How can leadership style influence time-to-market in an improvisational setting?

Author: Pim Dijkkamp
University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands

ABSTRACT

This paper is concerned with exploring the relationship between leadership and time-to-market in an improvisational setting. First a literature review is provided in which the concepts of leadership, time-to-market and improvisation are listed. After this qualitative and quantitative analysis are made of theatrical simulations in order to research how leadership can influence time-to-market in an improvisational setting. The three leadership styles which are included in this research are directive, rotating and servant leadership. This paper contributes to the existing knowledge by exploring the relationship between leadership and time-to-market in an improvisational setting, which is a relationship that requires some additional research.

Supervisors: **Dr. Ir. Klaasjan Visscher**
Dr. Michel Ehrenhard

Keywords

Improvisation, Leadership style, Directive, Rotating, Servant, Time-to-market, Unforeseen events

1. INTRODUCTION

In the literature on new product development, there is a growing attention for organizational improvisation (Moorman & Miner, 1998; Kamoche & Pinha e Cunha, 2001; Akgün et al., 2007). Improvisation - defined as the 'conception of action as it unfolds…drawing on available material, cognitive, and social resources (Pina e Cunha, Vieira da Cunha, & Kamoche, 1999, p.302)'.

As the business world continues to exhibit higher degrees of uncertainty and an increasing pace of change, this brings additional challenges to new product development. In order to speed up the process of new product development or to overcome time constraints, firms improvise. Improvisation consists of a combination of intuition, creativity, and bricolage that is driven by time-pressure (Leybourne & Sadler-Smith, 2006).

When improvising, people gain speed in the process of decision making, since the lengthy planning phase is skipped. As mentioned by Leybourne and Sadler-Smith (2006) improvisation is the act of moving away from the agreed plan in order to speed up. When speeding up the process of new product development, time-to-market can be reduced. As time-to-market is vital to the success of a product, improvisation can be used to speed up the process of new product development.

Improvisational actions are often triggered by time pressure (Crossan et al., 2004). By time pressure is meant a scarcity of time (Vera & Crossan, 2004). If groups are not able to get more time, the urgency of the situation stimulates an improvisational action (Vera & Crossan, 2004). Within the current improvisation literature, the focus is mainly on creativity and spontaneity. As mentioned by Crossan, Cunha, Vera and Cunha (2005) improvisation and planning are often related to time pressure and uncertainty. Improvisation can be used as a tool to converge conflicting topics such as planning and execution.

Time-to-market is an important factor affecting a product's success. There are a lot of reasons to accelerate new product development, and thus reduce time-to-market. The two major reasons for this are: increased domestic / global pressure and rapid technological changes (Gupta and Wilemon, 1990). With this increased competition there is a need to speed up the new product development process, otherwise you will miss the opportunity and other companies will profit from this opportunity. In order to be ahead of the technological changes, firms need to introduce products faster to the market, which underlines the need to accelerate new product development.

But how should this be managed, when organizations want to reduce time-to-market. In the current literature several leadership styles are identified, however the research on time-to-market and leadership is limited, especially in an improvisational setting. These different leadership styles have different characteristics, however it is not explored how these differences in leadership style influence time-to-market differently in an improvisational setting.

The purpose of this paper is to explore how different leadership styles can influence time-to-market in an improvisational setting. In order to answer this research questions several steps are executed. First, a clear definition of the concept of improvisation, since all of the management is done in an improvisation setting. Second, enlist the leadership styles which are beneficial to improvisation and a leadership style which is contrasting to these two. Third, give a definition of time-to-market and what factors are affecting time-to-market. In the fourth part, an analysis is made of theatrical simulations in order to research the relationship between leadership and time-to-market. The end of this paper is a conclusion based on the theatrical simulations and a discussion section. A possible outcome of this paper is having explored how different leadership styles affect time-to-market in an improvisational setting.

2. LITERATURE REVIEW

2.1 Improvisation

Within the current literature improvisation is often linked to jazz improvisation. A definition from jazz improvisation by Kamoche and Cunha (2001) is the act of composing and performing simultaneously. Improvisation involves exploring, continual experimenting, playing with possibilities without knowing what it will become or how actions will unfold (Barrett, 1998). Making the transition from jazz improvisation towards improvisation within a business context, acting without the act of planning in advance. This is also in line with the definition by Leybourne and Sadler-Smith (2006) who state that improvisation is the act of moving away from an agreed plan in order to speed up a process. Leybourne and Sadler-Smith (2006) also propose improvisation as a critical skill to manage time in organizations. For example in handling unforeseen events, improvisation can be used effectively to handle these unforeseen events, in order to meet deadlines and thus assure profitability (Miner, Bassof, Moorman, 2001).

Organizational improvisation is more common in organizations then one would expect. As mentioned by Vera and Crossan (2004) improvisation does not only happen in crisis circumstances when teams face unplanned events. People in organizations often start without making plans, make up reasons to proceed and use interpretations. Pretending improvisation does not happen in organizations, is not understanding the nature of improvisation (Barrett, 1998).

As mentioned by Crossan, Cunha, Vera and Cunha (2005) improvisation is closely associated with time and improvisational actions often occur extemporaneously, in the nick of time, and in real-time. It is a process which blends conflicting concepts such as planning and acting, discipline and freedom, control and spontaneity. Improvisation is a common response when individuals are faced with a situation when there is a need to act, but there is a lack of time and understanding of the environment (Crossan, Cunha, Vera and Cunha, 2005). Managers often make decisions in loosely structures where information is limited or when time is of essence. In these situations they often call upon their intuitive decision making skills and improvisational capabilities. (Leybourne & Sadler-Smith, 2006)

2.1.1 Teamwork and improvisation

Organizational improvisation often occurs in groups. As mentioned by Crossan, Cunha, Vera and Cunha (2005) team skills are important factors affecting the effectiveness of the improvisational process. In theatrical improvisation, the process were other team members build upon each other's ideas, is called 'yes-anding' (van Bilsen, 2010). Vera and Crossan (2004) mention that accepting an idea is not enough; team members have to agree upon other ideas and support them with their own ideas. This process of 'yes-anding' is an interesting team process, which leads to better and more innovative ideas and faster problem solving, since all the knowledge of all the team members is combined. As mentioned by Akgün and Lynn (2002) team improvisation has a positive effect on time-to-market under turbulent markets and technologies.

2.1.2 Stimulus of improvisation

A stimulus of improvisation is an experimental culture (Pina e Cunha, Kamoche, & Campos e Cunha, 2003). Such a culture

results from a set of values and beliefs that promote action and experimentation (the opposite of reflection and planning) as a way to deal and understand the reality (Pina e Cunha, Vieira da Cunha, & Kamoche, 1999). In order to establish such a culture, an organization needs to tolerate errors. Next to an experimental culture Pina e Cunha, Kamoche and Campos e Cunha (2003) identified another stimulus of improvisation which is minimal structures. Minimal structures are a set of controls adapted by a company in order to achieve synthesis between autonomy and control (Kamoche and Cunha, 2001). Minimal structures need two elements to create a feeling of urgency and to have a certain level of alignment between improvisational actions and organizational goals, which are milestones and experimental cultures (Brown & Eisenhardt, 1997). Within the process of new product development, improvisation can be used to cope with unforeseen events to ensure that deadlines are met (Minor, Bassof, & Moorman, 2001).

2.1.3 Demand for improvisation

Pina e Cunha, Vieira da Cunha and Kamoche (1999) identified several situations when there is a demand for improvisation. There is a demand for improvisation when there is a demand for speed, action and when unexpected occurrence are perceived by the organization. The situations arises other questions which are the origin of demand for action, the origin of these unexpected events and origin of the demand for speed.

This identification of a demand for improvisation is in line with the situations that Crossan, Cunha, Vera and Cunha (2005) identified when there is a demand for improvisation. Their identification was based on two dimensions, which are time pressure and uncertainty. Based on these two dimensions several situations were identified in which there is a demand for improvisation. The improvisational part in these situations is characterized by different levels of spontaneity, creativity, influence of prior plans / routines, and combinations of knowledge and experience. The demand for improvisation is there when: (1) a situation where planning is ineffective, due to an uncertain environment. (2) there is urgency to respond to an unforeseen event, where planning is not possible because there is no time to plan. (3) planning is impossible, due to limited time and an undecipherable environment. These situations match perfectly with time-to-market, where there is a demand for speed and in new product development a lot of unforeseen events come along which requires an immediate response in order to maintain short time-to-market and to be able to respond to the opportunity and / or window.

2.2 The different leadership styles

As mentioned earlier, by adapting a minimal structure, a good synthesis can be achieved between freedom / autonomy and control. Leadership is important for organizational improvisation, since it is instrumental to solve the paradox between freedom and control (van Bilsen & Visscher, 2010). In addition, it is an important factor affecting the degree and effectiveness of organizational improvisation (Pina e Cunha, Vieira da Cunha, & Kamoche, 1999). Members of new product development teams need freedom to improvise, but this process needs control to reach a desired outcome (Amabile, 1997). Leadership plays a crucial role in solving the paradox between freedom and control (Vera & Rodriguez-Lopez, 2007).

According to Pina e Cunha, Kamoche and Campos e Cunha (2003) improvisational leadership emerges mostly when events are considered to be important and they have to be solved urgently. Less important events are often addressed via directive / permissive leadership. Leading improvisation differs from leading innovation or creativity, due to the different roles a leader has to play simultaneously and the leader has to minimize the negative aspect resulting from spontaneity and process focus of improvisation (van Bilsen, 2010).

The presence of an imbalance of power, creates a situation in which it is unlikely improvisation will take place (Kamoche & Cunha, 2003). If there is no imbalance of power, no one has the authority to assign roles, thus the potential for role improvisation is much higher. If the balance of power is dynamic instead of static, allowing leadership to rotate among team members (rotating leadership) individual are more motivated to vary in the way they act since they might have perform a role with which they are not familiar with (Kamoche & Cunha, 2003).

In this research the focus is on three leadership styles, which are rotating, servant and directive leadership style. The reason the focus is on rotating and servant is since these leadership styles are considered to have a positive effect on the improvisational process (Pina e Cunha, Kamoche, & Campos e Cunha, 2003). These two leadership styles are contrasted by a directive leadership style, which is considered more control oriented.

2.2.1 Rotating

If the balance of power is dynamic rather than static, allowing leadership to rotate among group members, individuals will be motivated to vary the way they act because they may be called upon, at a given point in time, to perform a role with which they are unfamiliar. Depending on the configuration of roles, leadership might function in a way similar to jazz, where roles rotate, or may be absent as in Indian music (Kamoche & Cunha, 2003). According to van Bilsen (2010) rotating leadership solves the paradox between freedom and control by giving responsibility to everyone, which gives all the team members the freedom to act but also to control. This makes everyone responsible for the results, and thus motivation of the team members to deliver result will also be higher. This rotation of leadership also allows every team members to have input, which will generate more and (potentially) better ideas.

The rationale for adapting is originating from the contingency theory, which states in unexpected situations, a strong leader must emerge, especially when there is a demand for action (Kamoche 1999). This seems contra dictionary that when there is a demand for action, rotating leadership is suitable for such a situation. The main reason this is suitable is due to the increasingly complexity of problems and / or opportunities of organizations, which require different knowledge and competencies (Stacey, 1996).

2.2.2 Servant

Servant leaders are responsible for the result of their people (employees), but they give them freedom to achieve these results and support them by menial tasks and ensuring commitment (Pina e Cunha, Vieira da Cunha, & Kamoche, 1999). A servant leader is a leader who is more active in the background and is serving the team. As mentioned by van Bilsen (2010) the paradox between freedom and control is solved by giving people freedom to act, while they exert small control via asking small questions and stating the goals.

2.2.3 Directive

A directive leader is a leader who makes the decisions himself and assigns tasks to his followers, and controls the tasks of the followers in order to reach a certain objective. This leadership style is contra dictionary to servant leadership and rotating leadership style where team members have a lot of freedom to act and have more responsibility regarding the outcome.

As mentioned by Kamoche and Cunha (2003) a situation where a power imbalance is present and there is demand for directive

leadership, little role improvisation is expected in this situation. This leadership style is considered to be ineffective, due to the fact that is too control oriented and thus hinders improvisation (van Bilsen, 2010). However, as mentioned by van Bilsen and Fisscher (2010) when directive leadership is combined with positive feedback the quality of improvisation is better than servant leadership and almost equal to the quality of a rotating leadership style. Directive leadership is associated with establish clear rules for behavior in work teams, which is associated with high-performance work teams (Katzenbach & Smith, 1993).

The directive leadership style is also associated with providing psychological structures for subordinates by letting them know what they are expected to do, scheduling plus coordinating work, giving specific guidance and clarifying policies, rules and procedures.

2.3 Time-to-market

As mentioned before, the two main reasons to accelerate time-to-market are increased domestic and global pressure and rapid technological changes, other reasons are: market demand, customers requiring new products developed quickly, need to meet corporate growth objectives, shortening of product life cycles (this is due a combination of factors: rapid technological changes, competitive activities and market requirements changes), pressure from senior management and desire to be first in the market (Gupta and Wilemon, 1990).

Fast development of products with low performance levels are optimal for markets with short product life-times, sharply declining margin, or weak competitive offerings (Bayus, 1997). This indicates the trade-off between decreasing time-to-market and quality. Significant improvements in product development can lead to a high market share, however in order to create these significant improvements it will probably take too long, and thus the company will miss the opportunity / window (Cohen & Eliasberg, 1996). Discovered by McKinsey & Co a product which is six months late, will earn 33% less profit over five years, whereas a product that is 50% over budget to make it on time, will only cut profits with 4% (Gupta & Wilemon, 1990). Another figure discovered by Clark (1989) that each day of delay for a 10.000 dollar car, will cost the firm one million dollar each day. These sources are a bit old, but it illustrates the impact time-to-market can have on a products profitability.

As mentioned by Crossan, Cunha, Vera and Cunha (2005) research on new product development has shown that execution always differs from planning, and due to this deadlines are often not met. Unforeseen events arise which will delay the new product development. As mentioned by Zirger and Hartley (1994) time-to-market is a key determinant of the success of a new product. So if deadlines are not met, this is likely to go at the expense of the success of the product. In new product development processes firms can improvise in order to meet deadlines. For example in handling unforeseen events, improvisation can be used effectively to handle these unforeseen events, in order to meet deadlines and thus assure profitability (Miner, Bassof, Moorman, 2001). Which means that not being able effectively manage unforeseen events, will lead to not meeting deadlines, which will thus increase time-to-market. If organizations wants to quickly resume work after an unforeseen event, they must have the capabilities and resources to respond to this in an urgent matter (Beckhy and Okhuysen, 2011). So if organizations don't want to increase time-to-market, the team must encompass the capability and resources to deal with unforeseen events. One way to deal with unforeseen events and being able to meet deadlines is improvisation. An unforeseen event is defined by England, Agarwal and Blockley (2008) 'Any possible action which was not previously identified, or identified but dismissed because its probability of occurrence was too small' (p. 1043). An example of such an unforeseen event is changing customer requirements. As mentioned by Gupta and Willemon (1990) 71% of the interviewees mentioned that the process was delayed due to a poor understanding of customer requirements. The lack of understanding results in frequent changes in the product development. A quote from one of the interviewees: 'Changing product requirements causes more delay in product development than anything else'. Changing product requirements is an unforeseen events / surprise which is enacted by the customer. Changing requirements can also be additional requirements by the customer, so for example in new product development the customer check the progress and is not happy and initiates several additional requirements.

An interesting discovery by McDonough and Barczak (1991) who researched what the relationship was between leadership style and speed-to-market. They discovered that leadership style does make a difference how fast a project is developing. Another discovery was that the speed of development is not influenced by technology that is developed internally or acquired from an external source.

It appears that companies executing the steps of new product development, in order to rush a product to the market several steps are poorly executed. This results in poor design, bad functioning of the product, expensive recalls and potentially higher production cost (Hise, O'Neal, McNeal & Pasasuraman, 1989). Within industries where product life cycles are long, a longer product development stage is more acceptable than in industries where product life cycles are shorter. However, in many market product life cycles are shortening due to increased competition.

Another factors that influences time-to-market is the establishment of clear time goals. The establishment of such clear time goals speeds up development by increasing task motivation and a sense of order (Kessler & Chakrabarti, 1999). Therefore, the amount of deadlines which are established during a new product development process, will decrease time-to-market / increase development speed.

3. METHODOLOGY

3.1 Sample and Data Collection

The data consists of theatrical simulations of new product development teams, which were used by Gijs van Bilsen (2010) to research the effect of leadership style on the improvisational process.

Theatrical simulations are real life simulations performed on stage, which allows isolation, magnification and condensations of the a studied process (Wagenaar, 2008). Theatrical simulation follows the same phases as computer simulation, but is done with theatrical performers instead of a computer (Wagenaar 2008). One important principle of theatrical simulations is that the focus is on the process and not on the outcome (Vera and Crossan, 2004).

The simulations were performed by (experienced) improvisational actors who had specific instruction regarding the leadership style they had to perform. They had to complete an assignment / task to invoke the use of organizational improvisation. The dataset consists of 15 theatrical simulations, which are between 10 and 30 minutes. The setting which was chosen for the simulations were the guild in the late Middle Ages of Western Europe. This simple, stylized historical context is easy to understand for the improvisation actors. In this setting the actors improvise roles as guild master,

apprentices or abbots. The task for the actors is to create an innovative product for their empress within 24 hours. The empress has several requirements for this product. The demands are quite minimal in order to create a minimal structure, but in a broad and clear goal.

Every movie follows approximately the same script, which is:

(1) The king / empress / servant of the king or empress states his/her demands regarding a new product (2) The new product development teams discusses the demands and come up with a product. (3) In the middle of the movie the king / servant of the king comes to check the product, and gives this opinion on the current product. The might give some additional requirements or doesn't like the current product. (4) The team discusses how to solve this problem.(5) In the end the king comes, they communicate what they produced and the king usually likes the product. In between these scenes, the actors are mainly producing and have small discussion regarding the product development process.

In addition the, servant of the king who communicates the task / assignment states several things clearly in every movie: (1) mistakes are allowed, as long as they work hard, (2) they have a certain time frame to deliver a product (short, between 1 day and 3 days), not only a plan in this way it is required to improvise in order to deliver a product in such a short time frame, (3) Emphasizes the importance of the assignment to the king (4) that the guild master, apprentice or abbot will be overwhelmed with wealth when they succeed.

3.2 Measurement and methods

In order to operationalize how leadership can influence time-to-market a qualitative analysis made of the theatrical simulations in combination with a quantitative analysis. The focus is on the scenes: initial product development and unforeseen events, since these two scenes have a big impact on the time-to-market, especially the unforeseen events. The management of unforeseen events is an important factor in time-to-market, since these have to be managed accurate and quick in order to meet deadlines and not delay time-to-market (Miner, Bassof, Moorman, 2001). The leadership style actions are classified according to the management principles of Henri Fayol in order to make them comparable and observe differences in management between the leadership styles. The management principles are:

- Planning: examining the future and laying out actions to be taken
- Organizing: Laying out lines of authority and responsibility
- Coordinating: Laying out timing and sequencing of activities, binding and harmonizing all.
- Commanding: Putting the plan into action.
- Controlling: Monitoring and adjusting; ensuring conformity with the rules.

From the five management principles of Fayol only three management principles are taken into account, this is due to two reasons. First, the organization of the theatrical simulations, hereby is meant the organization of the team is already done in advance and therefore there are no organizational activities. Second, due to the fact that the new product development is based on improvisation, thus planning activities are also not present in the theatrical simulations. This leads to three leadership activities which are: coordinating, commanding and controlling. In this way there can be determined how the leadership styles manage/ deal with unforeseen events differently, which will thus affect time-to-market differently. See table A for definitions of the three management activities and several quotes from the simulations to clarify it.

Within the new product development simulations the focus is on two events, which are the initial product development and the unforeseen events.

First, the, the initial product development, so how long it takes to start producing is researched, this scene is present in every new product development. This is the moment after the product demands are communicated and the ideas are discussed and everyone is producing. By measuring the time required during this stage, I hope to discover differences between the different leadership styles. Time is quantitative measure which can easily be recorded and compared among the different leadership styles.

In addition to the initial product development, an analysis is made of the unforeseen events during the theatrical simulation. Unforeseen events are events which are not expected and can cause delay to time-to-market. New product development teams need to be able to respond to such events in an urgent matter in order to minimize the delay caused by an unforeseen event. Therefore, it is interesting to see how different leadership styles manage these unforeseen events, which thus will affect time-to-market differently.

Within these two scenes the focus is on several variables. The focus is on: the leadership style, the product which is demand by the king/queen, what management action did they undertake (Fayol), including several citations, and time it takes to start producing / management of unforeseen events. Since the focus is on leadership, it is important to demonstrate how the leader is influencing the process and time-to-market. In order to demonstrate this, quotes are included which are classified according to Fayol to give clear examples of how the leader is influencing this. This research is on time-to-market, thus the time required during these two scenes is also measured.

In short, the focus is on two scenes within new product development. First, on how different leadership styles manage the initial product development. Second, how leadership styles manage unforeseen events differently.

3.3 Data analysis

In order to analyze the data a qualitative analysis is made in combination with a quantitative part of the two scenes.

The qualitative analysis is an analysis of actions of the leader during the initial product development and unforeseen event. This analysis is made by summarizing the actions of the leader in order to create a clear overview of what the leader did during this specific scene. This in order to create a clear understanding of how the leader is influencing the process and thus time-to-market. To create a better understanding of the actions of the leader, there are quotes of the leader included. The quotes of the leader are than classified according to the management principles of Fayol, in order to make these comparable among the different leadership styles. The quotes from the leader are only recorded when the leader is giving lead. General statements such as greeting the king or a more general question are not recorded.

The second analysis is a quantitative analysis of the two scenes. In this analysis the times are being recorded how long it takes for the team to deal with these two scenes. First, the initial product development, so how long it takes for the team to start producing after the king / emperor / servant has communicated the demands. The begin time is when the king or servant has communicated his demands and leaves. The end time is when everyone started producing a certain part of the part, excluding

the leader. The leader is excluded since he is leading the process and often not taking part in the production. Second, the time required to deal with an unforeseen event. A unforeseen event is defined as an event which was not expected by the team or expected but not knowing when it will happen. The time that is required to deal with this unforeseen event is when the event occurred and when the event is managed and everyone is producing again, so no more discussion regarding the unforeseen event. In the beginning of the scene the emperor / king / servant clearly states that he or she will return once to control the progress of the product, however they don't know when. This event is also classified as unforeseen since they don't know when he or she will return. The communication with the king / emperor / servant, often with changing / additional demands, is not recorded for the time, but the same as with initial product development, the time is being recorded after the king / emperor / servant leaves and the time is stopped when the event is managed. From the quantitative analysis the means are calculated and the standard deviation. The mean to make them comparable and thus to see which one has the lowest time during the specific scenes. The standard deviation in order to determine if the mean is not biased by an outlier. If this is the case, then an analysis is made of the outlier in order to determine what caused the outlier.

These two analysis together create a clear understanding of how the leader can influence the time-to-market in an improvisation setting. The qualitative analysis with the summary and the quotes gives a clear understanding of how the leader is influencing the process, whereas the quantitative analysis gives it an element which is easily comparable among the different leadership styles and you can compare how different actions by the leader result in a shorter or longer time.

4. RESULTS

In this part of the paper the results from the qualitative and quantitative analysis are described. As stated above, the analysis are made of two scenes, which are the initial product development and management of unforeseen events.

The first qualitative analysis is of the initial product development, which was classified as the period after the client left till how long it took for everyone to start producing something excluding the leader. As shown in table B, the main tendency within directive leadership is that the leader, often, first asks input from its students, after this he comes with the final idea and starts to delegate tasks, this is also reflected in the fact that the leader is more commanding than other leadership styles. An quote of the directive leader which is clearly a commanding activity of the leader: 'you will be working on the rocking horse and you will be working on the equipment'.

For rotating leadership, first a lot of discussion is required before they start producing, there is no one who is making a real decision in order get everyone working on the product. There is almost no commanding and the tasks are divided via questions, not via directions. A good quote of this is: 'Can you get some leather?'. Via such questions tasks are divided, and there is no real delegation of tasks.

The servant leader tries to have input by asking questions but the input of these questions is really limited. Most of the time the team members themselves generate all the ideas and take on tasks themselves. In servant leadership, the leader exerts subtle control via questions, for example 'Who will be doing what' which sometimes results in fast decision making and a lower initial product development time. This is due to the fact that the servant leader is mainly controlling the group, and if they run into a problem, the leader is serving the group to solve this problem. In this scene the leader is able to control what the group is doing and providing assistance when running into problems. The main management principle the servant leader is using is controlling.

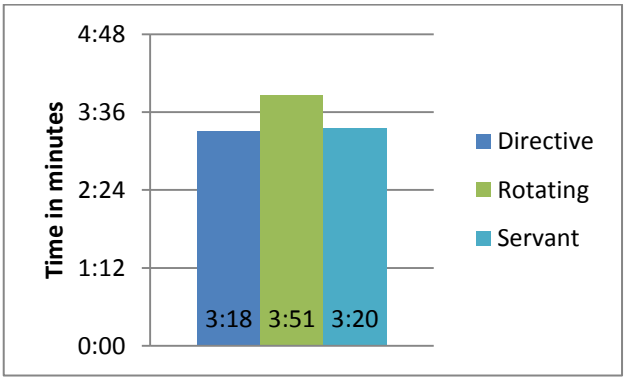


Figure 1. Mean time initial product development

The first quantitative analysis is the mean time of the initial product development. The total amount of analysis is 15, where from every leadership style 5 analysis were made of initial product development scenarios. As one can see in figure one, the differences between directive and servant leadership are minimal and the additional time rotating leadership needs to start producing is only 33 seconds and 31 seconds, so the differences regarding time in the initial product development is limited. Directive leadership has the lowest time during this stage, servant leadership takes 1% longer which is thus an minimal difference between directive and servant. However, rotating leadership takes 16,6% longer than directive leadership and 15,5% longer than servant leadership. The differences between these two stages are limited, but they are present.

Leadership style	Standard deviation
Directive	0:59
Rotating	2:05
Servant	1:31

Figure 2. Standard deviations time initial product development

When taking a look at figure 2, you can see that the standard deviations of the initial product development time are high, especially for rotating leadership. When taking a look at the appendix table C, you see that rotating leadership has an outlier of 7 minutes and 26 seconds. The cause of this outlier is that during this scene the group keeps on discussing ideas and jumps from one idea into another and they keep asking each other for opinions. The other four initial product development times of are a lot lower than 7 minute and 26 seconds, this is due to the fact that they are discussing the demands and are yes-anding, which leads to a lot of ideas in a short time span, which results in a product in thus a short time span. Taking a look at appendix C, directive leadership and rotating leadership have no outliers which would make the mean biased. The standard deviation is quite high, but is also due to the limited amount of analysis.

The second qualitative analysis is of the management of unforeseen events. The main unforeseen event are a result of changing / additional requirement by the client, e.g. the king finds the product too ugly. The first observation is that again, directive leadership is commanding a lot to solve an unforeseen event, e.g. 'No, I am the boss here and the king is my boss, so we are not going to do that'. This is also the main way the directive leader is managing an unforeseen event, by commanding his subordinates (e.g. for the king we can only deliver a perfect product, I want you to create a one). The main

tendency is that the leader is communicating separately with the students and is also giving commands to the student individually. There is almost no discussion.

Rotating leadership is able to solve unforeseen events by group discussions, every team members has an input in order to manage the unforeseen event. These discussions result in a lots of ideas and solutions in a short time span. Since everyone is having input in the management of the unforeseen event, via yes-anding, consensus is reached really fast and the unforeseen event is managed quickly. Within rotating leadership, the amount of managerial activities of Fayol are really limited. Therefore there are also no quotes of the leader include in this section. The rotating leaders is also responsible for a certain part of the product, therefore you also see that they want to start working on their specific part of the product as soon as possible.

However, in servant leadership the opposite happens. There the management of unforeseen events is also done by group discussions, but these are longer discussions. The amount of ideas generated is high, but is over a much larger time span. The team members keep discussing ideas, whereas the leader is not able to give directions or cut the discussions which results in long discussions. In the management of the unforeseen events the servant leader is often not showing leadership activities and if there are leadership activities, these are mainly classified as controlling. An example of this is: 'What wood did you use'? Whereas in the initial product development the leader is able to create some urgency which leads to the start of the production. The managerial activity controlling seems to slow down the team, since they first have to explain to the leader what they are doing and how. The input of the leader in this scene is limited.

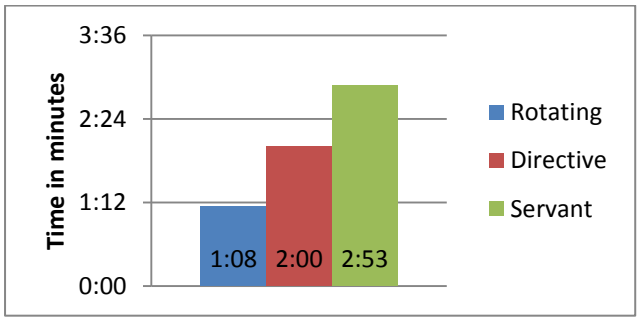


Figure 3. Mean time to solve unforeseen events

Taking a look at the times required to solve an unforeseen event, what you can see in figure two is that unforeseen events managed the quickest by rotating leadership, approximately one minute later directive leadership and after that servant leadership. The amount of analysis in the unforeseen events are 18, 5 from rotating leadership and servant leadership, and 8 from directive leadership. The differences in the management of unforeseen events are bigger than the differences in initial product development. The mean of the rotating leader is 1:08, the directive leader takes 2:00 to manage the unforeseen event, which is an increase of 76,4%. Comparing the rotating leader with servant leadership, there is an increase of 130,1%. As mentioned before, the big differences arise due to the fact that rotating leadership is able to solve these events really quick by short discussions. Directive leadership takes longer, because the leader tries to solve it himself and wants to communicate separately with each member of the team. And in servant leadership, the team members are having longer discussions, due to the fact that the leader cannot create a sense of urgency and the leader is delaying the team by controlling what they are doing and how they are doing it.

Leadership style	Standard deviation
Directive	1:24
Rotating	0:40
Servant	1:24

Figure 4. Standard deviations time to manage unforeseen event

Regarding the management of unforeseen events the standard deviations are lower, especially from rotating leadership.

However, in the directive leadership style, the data (table E) is quite diverse where they sometimes only need half a minute to manage an unforeseen events, but also they need more than three minutes to manage an unforeseen event. Comparing these events, several things are striking. During the shorter times when managing the unforeseen events, the leader is clearly commanding his subordinates to execute certain tasks and is having no discussions, he provides his subordinates with quick solutions to the unforeseen event. Whereas, when the leader takes around three minutes the leader is having longer discussions with his subordinates on what to do.

For servant leadership the standard deviation is equal to the standard deviation of directive leadership, only the data from the servant leader show no outliers, and there are no striking differences in the data (Table C). The difference between the highest and the lowest time in managing the unforeseen event, is due to the fact that in one scene the leader is actively involved when the leader is asking everyone for input which results in a shorter time. During the longer time to manage the unforeseen event, the leader is absent, which results in long discussions of the team members.

5. CONCLUSION

This paper provides the reader with a literature review in combination with an analysis of theatrical simulations of new product development processes. The literature review defined the topics time-to-market, improvisation and leadership. After this the theatrical simulations were analyzed with the focus on two scenes within the new product development.

The main research questions is: 'how can different leadership styles influence time to market in an improvisational setting?'. After having made a qualitative analysis and quantitative analysis, the leadership styles are using different managerial activities which results in differences in time during one scene.

What became evident after the qualitative analysis is that the managerial activities of the leadership styles are different among the leadership styles, but equal across the two scenes. A directive leader is mainly commanding his subordinates during the two scenes and sometimes controlling. With rotating leadership there are almost no managerial activities of the rotating leader and the servant leadership style is mainly controlling the group, which results in a sense of urgency during the initial product development but is delaying the management of the unforeseen event in comparison with the other two leadership styles.

What became evident after the quantitative analysis is that the differences in time the initial product development are really limited. They all manage this differently, but this doesn't result in differences in time. At first after looking at the means it appeared so, that rotating leadership took longer, but this was due to a biased mean. However, in the management of the unforeseen there are significant differences. A directive leader is influencing the process by commanding his subordinates, which results in shorter time but when discussing this increases the time of the management of the unforeseen event. The

rotating leadership style is managing the unforeseen event by group discussion, which results in a lot of ideas in a short time span in which everyone can have input. This appears to be an effective way to manage unforeseen events and thus not delaying time-to-market. The servant leader is not an effective leadership style when managing unforeseen events. The main managerial activity of the servant leader is controlling, which results in a delay of the group process. The unforeseen event is also managed by group discussions, but these take more time due to the managerial activity of the servant leader.

When comparing the three leadership styles during the initial product development stage, directive leadership is able to get everyone working fast on the product by commanding a lot plus regulating the amount of the communication. The directive leader is really leading the group which results a shorter time to get everyone working. In other groups there is a lot less commanding which results in more discussion, but this doesn't result in a higher time during stage. The differences in managing the initial product development does not result in differences regarding time.

In short what became evident is that leadership styles influence time-to-market differently. A directive leader is managing the process by commanding. This appears to be effective when dealing with an unforeseen event and the leader is making the decisions himself. Rotating leadership is managing it by group discussions and this leads to fast solutions in a short time span, especially when managing unforeseen events. The servant leadership style is serving the team and not really influencing time-to-market. The leader is asking questions and controlling the group, which is delaying the team when managing unforeseen events.

6. DISCUSSION

This research explored that leadership is of influence to the time required during the two identified scenes. The result found during the qualitative analysis and quantitative analysis support this by having identified differences between the managerial activities of the leader and how this results in different times required during the two stages.

The relationship between leadership and time-to-market in an improvisation setting has not been explored yet. Therefore these finding are filling a gap in the literature regarding leadership and time-to-market in an improvisational setting. The relationship between leadership and time-to-market has been researched before, which conclude that leadership is of influence to time-to-market. This also appears to be the case in an improvisation setting. Leadership styles manage it differently which also results in different effect on time-to-market.

These results are interesting for new product development, since improvisation is more common during new product development than one would expect. Vera and Crossan (2004) discovered that people in organizations often start without making plans, make up reasons to proceed and use interpretations to continue. Therefore it is important to research how leadership can influence time-to-market in an improvisation setting.

The practical implications are that when facing unforeseen events in new product development, rotating leadership and directive leadership appear to be most effective when wanting short times of managing unforeseen events. When you want a lot of discussions, a rotating leadership style is more effective, whereas the leader wants to make the decisions himself, the a directive leadership style is more suitable. When focusing on the initial product development, the practical implications are that if you want discussions regarding the product, it is more effective to deploy a rotating / servant style of leadership, whereas if you don't want discussions during this stage a directive leadership is more effective.

An unexpected finding was that servant leadership appears to be delaying the group process when managing unforeseen events. As mentioned in the theory the servant leader is solving the paradox between freedom and control by asking questions. This appears to be a managerial activity of controlling which is delaying the management of the unforeseen event, and thus increasing time-to-market.

The external validity is limited. This research was based on theatrical simulations, which are simulation performed on stage. This topic requires thus some additional research in order to make it externally valid. This would be an improvement for future research, instead of focusing on theatrical simulations also research real life new product development scenarios. This is also the first limitation, that the analysis are analysis of theatrical simulations instead of real life product development process. However, this was also not possible give the time frame.

The second limitation is that time-to-market is limited in this research to two scenes, which are the initial product development and the management of unforeseen events. In real life time-to-market consist of much more events / scenes.

The third limitation is that, the research on leadership and time-to-market in an improvisational setting is really scarce. Therefore this was an explorative study to study the relationship between time-to-market and leadership style. The results can thus not be supported by other research which is a limitation in this study.

Having stated these limitations, the relationship between leadership and time-to-market in an improvisational setting require thus some additional research. My first suggestions for future research, is than to analyze real new product development processes instead of theatrical simulations in order to determine if leadership is of influence to time-to-market the same way as in these theatrical simulations. My second suggestions, is to analyze the whole new product development process instead of limiting it to two scenes. There are more scenes of influence to time-to-market and thus for future research all the scenes should be taken into account.

7. REFERENCES

Akgün, A. E., & Lynn, G. S. (2002). New product development team improvisation and speed-to-market: an extended model. European Journal of Innovation Management, 5(3), 117-129.

Amabile, T. M. (1997). Motivating creativity in organizations: On doing what you love and loving what you do. California Management Review 40, 39-58.

Baker, T., & Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. Administrative science quarterly, 50(3), 329-366.

Barrett, F. J. (1998). Coda—creativity and improvisation in jazz and organizations: Implications for organizational learning. Organization science, 9(5), 605-622.

Bayus, B. L. (1997). Speed-to-Market and New Product Performance Trade-offs. Journal of Product Innovation Management, 14(6), 485-497.

Bechky, B. A., & Okhuysen, G. A. (2011). Expecting the unexpected? How SWAT officers and film crews handle surprises. Academy of Management Journal, 54(2), 239-261.

Bilsen, G. (2010). Leading organizational improvisation: an exploration of the influence of leadership style on organizational improvisation.

Brown, S. L., & Eisenhardt, K. M. (1997). The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations. Administrative science quarterly, 1-34.

Cohen, M. A., Eliasberg, J., & Ho, T. H. (1996). New product development: The performance and time-to-market tradeoff. Management Science, 42(2), 173-186.

Clark, K. B. (1989). Project scope and project performance: the effect of parts strategy and supplier involvement on product development. Management science, 35(10), 1247-1263.

Crawford, C. M. (1992). The hidden costs of accelerated product development. Journal of Product Innovation Management, 9(3), 188-199.

Crossan, M., Cunha, M. P. E., Vera, D., & Cunha, J. (2005). Time and organizational improvisation. Academy of Management Review, 30(1), 129-145.

Cruz, M. G., Henningsen, D. D., & Smith, B. A. (1999). The impact of directive leadership on group information sampling, decisions, and perceptions of the leader. Communication Research, 26(3), 349-369.

De Meyer, A., Loch, C. H., & Pich, M. T. (2002). From variation to chaos. MIT Sloan Management Review, 43, 60-7.

England, J., Agarwal, J., & Blockley, D. (2008). The vulnerability of structures to unforeseen events. Computers & Structures, 86(10), 1042-1051.

Fells, M. J. (2000). Fayol stands the test of time. Journal of Management History (Archive), 6(8), 345-360.

Gupta, A. K., & Wilemon, D. L. (1990). Accelerating the development of technology-based new products. California management review, 32(2), 24-44.

Hise, R. T., O'Neal, L., McNeal, J. U., & Parasuraman, A. (1989). The effect of product design activities on commercial success levels of new industrial products. *Journal of product innovation management*, *6*(1), 43-50.

Leone, L. (2010). A critical review of improvisation in organizations: open issues and future research directions. In Proceedings of the Summer Conference.

Leybourne, S., & Sadler-Smith, E. (2006). The role of intuition and improvisation in project management. International Journal of Project Management, 24(6), 483-492.

Kamoche, K., & e Cunha, M. P. (2001). Minimal structures: From jazz improvisation to product innovation. Organization Studies, 22(5), 733-764.

Kamoche, K., & Cunha, J. V. D. (2003). Towards a theory of organizational improvisation: Looking beyond the jazz metaphor. Journal of Management Studies, 40(8), 2023-2051.

Katzenbach, J. R. (1993). The wisdom of teams: Creating the high-performance organization. Harvard Business Press.

Kessler, E. H., & Chakrabarti, A. K. (1999). Speeding up the pace of new product development. Journal of Product Innovation Management, 16(3), 231-247.

McDonough, E. F., & Barczak, G. (1991). Speeding up new product development: The effects of leadership style and source of technology. Journal of Product Innovation Management, 8(3), 203-211.

Miner, A. S., Bassof, P., & Moorman, C. (2001). Organizational improvisation and learning: A field study. Administrative Science Quarterly, 46(2), 304-337.

Pina e Cunha, M., Kamoche, K., & Campos e Cunha, R. (2003). Organizational improvisation and leadership: A field study in two computer-mediated settings. International studies of management & organization, 34-57.

Pina e Cunha, M., Vieira da Cunha, J., & Kamoche, K. (1999). Organizational improvisation: What, when, how and why. International Journal of Management Reviews, 1(3), 299-341.

Stacey, R. D. (1996). Complexity and creativity in organizations. Berrett-Koehler Publishers.

Vera, D., & Crossan, M. (2004). Theatrical improvisation: Lessons for organizations. Organization Studies, 25(5), 727-749.

Vera, D., & Rodriguez-Lopez, A. (2007). Leading Improvisation:: Lessons from the American Revolution. Organizational Dynamics, 36(3), 303-319.

Wagenaar, M. (2008). Simulatie in de filosofie. Philosophy of Science, Technology and Society. Enschede, University of Twente.

8. APPENDIX

8.1 Table A: Classification management principles Fayol

Classification of the management principles of Fayol.

Management principle	Quotes
Co-ordinating: Laying out timing and sequencing activities, binding and harmonizing all.	First we work half a day and after this we will see how far everyone is.
Commanding – putting the plan into action, giving order to the subordinates.	Start working boys.
	Frist draw it.
	Can you get some paint?
Controlling: Monitoring and adjusting, ensuring conformity with the rules and controlling of the product / tasks / subordinates.	Don't forget to take the roses off and put the corn on it.
	What will you be doing?

8.2 TABLE B: Analysis initial product development

Analyses initial new product development

Leadership style	Product	Summary	Quotes	Management principle Fayol	Amount of time required to start producing
Directive (8)	Toy	Summarizes demands from the client, after asks input from its students. Shortly after this he comes with the idea of the rock horse. After this divides all the tasks commanding.	What we are going to create is a rocking horse with equipment.	Commanding	3:16
			You will be working on the rocking horse and you will be working on the equipment	Commanding	
			You can create the pigeon; the pigeon needs to look as real as possible and must be able to move.	Commanding	
			Start working, I will check on you later. Maybe I will adjust some drawings, so start working! We have three days' time.	Commanding	
Directive (8)	Jewel	First is clearly asking attention, since he needs all attention. After this communicates the demands of the king. After this asking ideas, but there are no ideas at all. Eventually he is the creator of the idea for the dress.	Hugo, you will be doing the fabric and make sure that you use the finest fabric available. You will make the lines of the corset and make sure that it is tight, but that it is not visible for the eye. And you will create the decorations of the dress,	Commanding	3:34

			make it look sweet.		
Directive (15)	Toy	Is asking input from everyone after which he comes with the idea of a tomato shooter. Dividing of the tasks is done by the students themselves, the leader is really clear in this.	-	-	2:46
Directive (13)	Jewel	Again, first asks input from the students after which he comes with an idea, but after this he needs some additional input. Eventually the students come with the final idea. The leader is functioning more as a classmate than as a leader. Due to this there is no one really delegating the tasks. Eventually the leader is summarizing the ideas, after which the students are dominant again.	First we work half a day and after this we'll see how far everyone is	Co-ordinating	4:46
Directive (11)	Toy	Student is the one with the first idea, after this the leader asks for more input. Eventually the leader is the one with the complete idea. After this he starts delegating all the tasks.	Draw it first!	Commanding	2:10
			Can you get some paint?	Commanding	
			Also craft the badge which is supposed to be attached to it, the figure. You got one minute!	Commanding	
Rotating (7)	Armor	Lots of communication required, also generated a lot of ideas. Eventually someone takes the lead who is also	I will create the first design, can you get some leather, you get the iron and make	Commanding	2:18

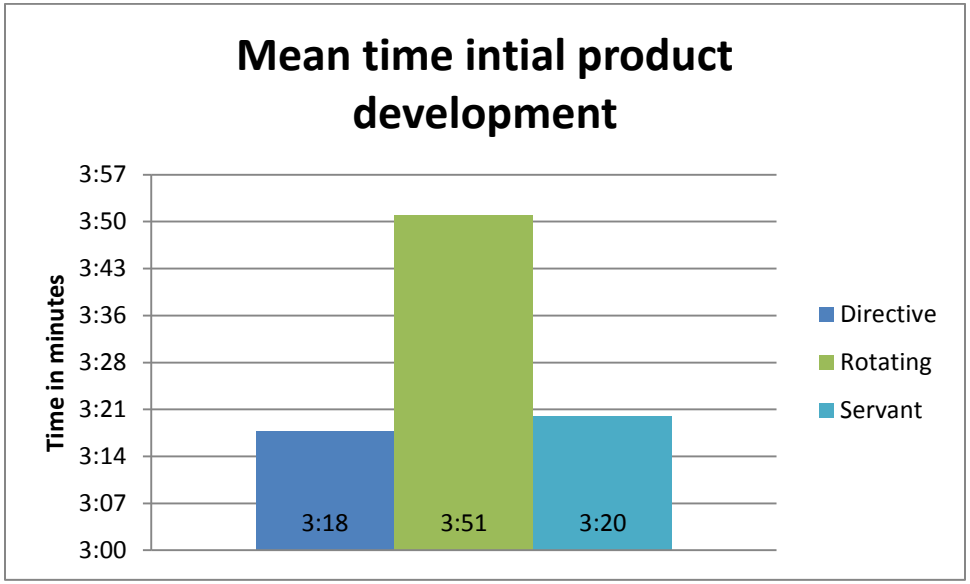
		dividing the tasks.	some nice shapes and you can do the chainmail.		
Rotating (15)	Armor	Everyone comes up with ideas, they are using each other's ideas, and eventually everyone is taking responsibility for a certain tasks.	-	-	2:30
Rotating (7)	Coach	The ideas generation comes to a slow start, no one is taking charge. First lots of discussion, before everyone is taking responsibility for a task.	So we are going to craft the chassis?	Control	3:38
Rotating (10)	Armor	Lots of ideas are being suggested and lots of deliberation. (examples of the ideas are the helmet and the baroque wig)	We don't have a lot of time, if you start designing than I will roll the plates.	Co-ordinating	3:25
Rotating (10)	Coach	Lots of deliberation and they are asking each other what his or her ideas are, there is no delegation but they are asking who wants to be responsible for a certain task.	But the inside, to make sure that we are all building the same, should be wood. There has to be a wooden structure.	Controlling	7:26

Servant (12)	Fortification	Lots of communication about what they have to build, the team is asking a lot to each other. Leader is a bit incapable to give lead and the quality of his input is limited. Is trying to steer the team by make small comments but is often overruled.	If you chop that tree and put it on that structure and you start with the pins.	Commanding	5:01
Servant (12)	Throne	Summary: Leader is mainly asking input and tries to make decision but leader is a bit incapable. Leader is not giving lead to the group.	-	-	4:36
Servant (14)	Throne	Is steering by asking questions and hereby generating input. De contribution of this leadership style is limited. Again by asking questions trying to divide the tasks.	Who will be doing what?	Controlling	2:10
Servant (9)	Throne	Leader is servant. Only asking questions about the product, no added value to the product. Roles are being divided by the students themselves and the leader is available for help.	-	-	1:30

Servant (9)	Fortification	The leader is calm, he is the one with idea to start working from the basis of the castle and that that should be their basis, regarding leadership the input is quite limited and he is also responsible for one of the tasks	-	3:26

-

8.3 TABLE C: Mean time - initial product development and excel table.



INITIAL PRODUCT DEVELOPMENT								
Directive			**Rotating**			**Servant**		
Session	Product	Time	Session	Product	Time	Session	Product	Time
11	Toy	2:09	7	Armor	2:18	9	Throne	1:30
15	Toy	2:46	15	Armor	2:30	14	Throne	2:10
8	Toy	3:16	10	Armor	3:25	9	Defense	3:26
8	Jewel	3:34	7	Coach	3:38	12	Furniture	4:36
13	Jewel	4:46	10	Coach	7:26	12	Defense	5:01
SOM		16:31			19:17			16:43
MEAN		3:18			3:51			3:20

8.4 TABLE D: Analysis management unforeseen events

Analyses unforeseen event

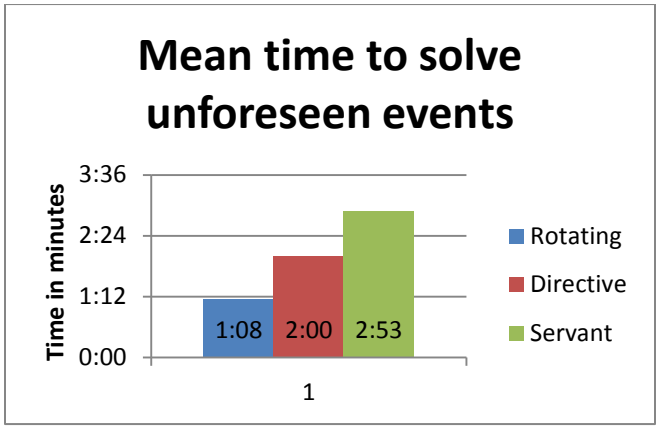
Leadership style	Product	Unforeseen event	Summary of how they solve this	Management principle Fayol + quotes	Time required to solve unforeseen event
Rotating (15)	Armour	King finds the product ugly, must be more feminine	Lots of ideas being created in short time. No act of leadership, via discussion ideas are being generated, there is no delegation of tasks.	No leadership activity to solve unforeseen event.	0:32
Rotating (10)	Coach	King has some additional demands, the coach can't be modular and some restriction regarding the length and width.	Long discussion, lots of questions being asked, eventually they start improvising by cutting the coach in half.	No leadership activity to solve unforeseen event.	2:10
Rotating (10)	Armour	Queen is allergic to metal	Solved quickly by a quick discussion	No leadership activity to solve unforeseen event.	1:17
Rotating (7)	Armour	The chest is too small, needs 6,5 buttons instead of 6	Ideas from every group members which leads to a quick solution to the problem.	No leadership activity to solve unforeseen event.	0:36

Rotating (7)	Coach	The shaft is bent	One of the members sees the problem of the bent shaft, which is solved by team members who generate ideas.	No leadership activity to solve unforeseen event.	0:54
Directive (15)	Toy	Additional demand it must be able to shoot flowers + the it needs a better finish.	Leader divides the tasks to make sure every can get back to work.	You are familiar with paint and stuff, so you can work the gold leaf. (Commanding) You were going to craft the wheels? (Control)	0:34
Directive (13)	Jewel	Resource constraints: Ran out of soda, due to the fact that it wasn't resupplied.	Leader checks what's going on and gives commands.	You are going to get some soda (commanding) And quick! (Commanding)	0:34
Directive (13)	*Jewel*	King doesn't find the product good enough.	First some discussion with the leader, since they think the product is good while the king doesn't. After this via group discussions they create a new idea.	No! I am the boss here and the king is my boss, so we are not going to do that (commanding) Can you draw it? (Commanding) You were crafting the rubies? (Controlling)	3:29
Directive (11)	Toy	A production fault by one of the students	Leader sees this, student think its fine but the leader demands to craft a	For the king we can only deliver a perfect product, I want you to create a new	1:31

			new one.	one! (Commanding)	
Directive (11)	Toy	King demands that it must be more peaceful	The leader is communicating one-on-one with its students. Student generate ideas and the leader gives feedback.	-	2:49
Directive (11)	Toy	Students uses the wrong material for the shield	The leaders is controlling what went wrong, the students tells what went wrong and comes with an idea to solve this problem.	What's going on? (Controlling) You have one hour left (Co-ordinating)	2:49
Directive (11)	Jewel	King finds the idea ridiculous	Leader communicates with every student separately. Takes lots of time. Some students have own ideas, whereas others the leader generates the ideas.	We go back to the original idea, but what we do, we use real metal and we gild it with fools-gold. (Commanding) You are going to gild the fools-gold with real gold, and in the real gold you carve 'I am a fool'. (commanding)	3:33
Directive (11)	Jewel	Students shows initiative by deleting one letter from the sentence I am fool, however this looks ridiculous.	Leader commands the student the re-do the crown.	No, this is not good. You must redo it. (Commanding) AGAIN! (Commanding)	0:42

Servant (14)	Throne	King finds the throne too high, doesn't like the colour and wants the fishing-net idea better worked out. (changing customer requirements)	Leader tries to solve this by long discussion with the members and is asking for input.	Do you think this is realisable within the time frame of twelve hours? (Controlling)	3:14
Servant (12)	Throne	Additional demand; the king wants a throne for two-persons not one.	Leader is mainly asking questions, team-members are generating ideas themselves but takes long.	No leadership activity to solve unforeseen event.	2:26
Servant (12)	Defence mechanism.	King demanded an scale model from the city, not an prototype.	Team members are communicating with each other, the leader is silent, however this takes lots of time.	No leadership activity to solve unforeseen event.	4:46
Servant (9)	Throne	Broken product, there is a rip in the plank.	The leader is asking everyone for input to solve this problem, this results in a fast solution to the problem.	Theo, what's wrong? (Controlling) What wood did you use? (Controlling)	1:06
Servant (9)	Defence mechanism	The team came up with one solution, the king finds this solution	The start to solve this problem is a chaotic discussion, which involves two team members. Eventually the leader is the one with the idea for holes.	No leadership activity to solve unforeseen event.	3:53

8.5 TABLE E: Mean time – management unforeseen events and excel table.



SORTED UNFORESEEN EVENTS

Rotating			Directive			Servant		
Session	Product	Time	Session	Product	Time	Session	Product	Time
15	Armour	0:32	15	Toy	0:34	9	Throne	1:06
7	Armour	0:36	13	Jewel	0:34	12	Throne	2:26
7	Coach	0:56	8	Toy	0:39	14	Throne	3:14
10	Armour	1:17	11	Jewel	0:42	9	Defense	3:53
10	Coach	2:10	11	Toy	1:31	12	Defense	4:46
			8	Jewel	1:48			
			11	Toy	2:49			
			11	Toy	2:49			
			11	Jewel	3:33			
			13	Jewel	4:29			
TOTAL		5:31			19:28			6:46
MEAN		1:22			2:26			1:41