How lean became institutionalized in the Swedish manufacturing industry context

The role of institutional work, motivational drivers and societal factors

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Authors:	Fredrik Andersson
	Anders Dahlin
Supervisor:	Christian Ax

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Abstract

This paper contributes to the literature that examines how a management accounting concept has become institutionalized by supply-side actors performing different types of institutional work. In doing so, we deepen the understanding of the later phases of diffusion, how a management concept despite becoming unfashionable can turn into an institution. In particular, we examine how lean has been institutionalized in the Swedish manufacturing industry context and what critical events, circumstances and motivational drivers have influenced the process. To theorise this development, institutional work has been applied to categorize the human agency involved in activities leading to its institutionalization. We extend extant research on this topic by examining how a global management accounting concept is received and adapted into a specific national setting and context and how actors involved affect this process. By considering broader societal factors and the motivational drivers of the actors involved, this study also explains the institutionalization process over time. Lastly, we discuss implications from our analysis for future research on management accounting concepts and institutional work.

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1. Introduction

During the late 20th century, a wave of management accounting concepts, including activity-based costing (ABC), target costing, beyond budgeting, and the balanced scorecard (BSC), was introduced. Management accounting researchers have produced an impressive body of knowledge about adoption, implementation, use, and performance effects of such concepts (e.g Østergren & Stensaker, 2011; Dekker & Smidt, 2003; Ittner et al., 2003). A characteristic of this research is the almost exclusive focus on the later phases of the diffusion process, with a particular focus on the demand-/user-side of the diffusion process, while less interest has been devoted to earlier phases. These earlier phases of the diffusion process involve the supply side and it has recently gained interest in research (Ax & Larsson, 2012).

Recent studies have focused on the supply-side of the diffusion of management accounting concepts, and a majority of the studies examined the management accounting concepts ABC (Jones & Dugdale, 2002) and the BSC (Cooper et al., 2017; Nørreklit, 2003). Drawing on actor-network theory, Jones and Dugdale (2002) examine the origins of ABC and its dissemination in the 1990's, while Cooper et al. (2017) use the same theory to analyse the human agency involved in developing BSC. Nørreklit (2003) analyses the origins of BSC and the implications of its rhetoric as a factor for its dissemination. This field is studied by examining what factors drive the diffusion of such concepts, a diffusion advanced by supply-side actors, such as management consultants, management gurus as well as the business press, through which the management accounting concepts are advocated.

Further studying management accounting concepts, some research has focused on the management fashion perspective and more specifically the processes of creating, selecting, processing and disseminating management fashions by supply-side actors (Abrahamson, 1996). A management fashion is characterised by its rapid, bell-shaped swings in popularity from starting in an up-swing phase, to then peak and eventually turning into a downswing phase (Abrahamson & Fairchild, 1999). Ax and Bjørnenak (2005) examined the bundling and adjustment of management accounting practices implied by supply-side actors, by focusing on the balanced scorecard in order to better understand its diffusion and popularity from a supply-side perspective. Another study on the BSC from this perspective examined the roles and involvement of leading actors such as consultants, professional groups, software firms and conference organizers in the Scandinavian diffusion of the concept (Madsen & Slåtten, 2013).

A limitation of extant research on management accounting concepts is that it does not consider what happens to popular concepts when their popularity decreases and they move beyond the dissemination phase. One possible outcome of this scenario is that management concepts become unpopular and disappear from the market of management concepts. Another possible outcome is that management concepts becomes taken-for-granted, i.e. become institutionalized. There is an increasing interest in examining this outcome through the perspective of institutional work

(Lawrence & Suddaby, 2006; Perkmann & Spicer, 2008). Institutional work can be described as 'the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions' (Lawrence & Suddaby, 2006, p. 215), performed by supply side actors which leads to the institutionalization of management concepts in particular contexts. Extant research on institutional work has mainly focused on *how* institutional work occurs, *who* is responsible and *what* constitutes institutional work, where much of the research has focused on how and under what conditions management fashions become more permanently diffused (i.e. become unfashionable by becoming institutions) (Perkmann & Spicer, 2008). Management accounting research using institutional work has focused on cases such as the institutionalization of Economic Value Added (EVA™) as a governance mechanism in Thai and Chinese state-owned enterprises, exploring how the concept became implicated in the governance and the political regulation of these enterprises (Chiwamit et al., 2014). Another study focused on the emergence and diffusion of Enterprise Risk Management - Integrated Framework (ERM-IF) becoming a dominant risk management model in North America, mainly focusing on the institutional work performed by the most influential supply-side actor and creator of the concept, COSO (Hayne & Free, 2014). Further research focused on the drivers in the diffusion of beyond budgeting and why some management concepts become successfully diffused, but in contrast to previous research, the case of Beyond Budgeting enables an explanation of why other concepts do not (Becker et al., 2015). A more recent study analysed the role played by the French Elite in the creation of Life Cycle Assessment (LCA) through their institutional work, in order to understand how environmental issues have been shaped and accepted in the French context (Gibassier, 2017).

However, as stressed by Chiwamit et al. (2014), extant research on institutionalization on management accounting concepts is still limited, and therefore we know relatively little about such processes and the work by actors that facilitate establishing and maintaining institutions. Further, we know little of how a global management accounting concept translates and develops within a specific country and context but also how the institutionalization process evolves over time. Learning more about this is relevant because institutional work provides a dynamic and relatively comprehensive view of the influence of different actors with a vested interest in management accounting concepts while at the same time maintaining a strong sense of how various institutions condition their actions (Chiwamit et al., 2014). The relevance is further increased because of the inclusion and categorization of the human agency involved in the institutionalization process of management accounting concepts and it can also explain how different types of institutional work relieve and overlap each other in the process of institutionalization. Therefore, the purpose of this study is to increase our understanding of institutionalization and we focus on the concept of lean (management concept) (Womack et al., 1991) as it is considered institutionalized, particularly in the Swedish manufacturing industry context (Larsson, 2015). By adopting an institutional work perspective, more precisely the framework provided by Perkmann and Spicer (2008), we seek to understand the influence that supply-side actors and their purposive actions have had on the institutionalization process of lean in the manufacturing industry context in Sweden. Therefore, this study can contribute to an increased knowledge in institutional work and by further studying the

supply-side implications on institutionalization, one can better understand how and what drives a management accounting concept becoming taken-for-granted over time.

1.2 Research Question

Focusing on the case of institutionalization of lean (management concept) in the Swedish manufacturing industry context, we address the following two research questions:

- *What actors were involved in the institutionalization process, what type of institutional work did they perform, and what motivated their participation in the institutionalization process?*
- *How did the institutionalization process develop over time, i.e. how did this institutionalization happen?*

1.3 Outline

This study will be structured in the following order: the next chapter will present the theoretical framework of the study, where the theory that will be the foundation for analysing the data is described. The third chapter will present the method used in the study, including the research setting and the data collection from the study, which also includes a presentation of the influential actors in this study. The fourth chapter will present the empirical findings from the study in two parts and this data generated from the study which will also be used in the discussion of the study. The final chapter is the discussion which also includes contributions of the study, limitations of our study and recommendations for future research.

2. Theoretical framework

The theoretical framework presents the theory which will be used to analyse the data gathered from the interviews. It starts with a presentation of the framework and it ends with a summarizing table as well as a figure which have been developed to further understand the institutionalization process over time.

2.1 Institutions and Institutional Theory

Institutional theory was first developed in the 19th century, and has mainly been used in the organizational theory, but also within sociology and political science. In contradiction to a rational view of organizations, its main focus is on how organizations are affected by other organizations as well as institutions in society (Eriksson-Zetterquist, 2009). Scott (1987) argues that institutions affect the interest of different actors; implying that the goal of an organization is in part formulated based on institutions. This means that institutions play an important role for the change of an organization. Institutional theory has been developed into three different streams, the old-, new- and Scandinavian institutional theory.

Early on, institutional theorists, and new institutional theory in particular, had no interest in describing institutions from the possible influence of individuals. As individuals were thought of as being legitimate when aligning their values and norms with the institutions', they had no reason to induce institutional change, but rather to reproduce it (the institution). With a perception that individuals possessed little degree of agency, the occurrence of institutional change was inherently limited. With an increasing interest in the studies on institutional change followed by this, the impact by individuals on institutions does in fact contradict the notion that institutions determine individual behaviour (Battilana & D'aunno, 2009).

Building on this dilemma, institutional work was introduced by Lawrence and Suddaby (2006) and is described as 'the purposive actions of individuals and organizations aimed at creating, maintaining and disrupting institutions'. Historically, institutions have been defined as:

> Institutions consist of cognitive, normative, and regulative structures and activities that provide stability and meaning to social behaviour. Institutions are transported by various carriers - cultures, structures, and routines - and they operate at multiple levels of jurisdiction (Scott, 2001, p. 33).

2.2 Institutional Work

With a larger focus on the actors' implications on institutions, Jepperson (1991) defines institutions as the product of purposive action and as an organized, established procedure that reflects a set of standardized interaction sequences. As this view implies an institution being a product of interactional patterns that ultimately reproduce or destroy them, it indeed comes closer to what constitutes the idea of institutional work (Lawrence & Suddaby, 2006). Despite the increased interest among scholars in studying actors affecting the institutions, extant research is still rather limited. To

this end, Lawrence and Suddaby (2006) provides a framework which addresses the three broad pillars of institutional work, namely creating, maintaining and disrupting institutions.

2.3 Perkmann and Spicers' Framework

Drawing on Lawrence and Suddabys' (2006) framework, Perkmann and Spicer (2008) examine the role of institutional work in the institutionalization of a management fashion and under what conditions it becomes permanently diffused. A management fashion can be defined as "a relatively transitory collective belief, disseminated by management fashion setters, that a management technique leads rational management progress" (Abrahamson, 1996, p. 257). Perkmann & Spicer (2008) argue that a management fashion becomes an institution because of the institutional work performed by various actors. They explain that purposeful actions result in establishing and maintaining a management fashion as an accepted component of organizational life. This implies that an institutional infrastructure is built both within and across organizational fields to which actual and potential adopter organizations are exposed. Three different kinds of institutional work are described by Perkmann and Spicer (2008): political work, technical work and cultural work, which are described below.

2.3.1 Political Work

Political work involves influencing the development property rights, boundaries and rules in an attempt to support an institution within the wider social system. Thus, political work mainly refers to the regulative pillars of institutions, involving the creation of rules and regulations. According to Perkmann and Spicers' (2008) framework, political work can be divided into the activities *advocacy*, *vesting* and *defining*. Defining can be described as the boundaries between who is inside and outside a social system, advocacy as propagating a practice to other actors through direct social persuasion and vesting as entitling particular interested actors with specific roles and rights. To undertake this kind of work, institutional entrepreneurs must possess certain political skills, which makes it possible for them to push other actors into specific roles by aligning their interests and the specific institution. These skills are often concentrated among actors such as politicians, lobbyists, trade unions, industry associations and advocacy organizations. These actors often specialize in creating linkages between groups with different interests. Political work provides a social basis for the construction of institutions, but it does not provide models on how they function, which requires technical work (Perkmann & Spicer, 2008).

2.3.2 Technical Work

According to Perkmann and Spicers' (2008) framework, technical work relates to the cognitive-cultural pillar of institutions which involves the construction of shared views as well as 'mental models'. According to the framework, technical work can be divided into the four activities *theorizing*, *standardizing*, *mimicry* and *educating*. In broader terms this means creating categorizations, cause-and-effect diagrams as well as projections. Institutional entrepreneurs can pursue theorizing by producing theory and models, standardizing by creating links between a new practice and already institutionalized practices, mimicry through imitation of earlier ideas, and educating by establishing

abstract models of the institution and by also educating actors so that they are able to use the created abstract models. In order to carry out this type of work, institutional entrepreneurs need analytical skills, meaning the ability to create abstract models and representations of the institution. These skills are often concentrated and inhabited among actors such as consultants, social scientists and academics with technical, technocratic or expert competencies. Models created through technical work makes institutions more distinguishable, meaning that they are more easily transferable from one setting to another. Technical work is less effective when making actors 'attached' to an institution, for this, cultural work is needed (Perkmann & Spicer, 2008).

2.3.3 Cultural Work

To do cultural work in accordance with Perkmann and Spicers' (2008) framework, institutional entrepreneurs engage in work relating to the normative pillar, which stipulates common ways of behaving and acting. According to the framework, cultural work can be divided into the activities *constructing normative networks*, *changing normative associations* and *constructing identities*. Further, it can be described as presenting an institution in a way that appeals to an audience beyond those who have a direct interest or technical stake in the institution. Institutional entrepreneurs can target other actors' belief system by shaping their identities and thereby encouraging them to act in accordance with an institution. This often involves building a practice in a broader normative framework and constructing networks with other organizations in order to provide the practice with a degree of normative validation. The institutional entrepreneurs require cultural skills which involves the ability to frame an institution in terms of broader values, shaping it into normative attitudes and creating common identities. These skills seem to be concentrated amongst groups whom are able to manipulate and monitor public opinion and perception, such as journalists, public relations experts, social movements, advertising agencies and intellectuals (Perkmann & Spicer, 2008).

2.3.4 Multiple Forms of Institutional Work

Perkmann and Spicer (2008) conclude that enduring management fashions are institutionalized when different types of actors are involved. By contrast, less successful institutionalization attempts seem to be those which attract a limited range of actors and, hence, institutional work skills. Another conclusion is that management fashions are more likely to become institutionalized through the cumulative results of different kinds of institutional work over time, compared to a common output of institutional work at specific points in time. In short, for a management fashion to become an institution, the authors conclude that multiple institutional workers with different skills performing cumulative institutional work are needed.

2.4 Theoretical Approach

To this end, we will use Perkmann and Spicers' (2008) framework on institutional work to examine how lean has become institutionalized in the Swedish manufacturing industry context. The possibility of examining lean in this particular context was highlighted in a study by Larsson (2012), as she reported that the shape of the life cycle pattern of the lean production concept in the manufacturing context in Swedish print media deviated from the typical bell-shaped pattern found in

previous management fashion research. The study observed two full bell-shaped curve patterns, one in the period of 1990-1997 and a second beginning around 2002 and continuing until the studied period of 2008 (Larsson, 2012).

These indications will in our study be examined further and the supply-side actors involved in the institutionalization of lean will be established as well as what type of institutional work these actors did will be established and analysed. The ten activities explained in the framework as presented in the table below will serve as a guideline in answering the first research question; *what actors were involved in the institutionalization process and what institutional work did they perform, and what motivated their participation in the institutionalization process?* The underlying reason for identifying what type of actors that participate in the institutionalization of lean is to map out who they are, but also what their contribution is. They are also important as their participation in this study enables them to share their view of the institutionalization process. By identifying who they are and what their contribution is also enables us to categorise them into different types of actors, providing different types of institutional work. Their work is, however, not necessarily the objective of developing lean, but is simply being categorized in our conceptual framework, which is why we go beyond the framework to question what their motivational drivers are in working with lean. In order to address the first research question, the data gathered from the interviewed actors will be analysed through this framework and the table illustrated below will be used in the first part of the results to summarize and illustrate what type of institutional work and activities each identified actor has performed.

Table 1

Institutional work associated with political, technical and cultural work

Institutional work	Activity	Actor
Political work	Advocacy	Dominant industry player
		Unions
		Employers organisations
		Consumer groups
		NGO's
		Vendors
	Vesting	Government
	Defining	Standard organisations
		Think tanks
Technical work	Theorizing	Technical consultancies
	Standardizing	Standard organisations
		Consultancies
		Professional bodies
	Mimicry	Standard organisations
		Think tanks
	Education	Universities
		Training providers
		Professional associations
Cultural work	Constructing normative networks	Professional actors
	Changing normative associations	Professional associations
		Gurus
	Constructing identities	Professional associations
		Gurus

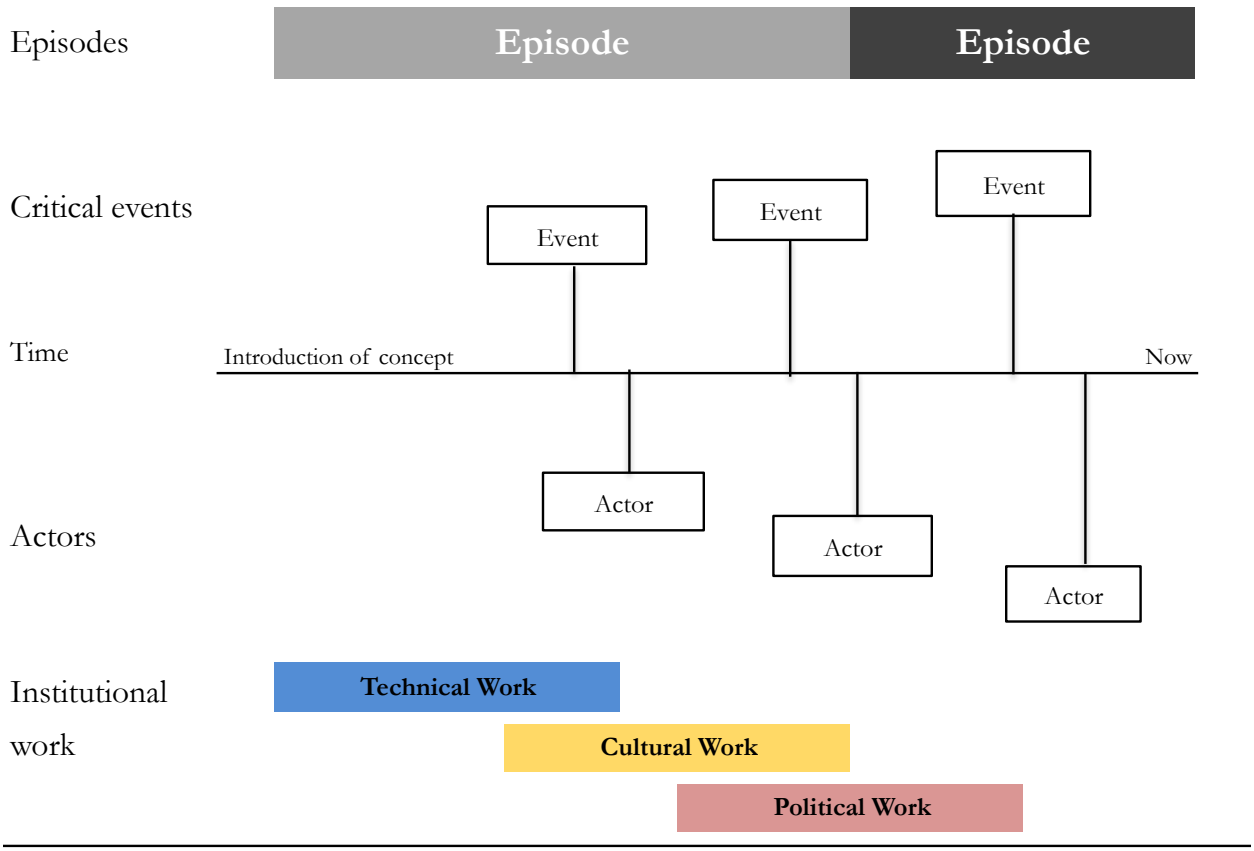
Table 1. Perkmann and Spicer (2008, p. 32)

The framework provided by Perkmann and Spicer (2008) is, however, not sufficient to explain what type of institutional work occurs at what time in the institutionalization process and therefore it is not sufficient when answering the second research question; *how did the institutionalization process develop over time; i.e. how did this institutionalization happen?* To be able to answer this and explain how lean has become institutionalized over time, an additional approach is needed. Inspired by Gibassier (2017), it was deemed appropriate to use a similar timeline, which enables an illustration on how episodes, critical events, actors and their institutional work can be viewed in its entirety. By identifying different episodes that are characterised by different themes which have been specific to a certain time period, it facilitates an explanation of the institutionalization. Beyond this, it is also possible that

critical events can be identified during this time which could have driven the institutionalization. The episodes and events could then be analysed through the lens of institutional work to see if they can explain why a certain type of institutional work was performed at a specific time and if these episodes and events can help explain that. This can therefore serve as a description and an illustration of the institutionalization process as a whole, to then be viewed in relation with table 1. Thus, the figure below will be used as a basis for presenting the second part of the result in order to answer the second research question.

Figure 1

A timeline of the identified episodes, critical events, actors and their institutional work.



3. Method

The method begins with a section about data collection, followed by an introduction of the identified actors in the study, which have been divided into actors within the Production Leap and actors outside the Production Leap. Finally, a section about how the data is analysed is presented which is followed by a section about how the research has been evaluated.

3.1 Data Collection

This paper relies primarily on interviews with supply-side actors identified by Larsson (2015), whose study focused on the lifecycle pattern of the lean production concept in the manufacturing context in Swedish print media. She concludes that national initiatives were the main driver of the concept in the second popularity boom, the supply-side actors from these initiatives are identified and can be used to further study this unique case. Although the study did not focus on institutional work, there are indications that suggest activities related to institutional work. The influential actors identified by Larsson (2015) were used as a starting point but also as a means to find other influential actors that were important both within and outside the national initiative. These actors were interviewed and they were asked to mention other actors and events they thought were important in the diffusion and institutionalization of lean in the Swedish manufacturing industry context. This type of collection method is also known as snowball sampling (Halvorsen, 1992) and it helped us identify both additional important actors as well as events involved in these processes. This process helped us arrange interviews with important actors both within as well as outside the national initiative, but it also helped us identifying important actors or events which occurred before the second fashion boom whose actions facilitated or led to the national initiative or other important events closer to the second fashion boom.

The data has been collected over a time period of three weeks in March of 2018. It was collected through semi-structured interviews, which facilitates an intensive and detailed research of a specific phenomenon. Further, this approach enables a flexible interview process with an emphasis on how the respondent frames and understands issues and events (Bryman & Bell, 2017). Prior to the first interview, an interview guide (see appendix 1) was designed to keep the interviews focused on relevant information as well as to help us in the interview situation. A few days before each interview, the questionnaire was distributed to the respondents. This step helped the interviewees better understand the aim of the interview, but it also helped them prepare to, for example, avoid providing abundant and irrelevant information.

In accordance with the purpose of semi-structured interviews, the interview guide was used as a guideline but sometimes additional questions were asked as the interviewer picked up on things said by the respondent (Bryman & Bell, 2017). Another reason why we used semi-structured interviews was that certain actors were expected to be involved in more than one type of institutional work, meaning that questions had to be added in certain interviews in order for extensive information to be obtained. The interview guide was used as a navigator and included questions that had to be asked, but every interview was unique and the flow of the conversation was followed to better

capture the main discussion points that were unique to each interviewee (Czarniawska, 2014). The interviews were held in Swedish and lasted approximately between 25 and 75 minutes.

The supply-side actors identified were categorized either as inside or outside the national initiative, and those inside being governmental agencies, union & employers' organizations, training providers and universities. The actors outside are identified and categorized as consultants, academics, professional associations and dominant industry players. These actors are further described below.

3.2 Identified Influential Actors

In this chapter, the most influential supply-side actors are presented and they are identified either by Larsson (2015) or along the data gathering process. In total, there are eight different types of actors, all of which have been interviewed and the specific respondents representing each actor can be found in appendix 2. In the institutionalization of lean, the national initiative the Production leap and the actors involved can be seen as an entirety and is therefore introduced first, and then actors are presented as either within or outside of the Production Leap.

The Production Leap

A national initiative named the Production Leap was initiated in Sweden in 2006. It aimed at increasing productivity, competitiveness and the capacity for development in the Swedish manufacturing industry, which in turn would strengthen long term prosperity for Sweden. Initially, IF Metall, Teknikföretagen, Vinnova, KK-Stiftelsen, Tillväxtverket, Chalmers University of Technology and Swerea IVF participated in the Production Leap, collecting a broad set of skills and interests. The argument for their activities can largely be explained by the outcomes and recommendation from the report "Made in Sweden - Production for Competitiveness" that was released in 2006. It unfolded a significant long term uncertainty concerning small- and medium-sized enterprises within the Swedish manufacturing industry, which was considered a national interest. As the aforementioned particular industry showed lack of productivity and efficiency, the report suggested a solution implying Lean principles. Up until now, the Production Leap has worked with more than 250 companies and it is still government funded.

3.2.1 Actors Within the Production Leap

The Production Leap can be divided into four sections with one or two organizations working within each section, all with different roles and functions. The actors within the Production Leap will be presented in these categorizations below, and are as follows; financiers, union and employers' organizations, training providers and universities.

Governmental Agencies - Since 2006, three financiers have been involved in funding the project, Vinnova, KK-Stiftelsen and Tillväxtverket, with Vinnova being the only financier to fund this project for the entirety of its ongoing process. All of the organizations are state funded and work in some capacity to fund research or businesses that can help Sweden develop. According to these financiers, the Production Leap is considered to be helping Swedish manufacturing companies and their competitiveness. From 2006 their role has been to fund the Production Leap and since they are

a state-funded financier it means that the Production Leap has had political support from the beginning.

Union and Employers' Organizations - There are two stakeholders involved in the Production Leap, the employers' organization Teknikföretagen and the union IF Metall, both of them were the initiators of the project back in 2006. Their role in the Production Leap is to both operate and support it with their own regional and local work. IF Metall wants to create better working conditions and more competitive companies by developing the work content as well as the organizations, and the Production Leap is considered a necessary part of that goal. Teknikföretagen deem the Production Leap to be an important part of their mission to improve the competitive conditions in Sweden and to give their member greater capacity to develop new ideas that make Swedish economy grow perseveringly. Without these types of organizations, the concept of lean would not have been diffused and adopted in the same rate but perhaps more importantly their involvement in the Production Leap has created legitimacy among workers and organizations in the Swedish manufacturing industry context.

Training Providers - The first responsible authority involved in the Production Leap is Swerea IVF, together with the universities they are responsible for the national coordination of the Production Leap. Swerea IVF is responsible for the coaching of the companies, developing coaching methodologies as well as follow-up on the coaching. The responsible authorities are the actors within the Production Leap which are performing the practical work with the participating companies and are therefore deemed an important and influential actor.

Universities - The second responsible authority involved in the Production Leap are universities, with Chalmers University of Technology and the Royal Institute of Technology (KTH) in the leading roles. Universities are responsible for educating the participating companies in the Production Leap, focusing on a broad spectrum from the board of directors to the workers on the floor. They are also responsible for creating and developing the lean courses which the participating companies attend.

3.2.2 Actors Outside of the Production Leap

There are a number of actors outside of the Production Leap which have played a major role in the institutionalization of lean. These actors have been identified by the respondents themselves in the interviews and have been divided below into four categories which each participates in a different way.

Consultants - A number of consultancy organizations have been established since the introduction of lean in Sweden. In this study, two companies working with educating and coaching lean in companies have been studied. The range of consultants or coaches is broad and the quality varies between long term methods and quick-fix solutions. It is clear that private consultancies have influenced the institutionalization of lean to some extent, but is hard to say exactly to what extent because of their broad target group, not only focusing on manufacturing companies.

Academics - There are a number of different researchers or academics involved in the institutionalization of lean. Some are working in independent organizations and were assigned to study the effects and consequences of the Production Leap. Other researchers have been identified as influential since they provided literature regarding lean in a number of different ways and it has helped in the institutionalization of the concept. One important book in this area is "This is Lean" (Modig & Åhlström, 2012). It has been regarded as influential by a number of respondents and one of the authors and researchers of that book has been interviewed because of this. Researchers and authors are deemed important in creating awareness of lean by creating methods or models, or theorizing, which have helped the institutionalization of lean within the manufacturing industry context.

Professional Associations - Lean Forum is a non-profit association with a mission to inspire and communicate lean by hosting conferences and meetings offered to those with an equally strong passion for lean. Every year the "Swedish lean price" is awarded to a Swedish company practicing the principles of lean and it has come to gain prestige within the industry. As many of the respondents in the present study have mentioned Lean Forum's relevance for the institutionalization of lean, it was considered relevant to interview a representative in this professional association.

Dominant Industry Players - The last actor which has been identified as influential by a number of respondents is the success of large companies in Sweden. This includes companies such as SAAB, Electrolux, AstraZeneca but most of all Scania. The success of Scania can be considered as a success story and according to many of the respondents it has motivated a transition to lean for many other companies. Although Scania is not considered a supply-side actor per se, their will to share their work with lean can be seen as institutional work and they have therefore been deemed an actor relevant to interview in this study.

3.3 Data Analysis

The data analysis is essentially about data reduction, meaning that the large amount of data is reduced in order to make sense of it. Otherwise, the data collected will be much more difficult to interpret (Bryman & Bell, 2017). As a first step in the data analysis, all of the interviews were recorded with two cell phones to reduce the risk of losing any data. To become more familiar with the collected data it has to be managed, meaning that the interviews were transcribed and coded as soon as possible (Dalen, 2015). The transcribing and coding processes were undertaken throughout the data gathering period in order to aid in developing our understanding of the data, but also to remove the feeling of being swamped by the data. The coding process was initiated by going through the material looking for keywords that could later on be categorized into themes. As further interviews were held and new insights were added, previous material needed to be reviewed with this new insight in mind, meaning that the coding process included several steps that had to be repeated a number of times. By doing so, it not only contributed to a better coding process, but it could also be used as an input to improve the subsequent interviews. In the next phase, the managed data was considered in light of the theoretical framework aiming at developing connections between the data

and theory (Bryman & Bell, 2017). This meant that identified themes were compared to the framework to see if this categorization was supported in terms if institutional work, activities and type of actor.

3.4 Evaluation

When evaluating the research, we draw on Scapens' (2004) criteria of "procedural reliability", "contextual validity" and "transferability". *Procedural reliability* concerns a proper preparation prior to the study as well as a focus on reliable research methods and procedures in order for an independent observer to examine what has been done. This was approached in several ways; we had a plan to start the data gathering process early due to uncertainty related to the scope of the study; in the process of collecting data the interviews were held in accordance with a prepared interview guide; and its content was recorded and documented. Instead of using the broader term generalization, *transferability* can be used to describe how well the findings from a study can be transferred to another context as well as how different contexts can be compared to each other. In this individual case, it is evident that the findings are context specific, but this study can be considered as a contribution to the more general field of institutional work. *Contextual validity* refers in large to the credibility of the evidence from the study and the conclusions drawn from that evidence. Even though some of the events related to lean occurred some time ago, the information was able to be cross-checked as respondents shared the same view on a phenomenon. To further increase the validity, the interpretations from one interview could be used as input in the next for verification.

4. Empirical Findings

The empirical findings chapter has two parts. The first focuses on actors and what type of institutional work they perform as well as their motivation behind their work with lean. The second part focuses on the institutionalization process over time and what noticeable events and episodes can categorize the development of lean in Sweden.

4.1 Part One - Actors, Institutional Work and Motivational Drivers

After interviewing the actors that were deemed influential in their work with lean, we have identified their institutional work as well as the motivations for performing this work. The institutional work is now categorized under each actor and their motivational drivers are also presented. This part ends with summarizing the Production Leap as a whole and what institutional work the actors in the initiative cooperatively have performed.

4.1.1 Actors Within the Production Leap

Governmental Agencies

Attempts to gather political support for a practice, or *advocacy*, becomes evident in the case of the Production Leap and the governmental agencies involved in it. According to the initiators of the Production Leap, it was founded when governmental support from the financiers Vinnova and KK-Stiftelsen was actualized. The first funding occurred when IF Metall and Teknikföretagen joined and gathered support for the project. Political support has also been successful as these funds have subsidized participating companies in the Production Leap. The Production Leap gained legitimacy when the unions, the employers' organization as well as the state-funded financiers joined, which meant a broad range of skills and knowledge was accumulated. The creation and continuation of the Production Leap is a sign of a successful attempt of mobilizing political and regulatory support for the concept of lean.

According to the respondents involved in the Production Leap, the motivation behind working with lean through this initiative is a necessity for long-term benefits in Sweden. How a concept such as lean can be motivated by politicians on a national level is further exemplified by one respondent below:

> *"Those who have educated themselves and later move on to another company are still going to contribute on a national level. That is why state or public funds are motivated in supporting this type of expertise building. It is a reasoning similar to that of why a school exists."*
>
> Respondent 3, KK-Stiftelsen

Union and Employers' Organizations

There are measures within the Production Leap to *define* who is inside and outside the social system of lean. One aspect of this is that consultants and coaches take part in defining activities such as training and certifications. The hierarchy status between performing these activities within the Production Leap or through a private consultant is uncertain, but it is most likely higher if you have

performed these activities inside the Production Leap. The union and the employers' organization work with activities to delineate who is allowed to use a specific practice or not. There are also wider issues coupled with the activity defining and the lean movement. To be inside or outside of the social system cannot only be to delineate who is allowed to use a practice or not, but also to establish status hierarchies within communities of a practice as well as between those inside the communities and those outside. This can be done by separating the users of the practice from non users, this is exemplified by one respondent below:

> *"Lean is the best model right now, if you want to keep up with development you should work with lean, remove waste in the organization, work consistently with continuous improvements and all of that. That is how lean is perceived right now, it is simply the best model there is. That is why all companies feel like they have to come along."*
>
> Respondent 10, IF Metall

The union and the employers' organizations were motivated to join the Production Leap since it could benefit their members, both individuals as well as company members. One way to do this is to use concepts that could be profitable while also incorporating ideas which promote activities associated with workers' health and well-being. Their motivational drivers are further stated below:

> *"After 2000/2001 we had been working with creating strategies on how you can work with lean with tools that exist, while still considering the working environment, variation in the work and everything else."*
>
> Respondent 10, IF Metall

Training Providers

According to the respondents, *educating* activities have been performed by the training providers in the Production Leap. The educational and training content has changed over time in order to keep up with what type of education seems to work and also to better fit Swedish companies. The focus has evolved to a more top-down approach involving everyone from managers to the workers on the floor, always beginning at the top to let the knowledge flow down the organization, exemplified below by a financier:

> *"As a coach for the Production Leap, the idea is 'help to help themselves'. Regular consultants would like to sell several projects and the easiest way to do that is to make the client dependent of you and it is exactly the opposite of what the Production Leap does. As a coach you show them how to teach themselves the know-how and the techniques, that way they can teach the next level of employees and so on."*
>
> Respondent 1, Vinnova

The motivational drivers for the training providers are similar to those of the financiers. The training provider is Swerea IVF and they are partly a government funded organization which has a goal of benefiting industrial innovation and renewal. The broader motivation is to keep getting funding from Vinnova and KK-Stiftelsen, which will continue as long as the Production Leap is deemed beneficial for Sweden in the long term. According to the training providers, a second motivation is to help the participating companies become more effective and also to be a link between universities and companies, doing this by translating the research based knowledge and distributing it.

Universities

Research and practice being aligned have also been involved in *theorizing* in the case of the Production Leap. A respondent from IF Metall is emphasizing the need for sustainable development in respect of its members, complaining about the original lean methodology. By cooperating with Swerea IVF, a combination of tools and philosophies were developed which have been key in the deployment of lean. Alongside the Production Leap, research on evaluation has been carried out, which has been used as input to adjustments in the methodology and use of lean. Mostly, the focus of such research has been on its consequences on the working environment and how lean can be adjusted to better suit a Swedish working climate. By having a combination of practice and research, coaching the participating companies is also facilitated. One respondent further elaborated:

> *"We have always worked on developing the methodology in the Production Leap. The first version was initially developed before the Production Leap, deriving from "ProDesign" and the "Linnéprojects". It has later been reinforced and added on gradually, but there is a red line. It is really an evolution, not a revolution in the development work."*
>
> Respondent 7, Swerea IVF

It is also evident that the universities have been involved in *educational* activities when they have educated other actors so that the actors themselves are able to use the developed models. Courses have been developed by private consultants, but on a larger scale they have been developed within the Production Leap to train managers and workers on different universities in Sweden. This is exemplified by one of the founders of the Production Leap, as well as right now being the course coordinator of lean at Chalmers University of Technology:

> *"There were a few of us and we thought it was about time that someone developed courses, so in 2003 I developed the first 7,5 credits course here on Chalmers, so that is when we started to practice lean."*
>
> Respondent 5, Chalmers University of Technology

Other than the fact that the Production Leap has funded some research, there are a few other motivational drivers for the universities' involvement in lean research. On one hand, there was a

need to investigate the relation between human agency and efficiency. One academic performed evaluations on the Production Leap which showed an explicit correlation between working conditions and the actual quality outcome. On the other hand, the motivational driver reflected the value loss by constantly looking for new ways to increase efficiency, which is explained below:

> *"Historically, we have seen one management concept relieve another which are then rejected or simply faded away. Then there are companies that have stuck with their strategy for a long time, and we have realised the waste in changing concepts every third year. It creates frustration among people, it cost a lot of money and there are never any real results in it. To find a well-functioning lean concept that can work long term is my motivational driver."*
>
> Respondent 6, KTH Lean Centre

The Production Leap

Not one single actor from the Production Leap has been more prominent than the other in the *creation of networks*, as all participants have been equally important, as the different types of organizations within the Production Leap contributed with different competencies. By funding the project, the financiers Vinnova, Tillväxtverket and KK-Stiftelsen have been critical to its long term survival, the stakeholders IF Metall and Teknikföretagen in bringing the customer base, and the responsible authorities Chalmers University of Technology/KTH and Swerea IVF in bringing expertise and research. As previously mentioned, a collaboration or a *network* between the academy and the business world has been prominent in the case of the Production Leap. The reason behind this collaboration is further explained by one respondent:

> *"Roughly speaking, teachers and researchers at universities know what can be achieved in different areas, but they do not always know what to do. At the same time, the business people know pretty well what they want to achieve and their customers' needs, but they do not always know how it is done."*
>
> Respondent 3, KK-Stiftelsen

One motivational driver in *creating networks* such as the Production Leap is that different skills and knowledge is attained and distributed among the members of the network. The creation of a network as large and influential as the Production Leap can be considered as bringing legitimacy, which is another motivational driver according to the respondents.

4.1.2 Actors Outside the Production Leap

Consultants

The most prominent institutional work regarding *defining* is made within the Production Leap. However, *defining activities* such as delineating who is allowed to use a specific practice or not has been performed by private consultants and this is exemplified by one respondent below:

> *"Then we have our basic training, lean in practice and lean advances. Coupled with that we have certifications, lean games with supervisor training that we sell and there is also Lean Kata exercises. We also have courses and seminars that we run together with Plan."*
>
> Respondent 9, Revere & Lean Forum

Many respondents argue that there are private consultants that do not practice lean the right way or that they communicate the concept of lean as a "quick-fix" aimed at quick returns rather than focusing on long-term prosperity. However, the two consultants outside the Production Leap share a similar view as well of practice and exercise on lean as the actors within. Their *educational activities* are exemplified below:

> *"We usually say that we focus on transferring competence. In this case we practice together with them but let them do their "value flow chart" on their own, even though we sometimes have to hold their hand in the process. We never do the analyses ourselves, it is the management themselves that have to do the analyses and conclusions, while we coach them"*
>
> Respondent 9, Revere & Lean Forum

The private consultants emphasize the importance of collaborating with other actors similar to themselves, one example of this being the formation of the *network* "Plan". Further, the collaborations are not restricted to include Swedish actors only, but rather lean networks are internationally established or as one actor explained:

> *"We work with the lean transformation group in the US. If you are a nerd within the context of lean, you know who John Chuck and David Verble are and we are a part of a group that tried to push GM closer to the methods used at Toyota. John Chuck was then assigned to gather a group of experts, which has stuck together ever since and sometimes we make larger assignments internationally. They have been great partners and are a part of a network called "Lean Enterprise Institute" which is active on most continents and we can pretty easily gather a group of people with long experience."*
>
> Respondent 8, LeanConcepts

One underlying motivational driver for private consultants is that they always need to support and benefit the commercial activities to make profits. In this case, it means targeting a broader customer base but it also means that larger companies are preferred as they provide longer and more profitable relations.

Academics

According to the respondents, lean was first diffused in Sweden as a set of principles and tools, and through the years it has been a subject of criticism and consequently a subject for continuous improvements and adjustments. The introduction of the concept in Sweden started with "The Machine That Changed the World" (Womack et al., 1991) and several studies from the International Motor Vehicle Programme. However, the research on the concept of lean was at that time perceived as insufficient, this due to the almost exclusive focus on its implications in practice. On a more contemporary note, lean is seen as a philosophy, or a way of thinking, which also creates room for ambiguity and hence a need for theorization of the concept. When addressing the *theorization* of lean, one of the authors of the book "This is Lean" explains:

> *"There was a growing frustration on how badly defined the term was, it really is, it is not defined at all which makes it quite problematic when you try to do research. It gets particularly problematic when it is defined in entirely different ways. That is the reason to why we chose to write the book."*
>
> Respondent 2, Stockholm School of Economics

A motivational driver behind studying the concept of lean was according to one respondent that there simply was not enough research on the concept of lean, meaning that for the concept to be as successful as it has been, further research was needed. Another motivational driver for academics was as mentioned above the need to concretize and create a better definition for lean.

Professional Associations

There is mainly one important professional association which is involved in institutional work and that is Lean Forum. It is meant to be a gathering for people that shares a passion for lean. The motivational driver behind *constructing a network* such as this seems to be that it can create legitimacy if a lot of important actors are involved and this legitimacy is still increased by the introduction of the yearly lean price.

> *"For one thing we have not been involved in the network the Production Leap, but we have been in networks with other consultancy firms and we are also collaborating with Plan and Lean forum"*
>
> Respondent 9, Revere & Lean Forum

Dominant Industry Players

Another way of *changing normative associations* or presenting an idea with broader values which could appeal to a wider audience is to use success stories. Almost all of our respondents indicated that the success of large Swedish companies had been important in changing individuals as well as organizations' view on lean because it proved that working with lean could be effective and successful. One company in particular, Scania, was argued by ten out of eleven independent respondents to be critical for the institutionalization of lean. The importance of Scania is further stated:

> *"One positive thing is that the companies are happy to share their examples and that is not something you hear about other concepts or projects, normally companies do not want to share. All companies working with lean share, even though you later have to make your own version. It is not dangerous to share your story and Scania understood that very early and other companies did not."*
>
> Respondent 4, KTH Lean Centre

In response to the common perception of Scania as an important influencer, a former manager of the Scania production system was interviewed and was asked to elaborate on his thoughts regarding the relevance of their contribution, onto which he replied:

> *"Scania got a reputation of being quite early and also more importantly it was the CEO at Scania, Leif Östling, that pushed for the importance of sharing their version of lean […] There is some PR involved as well. Leif Östling knew a consultant who wrote a book that praised Scania enormously, a little bit too much if you ask me. It became very famous that way, through a book called "Profit Beyond Measure" I think. It contained a lot of lean and it became public quite early. When the management of Scania said that they were going to work with lean it became more famous so to speak."*
>
> Respondent 11, Scania

As a user of the lean concept, the most prominent motivational driver for Scania is seemingly the objective of profitability. The motivation behind being that open and sharing in their work with lean is further explained by a former employee below:

> *"There were some companies which got in contact with Scania and wanted to go and study how they worked with lean and it was good for the brand and that is the main reason why they shared their experiences as much as they did."*
>
> Respondent 11, Scania

4.1.3 All Actors Involved with Lean in Sweden

The last institutional work of *changing normative associations* has been performed by all of the actors involved in the development and institutionalization of lean. The concept of lean was introduced in Sweden in the early 1990s and according to the respondents it has changed drastically since then, both how it is perceived but also how it is practiced, thus, it has changed its normative association. Upon its introduction in Sweden, it had limited focus which according to some respondents did not fit the Swedish context, meaning it had to develop further until it could be proven effective.

> *"It felt a little bit unfamiliar in Sweden so the idea was that values which we take for granted and that are standard in Sweden should be included in the Production Leap. In Sweden we do things in a different way, such as decentralized organizations, which did not exist in Japan. The idea was to create a generic model."*
>
> Respondent 1, Vinnova

To better fit a Swedish context, the concept had to change from only including the methods and tools of lean to develop principles to develop behaviours and routines for lean, it changed its normative association. These later developments have included a greater focus towards the people within the organizations working with lean, including a greater emphasis on the development of leadership and the working environment. This in general means that the concept has evolved to be presented in a way that appeals to a wider audience and the concept is now based in a broader normative framework, exemplified below by one respondent:

> *"After 2000/2001 we had been working to create strategies on how to work with lean with the existing tools, while simultaneously considering the working environment and variation in the work and similar things. We have worked in different ways with lean, we are now working a lot with something called "sustainable work".*
>
> Respondent 10, IF Metall

When lean was introduced in Sweden it was not that successful. According to one respondent the concept was mistranslated in the beginning, people thought it was supposed to be resource scarce production but in reality it is supposed to be reserve scarce production. In order to fit the Swedish context better and by that making the concept more successful it had to change, meaning that there was always an underlying motivation to add principles and philosophies to develop lean.

Table 2
Empirical findings of institutional work performed by the supply-side actors

Actor	Institutional wor	Activity	Nature of work
Governmental agencies	Political work	Advocacy	• Through governmental support, lean was advocated as the solution to the underachieving manufacturing industry in Sweden
Union and employers organisation	Political work	Defining	• Using lean has established status hierarchies defining who is inside and outside communities
Training providers	Technical work	Educating	• Within the production leap, Swerea IVF has been responsible for for educating activities by establishing a group of lean coaches.
Universities	Technical work	Theorizing	• To develop methodologies, KTH and Chalmers have been involved by aligning practice with theory.
	Technical work	Educating	• By educating the participating companies in how they can learn to educate others.
The Production Leap	Cultural work	Constructing normative networks	• The production leap can be considered as a network with different competencies.
Consultants	Political work	Defining	• By certifying clients as legitimate users of lean and providing lean courses on different levels.
	Technical work	Educating	• With long term incentives, the consultants work on transferring competence by coaching.
	Cultural work	Constructing normative networks	• By creating networks with international actors and professional associations.
Academics	Technical work	Theorization	• As lean is broadly expressed in practice, researchers have been intereted in concretizing the concept.
Professional associations	Cultural work	Constructing normative networks	• Gathering people with a shared interest in lean, also awarding companies for their contribution when working with lean.
Dominant industry players	Cultural work	Changing normative associations	• In the case of Scania, their use of lean has been considered a success and by sharing their methods they have been normative.
All actors involved with lean in Sweden	Cultural work	Changing normative associations	• All identified actors have as a group changed normative associations related to lean.
	Political work	Vesting	• Not observed
	Technical work	Standardizing	• Not observed
	Technical work	Mimicry	• Not observed
	Cultural work	Constructing identities	• Not observed

4.2 Part Two - Institutionalization & Episodes

The second part of the empirical findings is presented below with the purpose to explain the institutionalization process over time, starting with the introduction of the lean concept in Sweden in 1990 up to approximately the first half of 2018. As different themes have characterized the time periods of the institutionalization process; they have been distinguished in separate episodes. Building on this, illustrated above the timeline in Figure 2, four episodes as well as several important events which have been critical for the institutionalization process as a whole, have been identified by the interviewees. Below the timeline, institutional work and the identified actors can be seen in order to illustrate when the most important institutional work was performed as well as when the identified actors performed their work, both which have been important to explain the institutionalization. When all of this is put together a greater understanding of the entire context and the institutionalization process is established.

4.2.1 Episode One - The First Wave of Lean in Sweden (1990 - 2000)

An important actor and event in the institutionalization of lean is the case of Scania in Sweden. By sharing their ideas and vision, many companies have been inspired to change into this new direction. To better understand the reasoning behind the motivation at Scania to work with lean, a broader perspective has to be taken into account. The concept of lean was introduced in Sweden in the early 1990s. The first major event considered as the introduction of lean in Sweden was the book "The Machine That Changed the World" (Womack et al., 1991). This book was published as an outcome of the "International Motor Vehicle Programme" at Massachusetts Institute of Technology (MIT), which challenged the mass production paradigm by introducing a new term; "lean production". This lead to a significant amount of research and research projects involving lean, particularly from MIT and this then lead to the first fashion phase of publications regarding lean. This was the first step in the diffusion, but this work can be connected to the fashion phase rather than a phase involving institutional work. However, initial research spurred other types of work as well as actors joining and this eventually led to institutional work and institutionalization of lean in the manufacturing industry context in Sweden and it can therefore be seen as an important stepping stone in the process.

4.2.2 Episode Two - The Involvement of Influential Swedish Actors (1996-2000)

By the time of the introduction of lean in Sweden, the country endured a severe economic crisis, which in particular struck the Swedish car manufacturing industry. A few years after the crisis, SAAB implemented lean with the help from Jan Helling, known for his research that inspired parts of the book "The Machine That Changed the World" (Womack et al., 1991). This book raised awareness of the success experienced in the Japanese car manufacturing industry and by the aid from Japanese lean experts SAAB became one of the best manufacturers in Sweden. In response to an increasing competition, larger demand and inefficient working methods, their results from working with lean made other companies realize they needed to change, and in particular large companies such as Electrolux, AstraZeneca, Volvo and Scania.

The empirical findings show that the most important and influential user in the institutionalization of lean proved to be Scania. Their work with lean served as a success story for the concept of lean and this made companies realize that they could benefit from working with lean and Scanias' work can also be considered the first observed cultural work, in the institutionalization process of lean in Sweden, in the form of changing normative associations. Scania was always open to showing their lean work to other companies and their motivations and reasoning behind this is that it could serve as branding or brand recognition. Instead of the previous reputation lean had in regard to having negative effects on both the personnel and economic returns, the success in the large companies meant that lean was framed in terms of broader values where even the workers could benefit. It also meant that positive attention was directed towards the concept of lean, indicating that the concept was gaining status and legitimacy and in turn lean was recognized by and appealed to a wider audience. The success of Scania meant that an international concept could be transferred and adjusted into a Swedish manufacturing context and their success in adopting lean also signalled that the mass producing paradigm in Sweden was being challenged.

It was also during this episode that consultants joined as well as when the professional association Lean Forum was initiated. Both actors have performed institutional work since their introduction in the institutionalization, however, their work that has not been identified as equally important. Consultants were mainly motivated to join the lean movement for economic reasons and they have performed the activities defining, educating and constructing normative networks. The motivations behind the initiation of Lean Forum was that a network such as this could establish a sense of legitimacy around the lean concept and their work can be regarded as the activity constructing normative networks.

4.2.3 Episode Three - Political Initiation Phase (2000 - 2006)

Scanias' cultural work continued, but in order for the institutionalization process to continue other types of institutional work were needed, this time in the form of political work. In the year 2000 the project "ProDesign" was initiated by similar actors as the Production Leap. It was funded by KK-Stiftelsen and operated by Swerea IVF and Chalmers University of Technology. The project was pursued with the objective of promoting growth and profitability among small and medium-sized enterprises within industries in need of growth. In the project, companies were offered training in product development focusing largely on production and the interaction between humans and technique. The project developed to include more of lean than was originally planned and discussed and therefore it was the first time political work around lean was observed in the institutionalization process of lean in Sweden. This work included the activities advocacy and defining and the motivations for the actors to start this initiative was for the benefit of Swedish manufacturing companies and in the long term for the benefit of Sweden.

Around the same time ProDesign ended, the research initiative "Made in Sweden - Production for Competitiveness" was launched and the underlying motivation was the underachieving Swedish manufacturing industry. This was in general because of a growing competition, which was clearly evident in the industrial manufacturing, an area where Sweden traditionally had been both competitive and effective. This competition consisted mainly of price pressure, largely from Asian manufacturing. In a poll from the report "Made in Sweden - Production for Competitiveness", one fifth of the questioned companies said that they were going to move their production abroad before 2010 and 40 percent answered that they are considering moving their entire business abroad. This could prove to be problematic since the production industry is responsible for 25% of BNP and 50% of the export. If company migration occurs, it would mean severe consequences for Swedish job opportunities, according to the report. The revenue to the public treasury could decrease drastically which in turn could affect the Swedish welfare system. The project suggested that several measures were needed in order to improve the situation, including focus on education, marketing and political initiatives. However, one of the projects which were derived and launched as a consequence of the suggestions in the report was the Production Leap. Although the "production for competitiveness" is not identified as a major institutional work in itself, it stressed the importance of Swedish companies using lean which in turn led to the Production Leap. Hence,

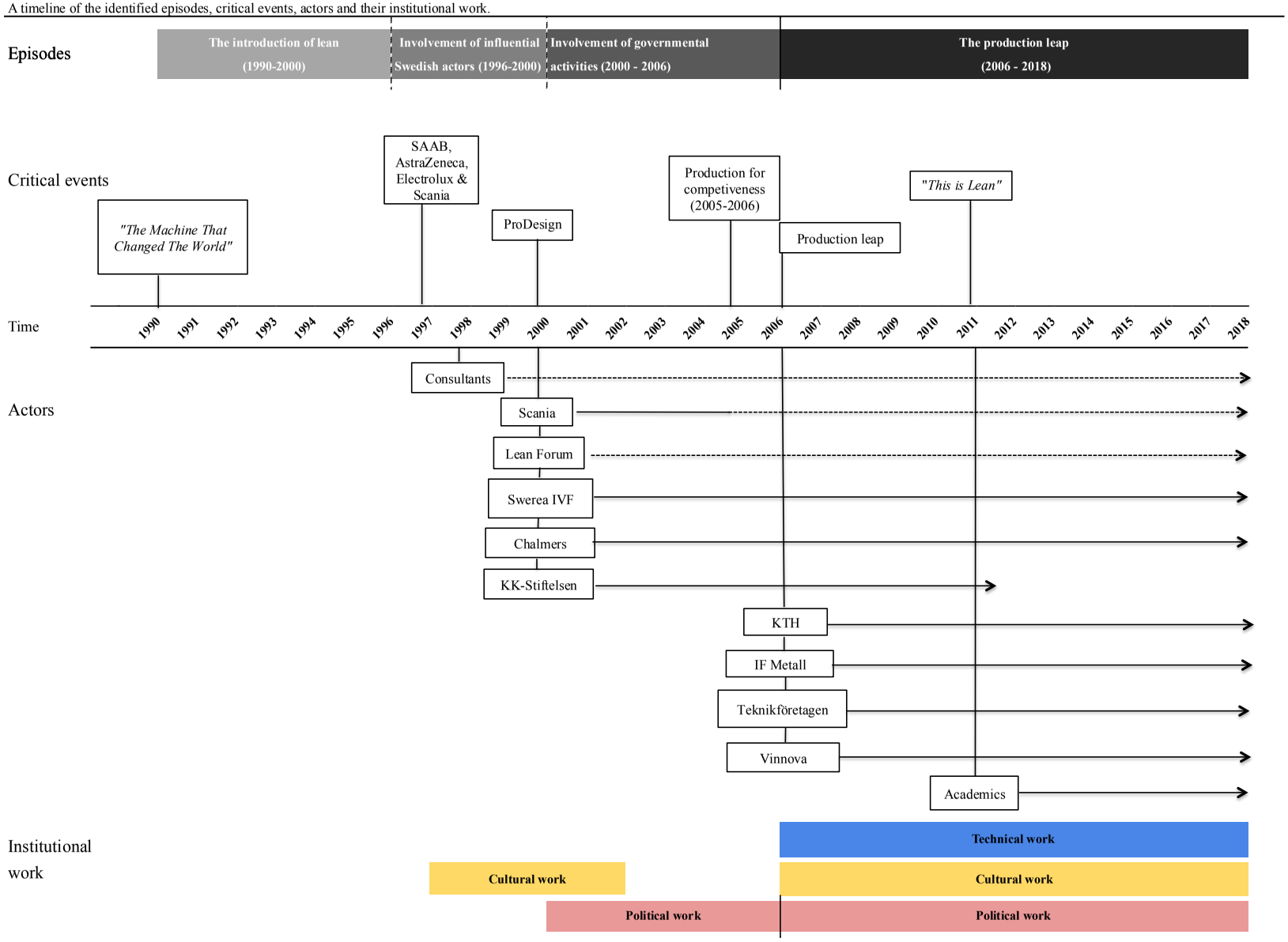
production for competitiveness and its political work can be viewed as an important stepping stone in the institutionalization process of lean.

4.2.4 Episode Four - The Production Leap (2006 - 2018)

The political initiation phase of "ProDesign" and the suggestions from the report "Made in Sweden - Production for Competitiveness" led to the initiative called Production Leap. The project started in 2006 and it is still ongoing today with funding that is guaranteed until at least 2020. The actors involved in ProDesign continued their work in the Production Leap but was joined by KTH, IF Metall, Teknikföretagen and Vinnova. Their motivations are similar to the actors joining ProDesign, but the union and employers' organizations also had an underlying motivation to benefit their members both financially as well as to create a better working environment. The Production Leap has been viewed as a major event in the institutionalization of lean and all types of institutional work through the activities advocacy, defining, educating, theorizing, constructing normative networks have been identified. The initiative includes political work through its state-funding, being allocated to facilitate research in lean development and practical use of lean but also to help subsidize certain participating companies. Technical work can be identified in the research revolving lean and its implications on practice, but also on the creation of education material and courses. Cultural work can be identified in the creation of the initiative; it has been the creation of a network which brings legitimacy to not only the Production Leap but to the concept of lean itself. Further, the initiative has been of major importance when it comes to the changes that have occurred to the conception of lean, being the largest actor considering its number of diverse participating actors, their work has been important in changing lean from only containing tools and methods to incorporate "the human aspect" into the principles and philosophies of the concept. During this period, the Swedish book "This is Lean" (Modig & Åhlström, 2012) was also published which is considered as important technical work in the institutionalization process. Although academics began research on the subject of lean much earlier, the book is considered particularly important and therefore the actor academics have been placed in this episode. As soon as the institutionalization process of lean began in Sweden, all identified actors have contributed with cultural work in the form of changing normative associations. This work has added positive aspects to the concept, which in turn has created a "Swedish Model" of lean including philosophies and principles, which were more appealing to Swedish manufacturing companies.

Figure 2

A timeline of the identified episodes, critical events, actors and their institutional work.



4.2.5 The Institutionalization Process

When summarized, the institutionalization process of lean in the Swedish manufacturing industry context contains 4 different episodes. These have been characterized by different circumstances and events, which in turn have led to different actors performing various types of work. By identifying events, actors and institutional work to then categorize into separate episodes enables an understanding of how the institutionalization process has developed over time. By then putting them together, the institutionalization process as a whole can be captured, as illustrated in figure 2.

5. Concluding Discussion

This paper started with the motivation to increase our understanding of the institutionalization process of the concept of lean in the Swedish manufacturing industry context. This included identifying influential actors, what type of institutional work they perform, and the motivational drivers behind their work, but also to understand the institutionalization process over time. To this end, the following part addresses the first research question, *what actors were involved in the institutionalization process and what type of institutional work did they perform, and what motivated their participation in the institutionalization process?* The type of actors involved in the institutionalization process of lean has been governmental agencies, union and employers' organizations, training providers, universities, consultants, academics, professional associations and dominant industry players. The most prominent actors in the institutionalization process, according to us, have been Scania as well as the actors involved in the Production Leap. As ten out of eleven respondents have argued for Scania and their relevance in this case, it is evident that their role as a dominant industry player has had impact, but it also makes an important finding as the framework provided by Perkmann and Spicer (2008) does not discuss the role of how important users of a concept can be considered as a part of the supply-side, nor does it reflect that the success in itself can represent an actor. As a national initiative, the Production Leap and the actors involved represent an important factor in the institutionalization process of lean. As their work with lean began relatively late, the notion of the Bandwagon effect (Benders et al., 1998) might be reflected in the case of the Production leap, as their involvement in working with lean could be a response to the risk of missing their part of a potentially highly attractive market. By working with a large number of Swedish companies involving a broad set of supply-side actors, the Production Leap has been an important propagator for lean during a long period of time.

As expected, all three types of institutional work were identified, but the most prominent institutional work was performed as cultural work by Scania, the political work by the actors involved in the Production Leap and the cultural work by all the identified actors. As a relatively early adopter, Scania made a case of being transparent and optimistic in their implementation and use of lean. Their role as a success story contributed to a cultural work where other Swedish companies were invited and their methodologies travelled outside the factories. With a strong political support, the Production Leap and its collaboration with the union and the employers' organizations enabled them to reach out and to change many organizations through the principles of lean. The last prominent institutional work that has been critical in this case is the cultural work that has been performed by all identified actors on the concept of lean. Since the introduction of lean in Sweden it has been transformed into a concept of its own. It started with the methods and tools derived from the Japanese car industry but it has changed quite emphatically over the years. The most important change has been the inclusion of a "human aspect" in the concept, meaning that working conditions and leadership characteristics have gained a larger focus.

With an exception for a few of the supply-side actors, most of the actors have a different agenda when working with lean than the agenda of developing the concept of lean. Instead, lean has rather

been used as a tool for other interests, where the actual motivational drivers behind the work with lean is often rooted in interests of long-term benefits for Sweden as a whole or the inevitable interest of long-term economic gains.

The following part addresses our second research question, *how did the institutionalization process develop over time, i.e. how did this institutionalization happen?* Although the institutionalization process of lean is difficult to describe in parts, there are some events and circumstances that have had a substantial impact on its development over time. The first significant event was the occurrence of large influential Swedish organizations using lean, their success brought legitimacy to the concept which in turn changed the perception of efficient production. As the manufacturing industry in Sweden was suffering from unproductivity and inefficiency, the successful use of lean experienced by larger Swedish companies initiated political support which suggested an extended use of lean as a solution to the problem. The manufacturing industry of small and medium-sized enterprises was particularly lacking in terms of efficiency, and it gained a large focus in the political agenda. Eventually, a national initiative called the Production Leap was established to confront this issue. By using the lean concept, their work has been an important factor in the institutionalization process and in lean becoming taken-for-granted in the Swedish manufacturing industry context.

This study is, to the best of our knowledge, the first that directly examines the institutionalization process and the actors involved in the process of a management accounting concept using the theoretical framework introduced by Perkmann and Spicer (2008). We believe our study contributes detailed insights into how lean as a global concept has been received and adapted in the Swedish manufacturing industry context and the critical events, actors and activities that have contributed to the institutionalization of lean. This contribution is important as it further adds to our knowledge of how a global idea can travel into a national context and that the direction of this process depends on actions by supply-side actors that are driven by motivational drivers not necessarily explained by a desire to propagate for the management accounting concept itself, but rather as a tool for individual agendas. Further, it can explain why development and changes in industries are not simply happening automatically or by accident, but are rather determined by processes governed by actors with various vested interests. This study also responds to the calls for further research on the phases of a management concept after being a management fashion, i.e. when a management accounting concept is unfashionable, but yet permanently diffused (Perkmann & Spicer, 2008). There are indeed more complex and comprehensive parts involved in the process of making a management concept more generally accepted, than the preceding phases in popularisation and dissemination of the same. Further, we contribute to the literature by highlighting actors involved in activities shown to contradict the institutional work framework, and more importantly identified actors that "should not" be considered influential or even a part of the supply-side.

While extant research mostly has focused on the diffusion and popularization of management accounting concepts, this study adds to the literature by focusing on the later phases in the life-cycle when the discourse has faded and the concept is considered broadly accepted. Drawing on the

institutional work provided by Lawrence and Suddaby (2006), Chiwamit et al. (2014) explained the creating and maintaining of EVA in state-owned enterprises in Thailand and China in terms of a broader societal relevance where field cohesiveness was required for its institutionalization. Hayne and Free (2014) argued that ERM-IF was institutionalized much due to a supply-side taking part in both the theorization and diffusion as well as creating and conveying, which have been considered as activities distinguished from each other. Becker et al. (2014) explain why Beyond Budgeting has not enjoyed a broader and more successful diffusion connected to identity and plasticity, and it is argued that its failure can be explained by the lack of both aspects. Gibassier (2017) described how the French elite has mobilized LCA into the governmental agenda by shaping the tool with their own codes and principles, which in turn has led to a strong sense of political impact on its diffusion. To this end, our paper provides a different perspective as it considers broader societal circumstances and the motivational drivers of the supply-side actors, which explains how lean as a global management accounting concept gets institutionalized in a specific local context over time.

Limitations of this work must be recognized, though. First, the result is most likely bound to the concept of lean, and our understanding is that this process is very concept-specific. A second limitation is that there are supply-side actors (employers' organization, additional academics and consultants) which have been excluded from this study because of time constraints, out of necessity or because additional interviews would lead to an abundance of information. Another limitation is that this study has been focusing on actors from the two largest cities in Sweden (Gothenburg and Stockholm). This is where most actors are situated, but it is still important to realize that the institutionalization process could be different if studied elsewhere, since it has been proved to be context specific. Finally, the focus has been all but entirely on the supply-side of lean, which means that actors from the user-side of lean and their importance may have been overlooked in this study.

For this reason, future research could study other concepts in other contexts to learn how the institutionalization process occurred in other cases but also to deepen the understanding of institutional work. Another possible research area could be to study institutional work in similar cases abroad in order to highlight the importance of extensive political work in the institutionalization process of management concepts. Future research could also focus on a broader perspective, including both the supply- and the user-side of another management concept as well as trying to capture institutional work nation-wide and not only around major cities.

6. References

Ax, C. & Bjørnenak, T. (2005). Bundling and diffusion of management accounting innovations—the case of the balanced scorecard in Sweden. *Management Accounting Research,* 16(1), pp.1–20.

Ax, C. & Larsson, E. (2012). Fashioning a global management accounting innovation in a local context - The case of beyond budgeting in Sweden.

Abrahamson, E. (1996). Management fashion. *Academy of Management review*, 21(1), pp.254–285.

Abrahamson, E. & Fairchild, G. (1999). Management Fashion: Lifecycles, Triggers, and Collective Learning Processes. *Administrative Science Quarterly,* 44(4), pp.708–740.

Battilana, J. & D'Aunno, T. (2009). Institutional work and the paradox of embedded agency. Institutional work: actors and agency in institutional studies of organizations, pp.31-58

Becker, S., Messner, M., & Schäffer, U. (2010). The evolution of a management accounting idea: the case of beyond budgeting. *Available at SSRN 1535485*.

Benders, J., van Den Berg, R.-J., & van Bijsterveld, M. (1998). Hitch-hiking on a hype: Dutch consultants engineering re-engineering. *Journal of Organizational Change Management*, 11(3), pp.201–215.

Bryman, A. & Bell, E. (2017). *Företagsekonomiska forskningsmetoder Upplaga 3*.,

Czarniawska, B. (2014). Social science research from field to desk, *Sage Publications*, London.

Chiwamit, P., Modell, S., & Yang, C.L. (2014). The societal relevance of management accounting innovations: economic value added and institutional work in the fields of Chinese and Thai state-owned enterprises. *Accounting and Business Research*, pp.1–37.

Cooper, D.J., Ezzamel, M., & Qu, S.Q. (2017). Popularizing a Management Accounting Idea: The Case of the Balanced Scorecard. *Contemporary Accounting Research*, 34(2), pp.991–1025.

Dekker, H. & Smidt, P. (2003). A survey of the adoption and use of target costing in Dutch firms. *International Journal of Production Economics*, 84(3), pp.293–305.

Dalen, M. (2015). *Intervju som metod 2*., utök. uppl., Malmö: Gleerups utbildning.

Eriksson-Zetterquist, U. (2009). *Institutionell teori – idéer, moden, förändring*, Liber, Malmö

Gibassier, D. (2017). From écobilan to LCA: The elite's institutional work in the creation of an environmental management accounting tool. *Critical Perspectives on Accounting*, 42, pp.36–58.

Halvorsen, K. (1992). *Samhällsvetenskaplig metod*. Lund: Studentlitteratur.

Hayne, C. & Free, C. (2014). Hybridized professional groups and institutional work: COSO and the rise of enterprise risk management. *Accounting, Organizations and Society*, 39(5), pp.309–330.

Ittner, C.D., Larcker, D.F. & Meyer, M.W. (2003). Subjectivity and the weighting of performance measures: evidence from a balanced scorecard. *Accounting Review*, 78(3), pp.725–758.

Jepperson, R. (1991). Institutions, institutional effects, and institutionalism. *The new institutionalism in organizational analysis*, pp.143-163.

Jones, C.T. & Dugdale, D. (2002). The ABC bandwagon and the juggernaut of modernity. *Accounting, Organizations and Society*, 27(1), pp.121–163.

Larsson, E. (2012). Managementmoden och popularitetssvängningar: en studie av Lean-konceptet i svensk populärpress 1990-2008, Göteborg: Företagsekonomiska institutionen, Handelshögskolan vid Göteborgs universitet.

Larsson, E. (2015). Management accounting fashion setting studies on supply-side actors in Sweden, Göteborg: BAS, School of Business, Economics and Law, University of Gothenburg.

Lawrence, T.B.B. & Suddaby, R. (2006). Institutions and institutional work. In The SAGE Handbook of Organization Studies. *SAGE Publications Inc.*, pp. 215–254.

Madsen, D. & Slåtten, K. (2013). The Role of the Management Fashion Arena in the Cross-National Diffusion of Management Concepts: The Case of the Balanced Scorecard in the Scandinavian Countries. *Administrative Sciences*, 3(3), pp.110–142.

Modig, N. & Åhlström, P. (2012). *This is lean: resolving the efficiency paradox,* Stockholm: Rheologica publishing, Bulls Graphics AB).

Nørreklit, H. (2003). The Balanced Scorecard: what is the score? A rhetorical analysis of the Balanced Scorecard. *Accounting, Organizations and Society*, 28(6), pp.591–619.

Perkmann, M. & Spicer, A. (2008). How are management fashions institutionalized? The role of institutional work. *Human Relations*, 61(6), pp.811–844.

Scapens, R.W. (2004). Doing Case Study Research. *The Real Life Guide To Accounting Research* 257.

Scott, W.R. (2001). Institutions and organizations 2. ed., *Thousand Oaks*, Calif.: Sage.

Scott, W.R. (1987). The adolescence of institutional theory. Administrative science quarterly : ASQ : dedicated to advancing the understanding of administration through empirical investigation and theoretical analysis, 32(4), pp.493–511.

Womack, J.P. Jones, D.T. & Roos, D. (1991). *The machine that changed the world: [the story of lean production]*, New York: HarperPerennial.

Østergren, K. & Stensaker, I. (2011). Management Control without Budgets: A Field Study of 'Beyond Budgeting' in Practice. *European Accounting Review*, 20(1), pp.149–181.

Appendix 1

Appendix one presents the interview guide which have been used during the eleven interviews. The interviews were conducted in Swedish so the questions have therefore been translated to English.

1. How and when did you come in contact with lean? What made you interested in lean?
2. When did you start working with lean (and in an eventual collaboration) and why (what was the motivation)?
3. How have you worked with lean?
    b. Has the work procedure changed over time? When was it the most intense?
4. Have you collaborated with any other actors?
    b. (If yes) Why? What was the purpose of the collaboration?
5. Are you still working with lean (and/or in an eventual collaboration)? If you stopped working with lean (and/or in an eventual collaboration), why/when?
6. What has been your "target group", how and why these? Has the "target group" changed over time, for example widened? If yes, why?
7. What critical events, actors, circumstances are associated to leans establishment as something "taken-for-granted" in Sweden?
8. Who else should we talk to that has been a key actor in leans establishment as something "taken-for-granted" in Sweden?

Appendix 2.

List of interviewees

Date	Respondent	Organization	Type of actor
8th of March	1	Vinnova	Governmental agency
12th of March	2	Stockholm School of Economics	University
14th of March	3	KK-Stiftelsen	Governmental agency
14th of March	4	KTH Lean Centre	Training provider
16th of March	5	Chalmers Professionals	Course coordinator
19th of March	6	KTH	University
20th of March	7	Swerea IVF	Training provider
21st of March	8	LeanConcepts	Consultant
22nd of March	9	Lean Forum & Revere	Consultant & professional association
26th of March	10	IF Metall	Union
28th of March	11	Scania	Dominant industry player