improve awareness in organizations and educate leaders inside these organizations how to cope with leadership and self-managing teams. By providing two models focused on decision making, team efficacy and indicators, practitioners are able to effectively lead project teams which can result in more efficient projects and better project outcomes.

6.3 Recommendations for further research

In this study the emphasize is on the leadership style of the process coach in relation with the efficacy level of the team. Further research could be done in relation with the content coach and without the process coach or even the movement of the team efficacy level without a process coach or content coach. Furthermore, research could focus on indicators on which the content coach can be measured on like NPS. In this case the effect of the work of the content coach in relation with the customer satisfaction can be identified.

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Appendix 1 – Interview Questions

General questions

1. Tell us about the nature of your company, its business and your role therein.
2. Tell us about the projects you are involved in, especially one of your currently ongoing projects. What is your role and what methodology is used in this project?
3. Tell us about the ways decisions are prepared and taken by people in the organization. Who or what influences the decision makers?

Leadership

4. Describe the leadership style of your project manager (alternatively: How would one of your team members describe your leadership style as a project manager?)
5. Can you give us an example of a typical situation in your project where the decision was clearly made by the project manager (vertical leader)? That means, without significant influence by the project team.
    a. What is the nature of the decision that was taken by the project manager? (e.g. business, project results, performance, stakeholder related etc.)
6. Can you give us an example of a situation in your project where a decision by the project manager was strongly influenced by the team, or the decision even made by the team?
    a. Did the influence come from one individual, or was it the team that influenced the decision? In either case, why was this the case (e.g. because of trust, experience, expertise, personal power, personality, or other factors)?
    b. What was the nature of the decision that was influenced by the team or individual?
    c. What enabled the team or individual team member to take the initiative/make the decision?
    d. Please describe how the team made the decision (e.g., nature of interaction, who participated, how were responsibilities divided, etc.)?
7. In your current project, which types of decisions are mainly made by the project manager and which ones mainly by the team or individual project team members?
    a. In your opinion, which types of decisions **should** be made by the project manager and which ones mainly by the team or individual project team members?
8. **For project managers only**: In your role as project manager, what are the criteria for you to let the team decide how to move forward or to retain the right to decide yourself?
9. What (other) factors influence who makes decisions and exercises leadership in projects (e.g. context factors, nature of the decision at hand, personal bonds, organizational culture, etc.)?

10. **For senior managers only** (the senior manager is a person above the project manager who ensures the project is related to the overall strategic objectives/program in the organization but is not directly involved in the daily work of the project team):
    a. Please describe your role/involvement in the decision making on project-related issues (in relation to specific projects).
    b. In your view, what decisions are best made by the project manager and what by the team or individual team members?
    c. To what extent do you enable leadership by the team or individual team members?
    d. How do you develop those people who shall be allowed to influence decisions related to specific projects in the future?

Enablers

11. **For project managers only**: In your role as project manager, how do you identify those people that you would allow to influence your decisions?
    a. How and when do you allow this influence to happen? Give examples.
12. **For project managers only**: In your role as project manager how do you develop those people who shall be allowed to influence your decisions in the future?
13. How do team members know who possesses what knowledge in the team? How important is this information for the ability of team members to make decisions/exercise leadership?
    a. How is this information obtained by team members (e.g. kick-off meetings, culture of knowledge sharing, personal relationships, networking, etc.)?
    b. What other information is shared between the project manager and the team to allow for team decision making (here: horizontal leadership) to happen?
    c. What formal (e.g. company procedures or shared customs) or informal mechanisms (e.g., personality, length of working together) influence the ability of the team to take on leadership roles when needed?

Additional questions

14. How do you think agile project management approach influences leadership?
15. Do you perceive a shift in roles and leadership while adopting agile methods? If yes, how?
16. What is agile leadership according to you?
    a. How would such a leader look like?
17. ~~How would you envision different leadership styles across different layers of the organization e.g. linking agile teams/projects to project portfolios?~~
18. What barriers and enablers to such leadership style do you see in your organization?

Appendix 2 – Code overview

decision_making_decision_nature_impact_project_boundaries	1
decision_making_decision_nature_magnitude	2
decision_making_decision_nature_magnitude_scope_decision	3
decision_making_decision_nature_timing	2
decision_making_pm_confirms_decisions_with_team	2
decision_making_pm_criteria_time_pressure	2
decision_making_pm_grands_dm_authority_according_to_dominance_individuals	1
decision_making_pm_grands_dm_authority_according_to_team_majority_supports_decision	1
decision_making_pm_other_info_for_team_leadership_shares_purpose	2
decision_making_pm_other_info_for_team_leadership_shares_purpose_financial	1
decision_making_pm_other_info_for_team_leadership_shares_purpose_quantitative	1
decision_making_pm_scope_of_decision_making_business_level	3
decision_making_pm_scope_of_decision_making_go_live	1
decision_making_pm_scope_of_decision_making_hiring_firing	2
decision_making_pm_scope_of_decision_making_inside_scope_factors_content_expert	1
decision_making_pm_scope_of_decision_making_project_boundaries	4
decision_making_pm_scope_of_decision_making_project_boundaries_budget	9
decision_making_pm_scope_of_decision_making_project_boundaries_decisions_over_different_teams	1
decision_making_pm_scope_of_decision_making_project_boundaries_functionalities	1
decision_making_pm_scope_of_decision_making_project_boundaries_planning	11
decision_making_pm_scope_of_decision_making_project_boundaries_prioritization	9
decision_making_pm_scope_of_decision_making_project_boundaries_requirements	1
decision_making_pm_scope_of_decision_making_project_boundaries_resources	4
decision_making_pm_scope_of_decision_making_project_boundaries_scope	18
decision_making_pm_scope_of_decision_making_project_boundaries_sprint_content	3
decision_making_pm_scope_of_decision_making_remove_issues_new_tooling	1
decision_making_pm_scope_of_decision_making_team_composition	4
decision_making_pm_skills_content_aware	2
decision_making_pm_skills_experienc_with_topic	2
decision_making_pm_skills_recognice_maturity	1
decision_making_pm_team_accepts_decision	2
decision_making_pm_trust_to_team_indicators_capable_of_doing_job	2
decision_making_pm_trust_to_team_indicators_communication	3

decision_making_pm_trust_to_team_indicators_decisions_in_line_with_goals	1
decision_making_pm_trust_to_team_indicators_expertise	10
decision_making_pm_trust_to_team_indicators_good_arguments	12
decision_making_pm_trust_to_team_indicators_interaction	3
decision_making_pm_trust_to_team_indicators_maturity	2
decision_making_pm_trust_to_team_indicators_maturity_majority_of_teams	2
decision_making_pm_trust_to_team_indicators_wanting_to_improve	1
decision_making_pm_trust_to_team_indicatos_maturity_skills_interpersonal	2
decision_making_pm_trust_to_team_indicatos_maturity_skills_organizational_overview	3
decision_making_team_acceptance_of_leadership_factors_experience	1
decision_making_team_acceptance_of_leadership_factors_expertise	3
decision_making_team_acceptance_of_leadership_factors_knowledge	1
decision_making_team_enablers_acceptance_of_errors	2
decision_making_team_enablers_expertise	11
decision_making_team_enablers_factors_management_trust	6
decision_making_team_enablers_freedom_of_decision_making	2
decision_making_team_enablers_maturity	2
decision_making_team_enablers_ownership	2
decision_making_team_enablers_responsibility	7
decision_making_team_enablers_time_agile_culture	1
decision_making_team_enablers_time_pressure	1
decision_making_team_enablers_training_pm	1
decision_making_team_enablers_type_of_project	1
decision_making_team_factors_management_trust	1
decision_making_team_good_fit_with_pm	3
decision_making_team_provides_pm_info_for_dm	2
decision_making_team_scope_of_decision_estimation	4
decision_making_team_scope_of_decision_making_all_team_layer_decisions	2
decision_making_team_scope_of_decision_making_content_sprint_review	1
decision_making_team_scope_of_decision_making_documentation	1
decision_making_team_scope_of_decision_making_functionalities	2
decision_making_team_scope_of_decision_making_inside_team_roles	1
decision_making_team_scope_of_decision_making_solution	14
decision_making_team_scope_of_decision_making_technical	18
decision_making_team_scope_of_decision_making_tooling	4
decision_making_team_scope_of_decision_making_way_of_working	13

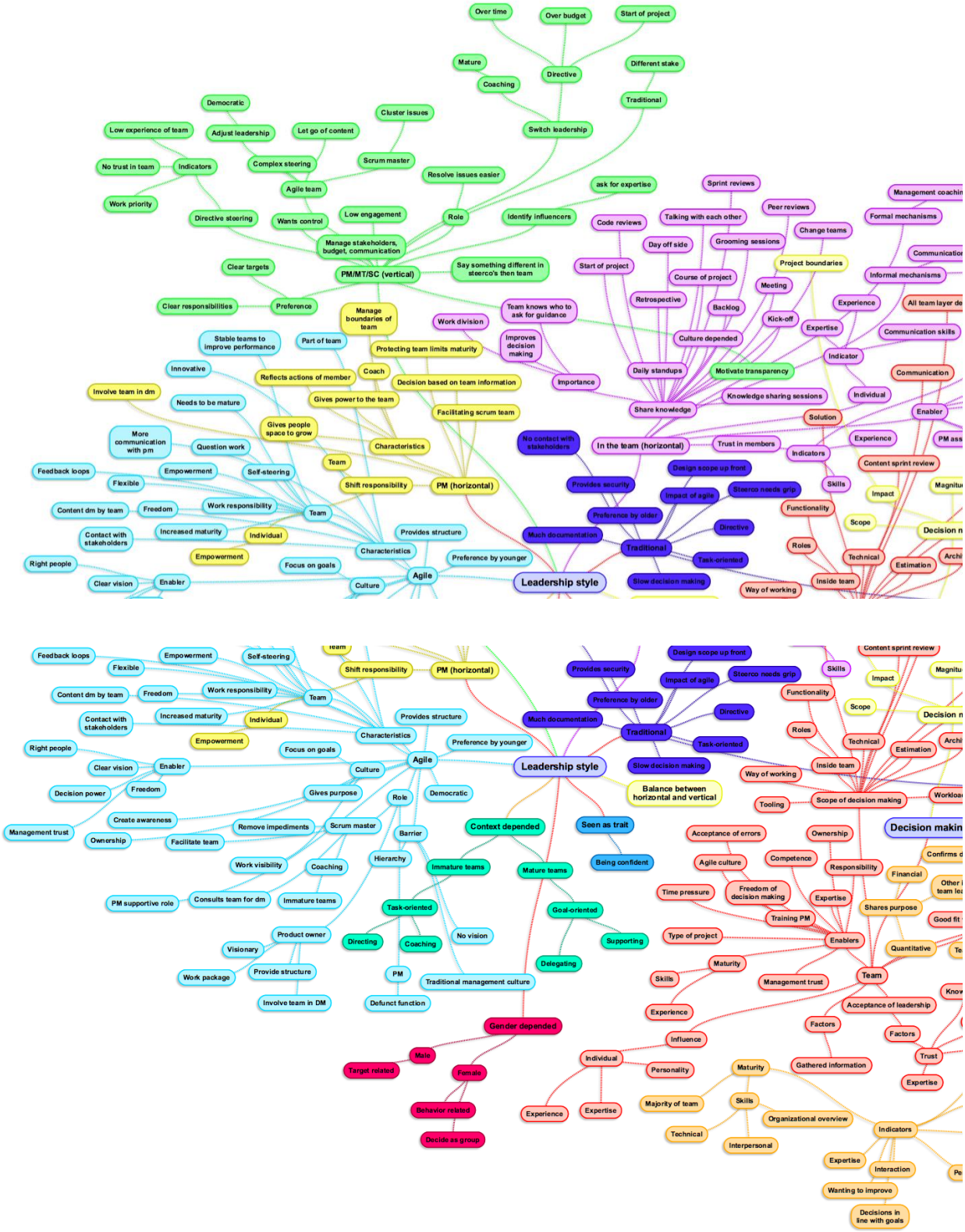
decision_making_team_scope_of_decision_making_workload	5
decision_making_team_scope_of_decision_within_scope	8
leadership_style_agile_barrier_hierarchy	1
leadership_style_agile_barrier_no_vision	1
leadership_style_agile_barrier_traditional_management_culture	5
leadership_style_agile_characteristics_contact_with_stakeholders	2
leadership_style_agile_characteristics_content_dm_by_team	3
leadership_style_agile_characteristics_feedback_loops	1
leadership_style_agile_characteristics_flexible	1
leadership_style_agile_characteristics_innovative	1
leadership_style_agile_characteristics_more_communication_with_pm	1
leadership_style_agile_characteristics_part_of_team	1
leadership_style_agile_characteristics_team_empowerment	1
leadership_style_agile_characteristics_team_stable_teams_improve_performance	1
leadership_style_agile_create_awareness	1
leadership_style_agile_culture_focus_on_goals	4
leadership_style_agile_culture_gives_purpose	2
leadership_style_agile_culture_more_empowerment	1
leadership_style_agile_culture_work_responsibility	6
leadership_style_agile_culture_work_visibility	2
leadership_style_agile_enabler_clear_vision	3
leadership_style_agile_enabler_decision_power	1
leadership_style_agile_enabler_freedom	2
leadership_style_agile_enabler_management_trust	3
leadership_style_agile_enabler_right_people	1
leadership_style_agile_pm_supportive_role	2
leadership_style_agile_preference_by_younger	2
leadership_style_agile_provdes_structure	1
leadership_style_agile_role_pm_defunct_function	2
leadership_style_agile_role_product_owner_involve_team_in_dm	2
leadership_style_agile_role_product_owner_provide_structure	1
leadership_style_agile_role_product_owner_visionary	1
leadership_style_agile_role_product_owner_work_package	1
leadership_style_agile_role_sm_coaching	3
leadership_style_agile_role_sm_coaching_facilitate_team	1
leadership_style_agile_role_sm_coaching_immature_teams	1

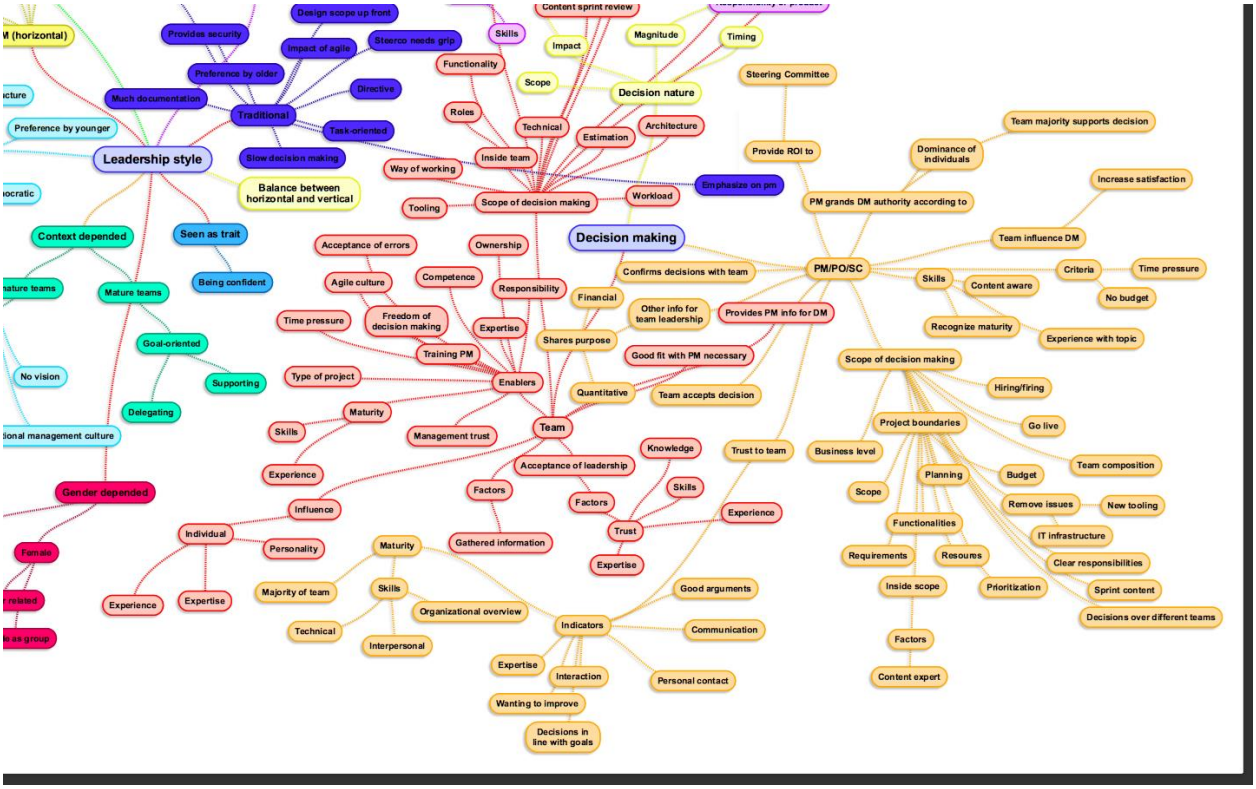
leadership_style_agile_role_sm_consults_team_for_dm	1
leadership_style_agile_role_sm_remove_impediments	1
leadership_style_agile_team_empowerment	4
leadership_style_agile_team_freedom	3
leadership_style_agile_team_increased_maturity	1
leadership_style_agile_team_needs_to_be_mature	1
leadership_style_agile_team_question_work	1
leadership_style_agile_team_self_steering	3
leadership_style_agile_team_work_responsibility	11
leadership_style_balance_between_horizontal_and_vertical	2
leadership_style_context_depended	1
leadership_style_context_depended_immature_teams_task_oriented	3
leadership_style_context_depended_mature_teams_goal_oriented	4
leadership_style_gender_depended_female_behavior_related	1
leadership_style_gender_depended_female_decide_as_group	1
leadership_style_gender_depended_male_target_related	1
leadership_style_in_the_team_enabler_joined_experiences	1
leadership_style_in_the_team_enabler_maturity	1
leadership_style_in_the_team_enabler_ownership_of_product	1
leadership_style_in_the_team_enabler_pm_assign_authority	1
leadership_style_in_the_team_enabler_pm_communicate_transparent	1
leadership_style_in_the_team_enabler_responsibility_of_product	1
leadership_style_in_the_team_formal_mechanisms_management_coaching	1
leadership_style_in_the_team_individual_indicator_experience	4
leadership_style_in_the_team_individual_indicator_expertise	2
leadership_style_in_the_team_informal_mechanisms_communication	1
leadership_style_in_the_team_informal_mechanisms_length_of_working	1
leadership_style_in_the_team_share_kick_off	1
leadership_style_in_the_team_share_knowledge_backlog	2
leadership_style_in_the_team_share_knowledge_change_teams	1
leadership_style_in_the_team_share_knowledge_code_reviews	4
leadership_style_in_the_team_share_knowledge_course_of_project	5
leadership_style_in_the_team_share_knowledge_daily_standups	1
leadership_style_in_the_team_share_knowledge_day_off_side	1
leadership_style_in_the_team_share_knowledge_grooming_sessions	1
leadership_style_in_the_team_share_knowledge_importance_improves_dm	1

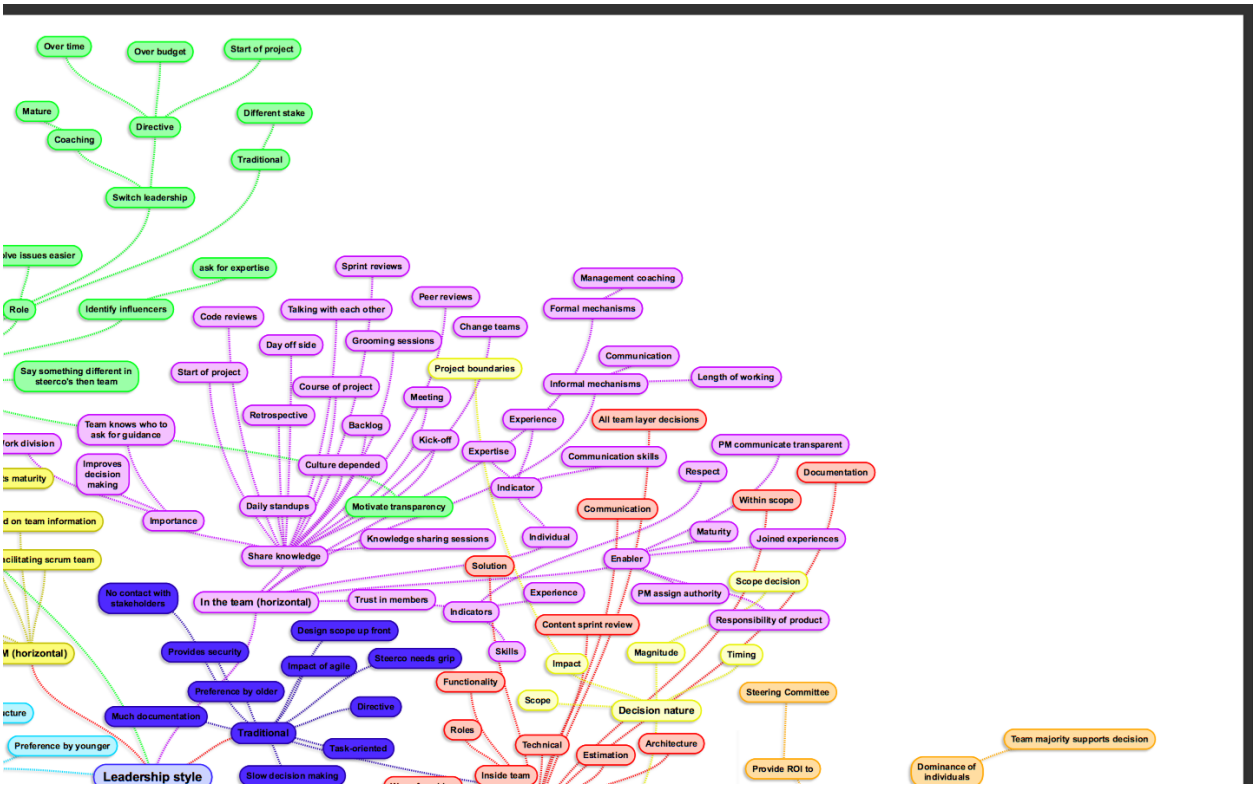
leadership_style_in_the_team_share_knowledge_importance_team_knows_who_to_ask_for_guidance	2
leadership_style_in_the_team_share_knowledge_importance_work_division	1
leadership_style_in_the_team_share_knowledge_knowledge_sharing_sessions	1
leadership_style_in_the_team_share_knowledge_meeting	4
leadership_style_in_the_team_share_knowledge_peer_reviews	1
leadership_style_in_the_team_share_knowledge_retrospective	2
leadership_style_in_the_team_share_knowledge_sprint_reviews	1
leadership_style_in_the_team_share_knowledge_start_of_project	3
leadership_style_in_the_team_share_knowledge_talking_with_each_other	3
leadership_style_in_the_team_trust_in_members_indicators_respect	2
leadership_style_in_the_team_trust_in_members_skills	1
leadership_style_pm_horizontal_characteristics_coach	1
leadership_style_pm_horizontal_characteristics_content_aware	
leadership_style_pm_horizontal_characteristics_gives_people_space_to_grow	2
leadership_style_pm_horizontal_characteristics_gives_power_to_the_team	2
leadership_style_pm_horizontal_characteristics_involve_team_in_dm	3
leadership_style_pm_horizontal_characteristics_manage_boundaries_of_team	2
leadership_style_pm_horizontal_characteristics_reflects_actions_of_members	2
leadership_style_pm_horizontal_decision_based_on_team_information	2
leadership_style_pm_horizontal_protecting_team_limits_maturity	1
leadership_style_pm_horizontal_shift_responsibility	1
leadership_style_pm_horizontal_shift_responsibility_individual_empowerment	3
leadership_style_pm_horizontal_shift_responsibility_team	1
leadership_style_pm_vertical_agile_complex_steering	1
leadership_style_pm_vertical_agile_team_adjust_leadership	3
leadership_style_pm_vertical_agile_team_adjust_leadership_coaching	1
leadership_style_pm_vertical_agile_team_adjust_leadership_democratic	1
leadership_style_pm_vertical_directive_steering_indicators_low_experience	
leadership_style_pm_vertical_directive_steering_indicators_work_priority	7
leadership_style_pm_vertical_role_resolve_issues_easier	2
leadership_style_pm_vertical_switch_leadership_directive_over_budget	2
leadership_style_pm_vertical_switch_leadership_directive_over_time	2
leadership_style_pm_vertical_switch_leadership_directive_start_of_project	1
leadership_style_pm_vertical_traditional_pm_different_stake	2
leadership_style_pm_vertical_wants_control	1

leadership_style_seen_as_trait	3
leadership_style_seen_as_trait_being_confident	1
leadership_style_traditional_design_scope_up_front	1
leadership_style_traditional_design_steerco_needs_grip	1
leadership_style_traditional_directive	3
leadership_style_traditional_emphasize_on_pm	1
leadership_style_traditional_much_documentation	1
leadership_style_traditional_no_contact_with_stakeholders	1
leadership_style_traditional_preference_by_older	1
leadership_style_traditional_slow_decision_making	2
leadership_style_traditional_task_directive	1
leadership_style_traditional_task_oriented	4

Appendix 3 – Visual mind map of codes




Leadership style
Traditional
Directive
Much documentation
Preference by older
Preference by younger
Task-oriented
Slow decision making
Balance between horizontal and vertical
Provides security
Design scope up front
Impact of agile
Steerco needs grip
Seen as trait
Being confident
Context depended
Mature teams
Goal-oriented
Supporting
Delegating
No vision
Gender depended
Female
Decision making
Scope of decision making
Decision nature
Functionality
Skills
Impact
Scope
Roles
Technical
Estimation
Architecture
Inside team
Way of working
Tooling
Workload
Emphasize on pm
Content sprint review
Magnitude
Timing
Steering Committee
Provide ROI to
Team
Enablers
Ownership
Acceptance of errors
Competence
Agile culture
Responsibility
Expertise
Freedom of decision making
Time pressure
Training PM
Type of project
Maturity
Management trust
Experience
Influence
Individual
Personality
Experience
Expertise
Majority of team
Technical
Skills
Organizational overview
Interpersonal
Maturity
Gathered information
Acceptance of leadership
Factors
Factors
Knowledge
Skills
Trust
Expertise
Experience
Trust to team
Indicators
Expertise
Interaction
Wanting to improve
Decisions in line with goals
Good arguments
Communication
Personal contact
Financial
Other info for team leadership
Shares purpose
Good fit with PM necessary
Quantitative
Team accepts decision
Confirms decisions with team
Provides PM info for DM
PM/PO/SC
PM grands DM authority according to
Dominance of individuals
Team majority supports decision
Increase satisfaction
Team influence DM
Skills
Criteria
Time pressure
Content aware
No budget
Recognize maturity
Experience with topic
Scope of decision making
Hiring/firing
Project boundaries
Go live
Business level
Team composition
Planning
Budget
Scope
Remove issues
New tooling
Functionalities
IT infrastructure
Requirements
Resoures
Clear responsibilities
Inside scope
Prioritization
Sprint content
Decisions over different teams
Factors
Content expert


Leadership style
Traditional
Directive
Switch leadership
Coaching
Mature
Over time
Over budget
Start of project
Different stake
Role
Identify influencers
ask for expertise
Code reviews
Talking with each other
Sprint reviews
Peer reviews
Change teams
Grooming sessions
Day off side
Start of project
Course of project
Retrospective
Backlog
Meeting
Project boundaries
Kick-off
Expertise
Experience
Culture depended
Share knowledge
Knowledge sharing sessions
Daily standups
Motivate transparency
Importance
Improves decision making
Team knows who to ask for guidance
Say something different in steerco's then team
In the team (horizontal)
No contact with stakeholders
Trust in members
Indicators
Indicator
Solution
Individual
Enabler
Communication skills
Communication
Informal mechanisms
Length of working
Formal mechanisms
Management coaching
All team layer decisions
PM communicate transparent
Respect
Documentation
Within scope
Maturity
Joined experiences
Scope decision
PM assign authority
Responsibility of product
Content sprint review
Experience
Design scope up front
Provides security
Impact of agile
Steerco needs grip
Preference by older
Much documentation
Preference by younger
Slow decision making
Functionality
Skills
Impact
Scope
Roles
Technical
Estimation
Architecture
Inside team
Decision nature
Steering Committee
Provide ROI to
Magnitude
Timing
Dominance of individuals
Team majority supports decision