Creating a global network of shared service centres for accounting

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Abstract

Purpose – The purpose of this paper is to contribute to the understanding of the practice of IT-enabled management control change, in particular how IT-driven change is made possible from a practical perspective in a global context. It does so by investigating the redesign of the telecommunications company Ericsson's global finance and accounting function from an independent structure of numerous national chief financial officer units into one interdependent global network of shared service centres.

Design/methodology/approach – Ericsson's transformation was followed by drawing mainly on interviews and documents. The data were analysed using narrative and temporal bracketing strategies for theorising from process data.

Findings – The paper illustrates how IT-enabled management control change unfolds as a continuous interaction between a dynamic organisational structure (social dimension) and a less, but still, dynamic IT (material dimension) across time. The study also highlights how such a process is metaphorically similar to the form of a hermeneutic spiral rather than the common perspective of an arrow from the present to the future.

Research limitations/implications – The focus of the paper is on positive organisational change and how transformation is possible from a strategic and managerial point of view. Hence, less focus is placed on the employee perspective.

Practical implications – This paper stresses the importance of pre-understanding, an openness to trials and learning, and a dynami stance towards the moving targets of IT and organisation.

Originality/value – The paper provides rich empirical material. The analysis includes contemporary issues, and the practice of IT-enabled management control change.

Keywords IT-enabled management control change, Organizational transformation, Globalization, Shared service centre, Finance function, ERP system, Organizational restructuring

Paper type Case study

1. Introduction

Globalisation and access to new information technology (IT) are two interdependent forces, creating both opportunities and threats for individuals, companies and nations (Bhimani, 2003; Scapens and Jazayeri, 2003). Opportunities can include opening up new markets and expanding the customer base for many companies. Threats can include

the development of new and innovative business models that increase the possibilities for new competitors to enter a given market. Such changes have consequences not only for an organisation's strategy, structure, culture, and management control (Berger, 2006; Granlund and Malmi, 2002), but also for competencies and work (Malone, 2004).

If, due to different institutional arrangements, cultural differences and technological restrictions, it was previously necessary to manage a multinational company strategically as a portfolio of independent and vertically oriented subsidiaries, globalisation creates possibilities for integration among the subsidiaries. It is now possible to design an interdependent, horizontally oriented and more standardised management model (Chenhall, 2008). Such change is largely enabled by the use of new integrating IT, such as enterprise resource planning (ERP) (Pollock and Williams, 2009).

Integrated IT increases a company's capacity to create, store, distribute, and use information, at the same time as relational databases make it possible to re-arrange work in time and space (Chapman, 2005; Quattrone and Hopper, 2005). Work that previously needed to be sequential can now be performed in parallel. Data, once entered, are immediately accessible as information all over the company. In this way, work that was formerly highly bound to a specific physical place can now be visualised, virtualised, reconfigured and replaced in a new geographical location (Overby, 2008). Realising all this potential, however, requires combining IT solutions with organisational change(s) (Dedrick *et al.*, 2003). In addition to adopting a new management philosophy – with a stronger focus on integration, the whole company and the creation of a common global mindset – it is often important to create new organisational routines, rules and roles (Burns and Baldvinsdottir, 2005; Burns and Scapens, 2000; Caglio, 2003). If well designed, these new structural solutions can support and strengthen IT solutions in a number of ways, such as reducing costs and time and improving quality. However, without change, much of the potential of integrated IT will not be realised, and IT investments will result in failure, disappointment and frustration.

An important example of the extensive change required – often referred to as transformation – is the creation of a new organisational unit: in this case, a shared services centre (SSC). For staff functions such as finance and accounting (F&A), human resources (HR) and IT, this new support solution is presented as an answer to the existing criticism that such units often lack value-adding capabilities. Often, these supporting units have been seen as a disturbing and costly burden for the operating units. The SSC solution, however, creates an opportunity and the desire to reorganise these often large units and change them from being perceived as passive, reactive and costly bystanders into more embedded and proactive actors within the organisation. This ambition is often expressed in terms of a will to be more of a partner to managers and employees (Granlund and Lukka, 1998; Walther *et al.*, 1997). With an SSC solution, the pressure and possibilities for generating increased efficiency and effectiveness is high (IBM, 2005). For example, the chief financial officer (CFO) function must spend the same or less in resources, but at the same time be prepared to deliver a broader array of services. The integrating ERP system in an SSC solution is often of vital importance to resolve this problem (Schulman *et al.*, 1999).

Among a large number of international companies working to realise SSC initiatives, the global telecommunications company Ericsson is one of the forerunners. Using one common integrated IT platform (SAP R/3), in just a few years they have successfully created a global network of ten interdependent F&A functions (this claim is supported

by the empirical data sources that were collected over two years after the transformation was finished). With this new organisation, Ericsson has managed to transform a situation that was characterised by hundreds of dispersed, independent and locally oriented CFO units and systems, into one common governance structure and one IT system. This paper explores and analyses this successful transformation from fragmentation to standardisation from a managerial point of view.

The research objective is to contribute to the understanding of the practice of IT-enabled management control change, in particular how IT-driven change is made possible from a practical perspective in a global context. In doing so, we employ the practice-based perspective (Ahrens and Chapman, 2007; Schatzki *et al.*, 2001): our focus is on how change is implemented. More specifically, we have organised the paper in accordance to our research questions: when did Ericsson change (Section 4), why did Ericsson change (Section 5), how did they do it (Section 6), and finally, so what (Section 7). Such straightforward issues may seem too simple for research, yet they are vital when the focus of interest is on a new phenomenon such as IT-enabled management control change in a global context (Van De Ven, 2007).

2. Theoretical and analytical considerations

General management research, specifically management control research, is dominated by a structural perspective. For example, in management control the main focus is on the control system and less on the creators, users and actors of such a system (Jönsson, 1998). Of course, there are some classic exceptions (Hopwood, 1973; Simon *et al.*, 1954) but overall, during the last few decades of management control research has been pre-occupied with general abstract structures at the cost of human actors and groups (Chua, 1986; Pihlanto, 2003). In other words, there is a lack of a balanced view in management control research that integrates both actor and structure perspectives.

Recently, there has been increased interest in the existence of a duality between structure(s) and actor(s) (Briers and Chua, 2001). An increasing number of researchers have begun to pay attention to the interaction between structures and actors (Coad and Herbert, 2009). An individual (actor) or group of individuals can influence a common structure or system, while the structure or system can simultaneously influence one or many individuals (Englund and Gerdin, 2008). Over time and during a process of creation, an actor's ability to influence the common structure (e.g. routines in a management control system) varies. In the early phase, with less formalised routines, rules and roles (less structure), the actor's opportunities for changing structures are greater. In the later phase, however, actor's ability to change structures is more difficult because of the process of institutionalization (e.g. individual behaviour becomes part of the "the way of doing things" in an organisation (Burns and Scapens, 2000). For example, and as Scapens (2006) illustrates, this means that if the control system is initially more open to design and creation, later on it will be more or less taken for granted among the many users, and therefore more difficult to change.

In this context, an SSC is analytically seen as a dynamic structural solution. It is dynamic insofar as a solution today will not be the same as one tomorrow. On the other hand, it will not (and cannot) be completely different as there is often a path dependency in a chosen solution (Dechow and Mouritsen, 2005; Scapens, 2006). This structural dynamism is partly the result of individual and collective knowledge and experience, which can be both a restriction and a resource for the company.

One important aspect of such knowledge, as related to an SSC solution, is the experience and learning of using an integrating IT system (Markus *et al.*, 2000).

Therefore, IT is an important structural concept for the present study. Traditionally, IT is often black-boxed and seen as a given, static and narrowly defined concept (Barley, 1986; Orlikowski, 1992; Zammuto *et al.*, 2007). This study, however, applies a broader perspective in which IT includes and is related to a number of organisational solutions. This is what Orlikowski and Iacono (2001) call the ensemble view of technology, which ascribes dynamic and fluid features to the IT artefact that are dependent on time, use and space. With an ensemble view of technology, IT is both a social and a material artefact. It is a socially constructed artefact because the creation of, for example, supporting processes, roles and routines is open to idiosyncratic definitions (Lamb and Kling, 2003). Therefore, every IT implementation initiative can be regarded as open-ended and unique (Boudreau and Robey, 2005; Piccoli and Ives, 2005). Still, many important aspects of IT are material (Leonardi and Barley, 2008) and thus a chosen IT solution also consists of a number of more general, driving and deterministic aspects. For example, a single company cannot change the technical standard for communication, the internet protocol (Zittrain, 2008). Or, when a financial routine is firmly embedded in the IT system, it is difficult for an individual actor to change it (Costello, 2000). Consequently, IT is seen here as a socio-material phenomenon (Iveroth, 2011; Orlikowski, 2007).

The socio-material phenomenon specifically discussed in this paper is an integrated ERP solution, which is of utmost importance for a global company (Campbell-Kelly, 2003; Chapman, 2005; Dechow and Mouritsen, 2005; Granlund and Malmi, 2002; Sennett, 2006; Véron *et al.*, 2006). An ERP system is a type of modularised IT system built on a horizontal business logic, which aims to support and strengthen organisational integration and interdependencies among a company's different sub-units (Dechow and Mouritsen, 2005; Pollock and Williams, 2009). With an ERP solution, the previously functional and standalone parts of a system are integrated into a number of modules within a single system. By handling a company's transactional data in one common relational database, it is possible to improve the horizontal flow of information, products and services (Klaus *et al.*, 2000; O'Leary, 2000). The system creates a more or less frictionless interface of information between different parts of the company, making it easier to move from aggregated to detailed information (drilling down). Ultimately, a modern, integrating ERP system can support both horizontal and vertical transparency and accountability, which are important for management control of a modern company (Mero *et al.*, 2007).

An ERP system has the capacity to manage large amounts of transactional data and can be seen as the backbone of a company's information capabilities. Information can be created, distributed and used throughout the entire organisation. However, since the information is designed and managed within an organisational centre, the system, the organisation and management control can be described as a distributed solution – it is neither centralised nor decentralised, since it has characteristics of both approaches (Boland *et al.*, 1994). In addition to this transactional system, it is common to use a data warehouse, or some other form of business intelligence (BI) solution. With this complementary IT application, it is possible to create knowledge out of the large amount of data and information stored and managed by the ERP system (Davenport and Harris, 2007).

To organisationally match these two types of IT – ERP and BI – it is common to divide accounting work and CFO activities into transactional and analytical work.

Transactional work is defined as relatively standardised, less complex, and consisting of frequent work with high volumes. Owing to these characteristics, the work can be standardised, automated, rationalised and centralised, which in turn can lead to increased efficiency. Transactional work is strongly related to the greater use of supporting tools such as computers and integrated systems. Because these tools are designed to support the standardised administrative flow of transactional work, and due to their connection to an information system, maintaining a geographical proximity to the primary operation is no longer necessary. Work can be managed, allocated, and coordinated from a distant geographical place (Schulman *et al.*, 1999). Typical examples of transactional work in a traditional CFO department include working with a general ledger (bookkeeping), accounts payable (A/P) and accounts receivable (A/R).

Analytical work, by contrast, is more bounded and related to a unique situation or place. Interpretations of the situation and the localisation of place – the situated practice – are important here. These interpretations are more dependent on human aspects, such as expertise and engagement in work, and the specific context where analytical work is conducted (Brown and Duguid, 2001). To gain access to explicit and tacit knowledge for better interpretations, but also to create important social relationships, emotional energy, commitment and trust, it is important to work physically close to the real-life situation. An information system, therefore, has limited capacity to fully substitute such a need (Boland *et al.*, 2001). Typical examples of analytical work are profit analyses of products and customers, and proactive controller work (Lindvall, 2009; Zoni and Mercant, 2007). Analytical work can be enabled by data warehouse technologies and other BI solutions.

In sum, this paper is informed by a sociomaterial perspective (Iveroth, 2011; Leonardi and Barley, 2008; Orlikowski, 2007; Zammuto *et al.*, 2007) that rests upon the notion of duality between structures and actors (Burns and Scapens, 2000; Coad and Herbert, 2009; Englund and Gerdin, 2008). This theoretical lens is applied to the examination of Ericsson's integrated ERP system (Pollock and Williams, 2009; Rom and Rohde, 2007) that enables transactional and analytical work (Davenport, 2005) in their construction of SSCs (Schulman *et al.*, 1999) that is viewed as a dynamic and organizational solution (Markus, 2004; Simon, 2002). The examination of the transformation is done in order to attain the research objective of contributing to the understanding of the practice of IT-enabled management control change, in particular how IT-driven change is made possible from a practical perspective in a global context. The objective is achieved by addressing the research questions of when (Section 4), why (Section 5), and how (Section 6) Ericsson changed, and finally so what (Section 7). The article answers these questions by taking a process approach to change (Burns and Scapens, 2000; Pettigrew, 1993; Weick and Quinn, 1999). Therefore, Ericsson's transformation programme was framed as an on-going evolutionary process rather than one disruptive revolutionary phenomenon. A more detailed explanation of the process approach and its methods follows in the subsequent section.

3. Research methodology

3.1 Data gathering
The empirical data come mainly from documents and interviews. Documents were collected retrospectively between 2004 and 2006, and interviews and document collection took place between March 2006 and June 2009. The formal transformation process began in 2004 and ended in 2006. The broader time span of the data gathering

was motivated by an intention to include the interviewees' reflection of the past change process (Pettigrew, 1990).

A total of 29 in-depth interviews were conducted with 17 respondents at the SSC offices in Stockholm and Beijing. Each interview was approximately one-and-a-half hours in duration, and was recorded and transcribed, and then analysed and discussed by the research team. The respondents were initially identified by snowball sampling, and later identified in the narratives of the respondents (i.e. actors who were recurrently brought up by the respondents), as well as identified in the documents (i.e. actors who recurred in different forms of documents). The majority of these respondents were seen as significant actors within the transformation process (however, six interviews were done with respondents with lower position). Most held key positions during the entire transformation programme and were experienced individuals in senior positions at Ericsson. Many of them were, in general, positive towards the transformation programme and we did not explicitly try to identify respondents who were negative towards it. This could be seen as a limitation since resistance is often related to change, but the focus here is on how the F&A transformation was managed and successfully carried it out in practice. In doing so, the paper adds to the recently developed field of positive organisational change (Cameron, 2008). The second source of empirical data consisted of the analysis of documentation (over 1,000 pages) including monthly global newsletters, policy documents strategy documents, operational documents, and presentation material for external communication.

3.2 Data analysis

Among the different strategies to theorise with a process perspective (Pozzebon and Pinsonneault, 2005; Van De Ven, 2007), the combination of narrative and temporal bracketing was selected (Langley, 1999). The combination was chosen because they correspond with the research questions (e.g. when, why, how and so what), as Pozzebon and Pinsonneault (2005, p. 1367) explain. "Temporal bracketing helps to recognize when and how changes are triggered; narrative strategies help to explain why". The joint answers to when, how (i.e. outcome of temporal bracketing, Sections 4 and 6) and why (i.e. outcome of narrative, Section 5) related questions attains the last research question (i.e. consequences, Section 7).

The narrative strategy meant that we constructed a meta-story of the entire transformation process from the empirical data. In doing so, the narrative strategy provided in-depth descriptions that illuminated and clarified individual stories, events, practices and choices in Ericsson's transformation. The narrative strategy was then combined with a broad-ranging temporal bracketing strategy, which is recommended when dealing with large amounts of process data spread across time (Langley, 1999; Pozzebon and Pinsonneault, 2005; Van De Ven, 2007). Temporal bracketing aims to make sense of and structure the empirical data by dividing the temporal change process into different broad-ranging brackets. Every bracket contains a certain continuity of activities and a discontinuity in regards to activities within neighbouring brackets. This enabled us to conduct, as Langley (1999, p. 703) states "the explicit examination of how actions of one period lead to changes in the context that will affect action in subsequent period". More simply put, Ericsson's transformation process was split up into brackets that became the unit of analysis for comparison across time (for a similar use of temporal bracketing, see Barrett and Walsham (1999) and Rowe *et al.* (2008)). The temporal

brackets were determined by the orientation of the CFO function at Ericsson over the last decade: a fragmented history (mainly Section 4); a more coordinated national SSC solution (Section 6.1); the transition into regional SSC solutions (Section 6.2); and finally, the existence of a global network of SSCs (Section 6.3; as noted Section 5 is the outcome of the narrative strategy).

The validation strategy was threefold. First, the multiple sources of data enabled comparison across time between the transcribed interviews and the different forms of documents. The examination was performed within and across the different sources of data. Second, the whole research process was conducted in a team of two, which limited the confirmatory bias. Third, there were opportunities to assess the validity of our understanding by holding feedback meetings with the most significant respondents. These occasions involved discussions, validation and elaboration of the similarities and differences that emerged from the empirical data. In general, the research team and the significant actors within the case firm seemed to share a common understanding of the phenomena under investigation.

4. When: case study background

Ericsson was established in 1876 and today is one of the global leaders in the telecommunications industry consisting of 200 legal entities with operations in over 140 countries. The company has been able to maintain this strong market position for many decades despite the considerable changes in technology. These changes can be briefly described as a transition from mechanics to electronics, and from mainly physical products and large systems to software and services (Asgard and Hellgren, 2001). Ericsson has extensive international business experience as they began to expand internationally as early as in the 1890s. Although during the majority of the twentieth century much of its competency and market position is historically due to a close relationship with the previously state-owned Swedish telephone company Televerket (later renamed Telia; Jacobæus, 1976). Throughout most of this century, many of Ericsson's international markets had a similar structure: a nationally oriented market with one or a few large customers, most being state monopolies. The important buying criteria for such customers were less about strictly commercial criteria and more about investments in prestigious projects with high technological performance (Asgard and Hellgren, 2001). Ericsson's competitive advantage in these types of markets has historically been based on its access to superior technology – technologies mainly developed in Sweden and then distributed to different national customers through local subsidiaries (Bartlett and Ghoshal, 1989). Over the last three decades, the global telecommunications market has been characterised by deregulation, privatisations and important shifts in technology (Cortada, 2004). As a result, the quantity and significance of for-profit customers has increased and the rules of competition have changed (Meurling and Jeans, 2000, p. 398).

In the 1980s and 1990s, Ericsson evolved from an international company into a multi-national company. One important reason for this, aside from market demands, was the existence of a management ideology that strongly emphasised decentralisation. In essence, it could be said that this management philosophy favoured effectiveness through local market adoption, at the cost of reduced efficiency from economies of scale. From an internal Ericsson perspective, this control philosophy created a large number of strong national entities (market units – MUs) through which the national CEO could manage "their subsidiary" as "their own kingdoms" (Elvander and Elvander, 1995).

From a corporate perspective, such a structure creates a lack of transparency, heavy governance structures, and major difficulties in implementing and coordinating change.

To increase transparency and strengthen the corporate perspective in a globalising world, a matrix structure was implemented at Ericsson in the early 1990s. This new organisational form was driven by a demand for a structural solution that was capable of managing the intense complexities of a globalised company: a company characterised by operations in many markets, a large portfolio of products and services and a strong management ambition to handle this complexity in a balanced manner. However, due to its multi-dimensional structure and the existence of shared responsibilities, the matrix organisation created additional pressure for congruence among the company's different management control systems. More specifically, and according to the interviewees, Ericsson's management control system was based upon a traditional approach of planning, feedback and control that was initiated from the top and executed according to the formal lines of responsibilities (Otley, 1999). Due to Ericsson's history of fragmented control, there have been recurring problems with the distribution and feedback of information (Beckérus and Edström, 1995, p. 151). A typical example of this was the lack of formalised follow-up procedures for the guidelines and corporate directives that were sent from its headquarters in Stockholm. As a result, headquarters often had limited knowledge of whether their corporate directives were being implemented or not. As a former CFO for one MU commented "If we thought it [the guideline/directive] was important for our company we followed it, otherwise we just ignored it".

Moreover, much of the feedback was time-consuming and infrequent. Information from subsidiaries was sent back to headquarters by post or by fax, and often only on a quarterly basis. Further complicating the management control process was the lack of specific rules (such as a shortage of a common chart of accounts and common models for cost and profitability calculations). According to the respondents, every local company (LC) and MU had more or less their own management control system, customised to their language, local needs and historical standards. Since Ericsson's information platform(s) was (were) also highly heterogeneous, this obstructed important financial communication inside and outside the company.

In 2001, Ericsson (as well as their competitors) experienced severe business and financial problems due to the bursting of the internet "bubble" (Strömsten, 2006). After having lost SEK30 billion in 2001, the company began to cut down operations by as much as 50-70 per cent, and dismissed a large number of its employees. It was after this market turmoil that Ericsson finally decided to reorganise their F&A activities into a global network of shared service centres (SSC), which formally began in 2004 and was successfully completed in 2006. While the financial crisis had been a wake-up call, it was still only one trigger among others for this reorganisation. Simultaneous, increasing pressure from global customers, a more demanding financial and capital market, and new technologies such as SAP/R3 created both a need for and the possibility of coordinating Ericsson's F&A function on a global scale. However, there were also more specific reasons behind the transformation, which is the subject of the subsequent section.

5. Why change: communicated reasons from Ericsson HQ about the need for a transformation of the CFO function
From the beginning of the transformation programme until its successful conclusion a number of motivating arguments for change was communicated in Ericsson,

which recurred in the data across time. These arguments centred on the notion of a vision of a global organisation and was grouped into four areas: Cost (Section 5.1), Control (Section 5.2), Consistency (Section 5.3) and Competency (Section 5.4). The four Cs and their respective messages were a recurrent and important part in the extensive, on-going communication between the initiators of the transformation at the corporate level and the employees at the local level. By communicating these motives – through monthly newsletters, numerous face-to-face meetings, group presentations, interactive workshops and conferences with a global orientation – attention to the changes and a common understanding of why change was important spread throughout Ericsson.

5.1 Cost

In a world with greater competition and higher demands on financial performance from capital market, reducing costs will always be important for management. Nowadays it is always important for a service function to reduce head counts (i.e. to increase efficiency), while it is simultaneously of utmost importance to be able to serve customers well and in a timely manner (i.e. high effectiveness) (IBM, 2008). Such a dual ambition was explained (with an MU perspective) in one of Ericsson's newsletters:

> Effectiveness relies on us having the right answer at the right time. Remember, the business often wants special one-off reports and wants them now. This information demand has to be answered! Armies of "spreadsheet jockeys" and "powerpoint pros" is not the answer. Efficiency, on the other hand, relies on simplicity and elimination of activities that do not add value, or in some case only cost us money to perform.

Ericsson's way of reducing costs was by standardising and automatizing their financial processes. This was mainly done by identifying, developing and integrating common best practices of F&A activities into the ERP system. Such ambitions can in general be supported by SAP/R3's ability to work with embedded processes. This enforced structural solution, with its general best practices and embedded routines, is in general a powerful tool for change (Davenport, 2000). What is important to note is that because most local Ericsson units were accustomed to working with their own tailor-made solutions, the transformation into one integrated system implied restrictions and compromises (as described below).

However, if just before the transformation programme Ericsson had experienced a recession and large layoffs, the significant actors believed it was important to stress that the transformation programme was not being initiated just to reduce costs. As expressed in a large number of presentations and interviews: "It is all about much more than cost!". One important reason given for defining a broader purpose, as stated by the interviewees, was the idea that a singular focus on cost reduction could raise the level of negative stress currently among employees, which may create a resistance to change. At the same time, experience and insights gained from earlier cost-reduction programmes provided an understanding on the part of both employees and employers for the upcoming transformation programme. Based on their prior experiences, many employees quickly understood the need for change. The widespread existence of such previous experience helped kick start the transformation that took of in 2004, as expressed by one interviewee.

5.2 Control
Before the transformation, the management control situation was influenced by Ericsson's fragmentised company structure. From an organizational standpoint, Ericsson had often stressed the advantages of local adaptation and decentralisation. Over time, this freedom resulted in the existence of a fragmentised company structure built on many strong LCs and MUs. Such a situation was problematic from a corporate perspective because it created low transparency and accountability, cumbersome feedback mechanisms, and difficulties implementing change. For instance, one of the respondents described these control problems as follows:

> We had an unstructured business activity, no global processes, no unified information system, bad routines for implementing change, and the company was stuck in the classical model of sending out corporate directives with no implementing routines.

From a technological standpoint, the fragmentised company structure was reflected by the fact that each LCs and MUs had their own information system (i.e. creating a heterogenic information infrastructure in the whole organisation). Since Ericsson tried to create globalised management control, this situation of a plethora of information systems created control problems (Davis, 2009; MacKenzie, 2009). For example, it created quality problems in their financial reporting (e.g. unconsolidated and fragmented financial information) and made it difficult for Ericsson to become Sarbanes-Oxley Act (SOX) compliant at that time.

Therefore, one ambition with the transformation was to change from a fragmented company structure into one common structure with a coordinated control. This was the recurring theme in the communication connected to the transformation, as this quote about the CFO illustrates:

> He [the CFO] is a very ordinary man, he had a few slides, and he provided a simple message: "I want one organisation, and I want one global organisation, I want one governance". He then drew a picture of Ericsson having more than 100 accounting factories, some small, some bigger and demonstrated how these were governed. Some were governed locally, and some were governed from Stockholm. But he clearly demonstrated that he wanted: "One organisation, One governance and they should all report to me". This was his message in a nutshell.

The change into one common structure with a coordinated control was enabled by the implementation of an integrated ERP system, namely SAP/R3 (Pollock and Williams, 2009; Rom and Rohde, 2007). With such a solution, Ericsson had the ambition to reduce the amount of manual work related to the consolidation of financial reports. Reporting was to become a relatively effortless activity that took less time, resources and emotional energy – a non-event as respondents called it. In a long-term perspective, the aspiration was to reach a wanted position with one common structure where controls were more coordinated, and where financial information was consolidated and less fragmented, as expressed in the archival documents and noted by interviewees.

5.3 Consistency
Ericsson's traditional and decentralised way of organising itself led over time to a wide range of diversified technical solutions, management models and financial definitions. For example, before the transformation programme and the creation of a global hub for master data in Stockholm, it was possible for an LC to create their own accounts, for their own specific purposes. Therefore, a consolidated chart of accounts for the Ericsson

group consisted of thousands of different accounts. This situation was administratively costly and highly problematic for an effective financial communication. In the more integrated and globalised world facing Ericsson in the mid-2000s, such – freedom in the economic language – created extensive communication problems and made it difficult to have one consistent, aggregated and consolidated corporate view.

With the goal of increasing the consistency of its financial information, Ericsson's master data (general structure and definitions of accounts) were centralised in Stockholm. A crucial part of this effort was the use of one common chart of accounts, which was controlled, coordinated and supported by the global unit in Stockholm but used by all other organisational units. This accounting scheme made it possible to classify transactions in one common way and – speak the same language – throughout the company. In addition, it reduced administrative costs by significantly reducing the number of accounts used by the company.

Another important part of Ericsson's search for internal consistency was the development of a mandatory service management framework, as Ericsson named it. This framework defined rules for the services performed by an SSC, including new common roles and processes throughout the company. The purpose of the framework was expressed as follows: "Describe and regulate, in a professional and service-oriented way, the performance and delivery of services". It included, among other things, a list of services and a related service descriptions. The list of services was seen as a product catalogue or order list for offered services (what to buy), while the service description was a specification for how these services would be produced (how it is done). By defining, step by step, how a specific service was produced, it was possible to visualise and implement standardised processes on a global basis. An additional important part of the framework was a common view of pricing, which included a price model, a pricing schedule and a pricing policy. The regulative rules (including measurements) that were described in this service management framework had been developed and refined over time. Some aspects already existed before the idea of an SSC network came about, and others were developed especially for the new organisational solution. Altogether, these parts of the framework contributed to an increased consistency of F&A activities at Ericsson.

5.4 Competency

In contemporary business, there is an increased demand for employees of the financial department to support operations in a more sophisticated way than before (IBM, 2008). As a result, the demand for F&A-related talent and competency is increasing (Lawler, 2008). For Ericsson, such a demand for greater competency articulated itself mainly in three ways. First, in Ericsson, the demand for greater competency meant an increased focus on financial accountability among managers. This was articulated in the demand on managers to know your numbers (as the respondents expressed it). While it was previously common that a technical or market-oriented manager could withdraw from their financial accountability by delegating the performance reports to their local CFO, it now became important for all managers to understand the meaning and practical implications of these numbers. To make this possible, Ericsson developed a self-service-oriented reporting system as a data warehouse solution. With this solution, it was now up to the managers' initiative to pull out the needed information. Instead of having a standardised report at a given point in time, the self-service solution created

the ability to extract specific information whenever the manager so wished. This solution created a hybridisation among managers as they now were both producers and consumers of financial information (Caglio, 2003). With this automated self-service solution of many financial activities, the remaining F&A work was less extensive in volume, but more complex in nature and therefore created a need of a higher competency among the F&A employees.

Second, because Ericsson's business had become global it required global decision, and such decision required fast and detailed financial information. Therefore, Ericsson had an ambition to create a more efficient process for information production where reporting is a non-event. In other words, the process to produce information needed to be without hindrance and more seamless than before. Ericsson's way to solve this was by creating standard processes that was integrated into the ERP system. Connected to the new standard processes were a number of new roles, such as process owner, process management, program manager, process lead, process expert, super user, service delivery manager, and local process driver. Compared with traditional F&A work, these new roles were more complex and required higher levels of competency (IBM, 2010).

Third, in the general debate about the role and required competencies for employees in the CFO department, a common traditional view has been that these organisations consisted of boring, isolated and not always competent personnel (MacKenzie, 2009). This view has historical and widespread roots (Walther *et al.*, 1997). Terms such as bean counters are repeatedly used to describe such employees, who are characterised as often working to a high degree of perfection on tasks that few people really care about (Granlund and Lukka, 1998). Such negative view of F&A employees was a common problem within Ericsson, according to the interviewees, and thus one of the reasons behind the transformation. The rationale was that the transformation would enable a raise in competence of F&A employees that would in the long-term increase the status of F&A employees in such a way that they would be perceived as having a more pro-active within the organization compared to earlier. One respondent explained:

> With a soft perspective there was a purpose to raise the status by making it [the F&A activities] a service. To work with financial administration, to work with accounting and bookkeeping etcetera is viewed as low status. But to say that you work within a global service organisation that delivers a service with a certain quality, precision, time, cost – then you raise the status of the work and those who deliver it. Then it is no longer a number crunching factory.

Such an emotional aspect of competency was an important driving force behind the transformation programme.

6. How to change: three phases of SSC initiatives

With a temporal perspective, Ericsson's transformation process entailed three phases of SSC initiatives connected to a national, regional and global scope, as displayed in Table I. These phases explain how the change emerged and how the transformation was carried out in practice. Each phase contains certain novel experiences that acted as both resources and restrictions for the upcoming phase. The first phase of early SSC implementation was a number of mostly local initiatives striving for cost reductions and using a simplified form of SSCs (Section 6.1). This period was also characterised by fragmented and heterogenic information system infrastructure as well as a decentralised IT-strategy and tailor-made solutions (legacy from the 1990s). Then, a second phase of SSC structures evolved, but this time with a regional

Year	Scope	SSC locations	Focus of activities
1999-2000	National	Stockholm, Dallas, Brighton, Rijen, Rome, Madrid	Local attempts to centralise F&A activities in simplified version of SSC structure; cost focus; fragmented and heterogenic information system infrastructure; decentralised IT strategy and tailor-made solutions (legacy from the 1990s).
2001-2003	Regional	SSC in Rome is relocated and merged with the SSC in Madrid. SSC in Brighton is relocated and merged with the SSC in Rijen	Collaboration and exchange between national SSCs; attempts to establish regional SSCs; mandatory and coordinated IT strategy; building of regional F&A competence
2004-2006	Global network of SSCs	Stockholm, Rijen, Madrid, Mexico, Johannesburg, Manila, Kuala Lumpur, Melbourne, Dubai, Dallas, New Delhi, Sao Paulo, Beijing[a]	Failed dual strategy of using internal outsourcing for larger subsidiaries and external outsourcing for smaller units; Global F&A transformation strategy; parallel development processes; process management; people management; exploitation of organizational and technological know-how from earlier periods.

Note: [a]The services in Johannesburg were migrated to Madrid and Manila in 2006

Table I.
The three phases of
SSC initiatives

scope (Section 6.2). This period entailed collaboration between SSCs and a mandatory and coordinated IT-strategy. Subsequently, experiences from earlier trials created opportunities for designing the new organisational solution, which was the third phase of SSC initiatives: the global network of shared service centres from 2004 to 2006 (Section 6.3). In this phase, much of the ambition was oriented to the creation of one controlling area in SAP/R3, an ambition which was finally reached in 2006.

6.1 The first attempt to create an SSC structure – a national solution (1999-2000)
Historical and structural factors proved to be important in the execution of the transformation. Earlier experience proved to be vital to identifying and defining upcoming problems, and for the process of creating and finding solutions. In short, history matters when it comes to change. This is well illustrated in the many detailed examples communicated in Ericsson's monthly *Global Finance & Accounting Newsletter*. For example, many new opportunities could not be realised before a certain level of experience in other areas was reached. This is especially evident with regard to IT where a number of organisational solutions in the transformation programme could not happen before a certain level of technological maturity regarding SAP/R3 was achieved.

The first structural attempts to create SSCs for F&A were a number of local national initiatives during 1999-2000. At that time, large subsidiaries in Sweden, the UK, Spain, The Netherlands, Italy and the USA were separately interested in cutting their costs through the centralisation of F&A activities in their own MUs. All these initiatives were born in the local major company except for the Swedish initiative, which was corporate. The fact that these attempts were mainly local was regarded as extra motivational

impetus for the change process. Such local initiatives create commitment and participation that can facilitate the change process, which are often difficult to attain if the idea is initiated from a corporate and more centralised level (Stensaker and Falkenberg, 2007).

During early attempts to implement information systems in Ericsson, the implementing unit were generally free to adapt "their" SAP system to "their" unique setting of local activities. This was in line with the tradition in which the IT system was tailor-made for a specific organisational structure (Pollock and Williams, 2009). One result of this customisation approach was that even if SAP implementation could reduce the number of existing systems, the IT architecture was still fragmented. At Ericsson, a number of SAP systems were in place within the different controlling areas. In addition, some of the Ericsson sub-units demonstrated resistance to using SAP/R3. Some believed their units were too small and the system was too expensive. Others refused because, as they argued, SAP was just not suitable for their kind of operations. These objections could be seen as a result of a desire of not to use a standardised system in an organisation that had differentiated and divergent characteristics. For example, in the early strategy documents it was stated: "Ericsson local companies are not homogeneous in terms of size, business complexity, organisational maturity and systems". Such a situation was the result of the Ericsson's strong decentralisation in the 1980s and 1990s (Section 4).

These first SSC attempts could be characterised as simplified versions and as an embryo for the global SSC solution that was presented later. It was a simplified version in the sense that earlier dispersed local and national F&A activities were now centralised in one geographical location. Work was coordinated to one common place and little else was changed. Crucial work processes, roles and IT systems remained very much the same as they had been before. It was an embryo in the sense that the experience gained and the attained organisational positions from these first attempts were, later in the transformation process, important for the creation of a global network of SSCs.

6.2 Moving from national to regional service scope (2001-2003)
In the start of this period, simple forms of collaboration between some of the different national units began to emerge. They exchanged ideas, early experiences and compared key performance indicators with each other. Collaboration and ties between the national SSCs were at first weak but grew stronger with time. As a consequence, a corporate goal was established to change some of the national solutions into regional SSC solutions. For example, in 2002 the unit in Italy, which had existed as a national SSC for just under two years, was merged with the SSC unit in Madrid and relocated. The purpose of this initiative was to consolidate and utilise the F&A competency in southern Europe.

In Northern Europe, the SSC in the UK was intended to become a central hub in the creation of a regional structure. The interviewees explained that since the mother tongue spoken in the UK was the same as the business language spoken within Ericsson, the location could be seen as a natural choice, as the respondents put it. The rationale was also that the SSC in the UK already had experience and know-how of supplying F&A services to internal customers on a national level. However, this local ambition did not turn out as expected because their old routines were difficult to change. The main problem, stated by the respondents, was that the UK unit had difficulties treating all customers across all geographical locations alike. Rather, they continued to give their own national customers preferential treatment. These old relationships

and routines were too strong, and they hampered the UK unit's ability to change from a national unit to a wider regional unit. Consequently, the UK unit did not become a separate regional entity within the global enterprise.

At a corporate level, the insights gained from this experience were important for the design of the global network of SSCs. For example, one outcome was the development of the service management framework, in which expectations and responsibilities for both internal suppliers and buyers were defined (Section 5.3). Thus, instead of establishing the regional SSC office for Northern Europe in the UK, Ericsson chose The Netherlands. This office was perceived to be more neutral, more experienced and more eager to become the hub for a regional SSC. As a result, in 2002, the UK office merged with the SSC in The Netherlands. This move was successful and this was partly because of Rijen's long experience with Ericsson's organisational processes and was, at the same time, one of the leading units in the Ericsson groups' SAP project. More importantly, they were capable of transforming their mindset from acting as a national actor to acting as a regional partner, and treat different national customers alike, independent of their geographical location.

In this period, Ericsson also started an important SAP/R3 project that affected the majority of Ericsson's subunits (earlier attempts had existed but now the efforts were more coordinated). At the beginning of the 1990s, every local Ericsson company was free to choose their own IT system, with the result that there were numerous different systems in place. In the mid-1990s, there was a corporate-initiated restriction that a subsidiary could now choose among a limited number (three to four) of predetermined systems. In the beginning of the new millennium, there was a corporate decision to implement SAP/R3 globally, to support the SSC structure. The choice of the system solution was influenced by a desire to create one integrated global Ericsson company (Dent, 1996). ERP systems, such as SAP R/3, has the potential to create such integration (Pollock and Williams, 2009; Rom and Rohde, 2007). From this point onwards, it was mandatory to use this solution. This chosen direction could both be seen as an end point and as a starting point of a new IT strategy for the company: from accepted, decentralised, and fragmented to a mandatory, coordinated and common view of system architecture.

From the beginning to the end of the transformation programme, the SAP system was very important for Ericsson, by being at the centre of the company's handling and reporting of important information, despite the fact that the system was initially and regularly criticised externally for being both too complex and too expensive (Ekstrand, 1998). Initially, two different versions of SAP systems were used:

(1) MU solution (MUS) for the market units outside Sweden. This system included modules for logistics, sales, customer support and project management, and was rolled out in 2001.

(2) Common business system (CBS) for the large supply and production units in Sweden and China. In Sweden, the system was implemented over the course of one year, from September 2002 to September 2003. In China, a CBS was implemented in spring 2003. The modules used here were: FI (financial accounting), CO (controlling), FM (fixed asset management), PS (project system), MM (materials management) and SD (sales and distribution).

*6.3 From many standalone units into an interdependent global network of SSCs
(2004-2006)*

In the design and implementation of a new organisational solution such as SSC, it is common to work with a top-down approach using assumptions of organisational homogeneity, and in doing so neglecting the existence of local organisational differences (Beer and Nohria, 2000). Such an approach makes leading change more convenient and effortless for managers. This one-size-fits-all solution has advantages and disadvantages. A standardised solution creates economic gains by, for example, stronger common ground and efficient knowledge sharing among employees. At the same time, it implies costly compromises for the many units that have less common characteristics and features. Achieving a balance between advantages and disadvantages is an important, yet tricky, approach to managing organisational solutions driven and enabled by new ERP systems (Davenport, 2000). One example of this is the unbalanced nature of the costs and benefits between local and corporate level. A new standardised ERP system can, from a local perspective be seen as a centralised and costly solution. The actual, cumbersome work behind implementation has to be done locally. Furthermore, implementation often comes at the price of having to sacrifice uniqueness in favour of commonality. The advantages are at the corporate level – where the new system can provide better information, increase vertical transparency, strengthen horizontal integration, reinforce accountability and produce a better picture of the whole company (Dechow and Mouritsen, 2005).

In the case of Ericsson, large organisational differences implied, for instance, that few of Ericsson's 200 units in 2004 actually were directly responsible for a larger part of the company's sales, while a large number of companies was really small. As described by documents: "Analysis shows that 50% of our companies provide 96% of the local company invoicing, which means that around 100 companies provides the remaining 4%". Such a structural situation has consequences for the creation of an SSC solution, like the important decision to avoid designing the SSCs as separate legal entities (which is what is commonly done (Ulbrich, 2008). Ericsson concluded from their earlier experience that such a solution tended to be too expensive. According to the interviewees, separate legal entities did not only increase the need for cost control but, more importantly, also increased the risk that a separate legal company's board could become too strong. This, in turn, often translated into a behaviour in which the separate legal company optimised their own performance while simultaneously sub-optimising the corporation's performance.

Initially, the idea was that the SSC transformation should be based on – two supplementary strategies and delivery models – as stated in the newsletters. This dual strategy was based on using internal outsourcing for larger subsidiaries, and external outsourcing for smaller units. Ericsson expected that this strategy should resolve the size problem relating to the difficulty of finding economic reasons for a small subsidiary to buy-in for a SAP/R3-based solution. Several consultancy firms were ready to offer this type of outsourcing service, and were promising substantial cost reductions. As such, Ericsson initially decided to invest in a governance model built on a combination of internal and external outsourcing. However, problems arose; there was a growing realisation that the chosen supplier – a globally recognised consulting company – did not have sufficient competency to create the promised global outsourcing service for Ericsson. In their proposal, the consultants had also miscalculated the potential cost reduction for Ericsson. As it was explained during the interviews, their initial

calculations had been based on the F&A cost situation before Ericsson's large cost reductions at the beginning of 2000, and not on the current existing, leaner, situation. Therefore, from Ericsson's point of view, the efficiency gains from the proposed outsourcing solution were not as high as expected or required.

Consequently, Ericsson's management took a step back and reconsidered the dual strategy. The conclusion was to abandon external outsourcing. Building on existing organisational experience and SAP competencies, it was decided that nearly all Ericsson companies would be related to the global network of SSCs. The next challenge was to determine how so many small separate units, with such different circumstances and features, could be motivated and integrated into one common network of SSCs. This challenge was addressed by developing a four phase model of the transformation strategy, shown in Figure 1. The model visualises the expected path of the transformation and was vital for both coordination and motivation. The significance of this model is reflected by respondents' frequent and direct reference to it, its regular appearance in different forms of internal documents, and its use as a logo in the monthly F&A newsletters. By framing and naming important aspects, this tool created both a vision for the journey and a language for the change (Tsoukas, 2005). The model is an example of how an idea or an artefact created by a few individuals can be shared and used by many as a boundary tool (object) for communication during a transformation process (Carlile, 2004).

The four-phase model communicates the evident reality that smaller Ericsson companies had less to gain from inclusion into the global network in terms of efficiency,
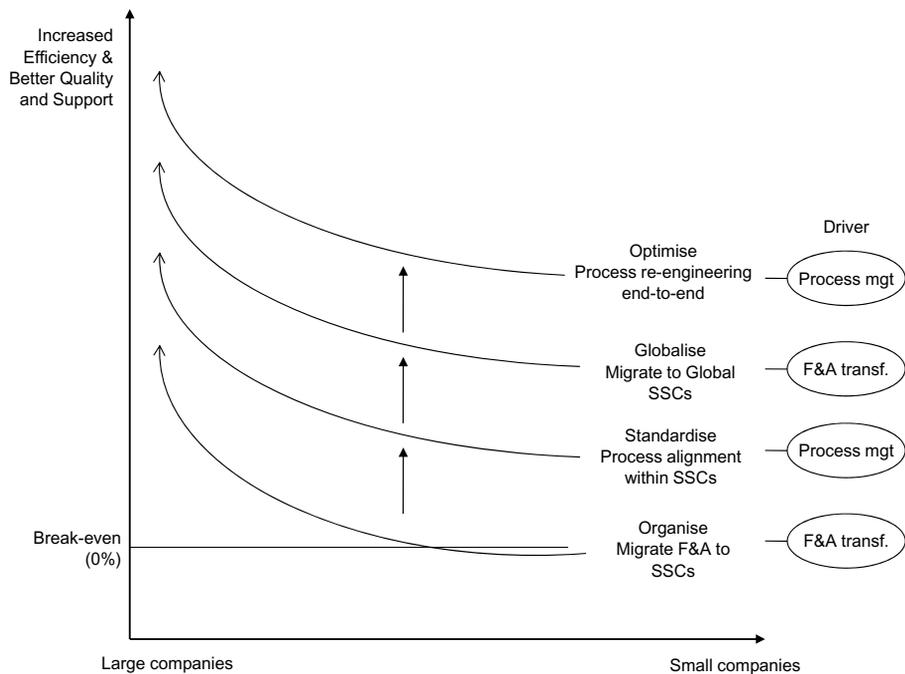

Figure 1.
The global F&A transformation strategy

Source: Adapted from internal presentation material

quality and support. For a small Ericsson company, it was initially difficult to reach an economic break-even point with the new F&A solution. Much of the expected advantages would first be realised at a higher organisational level, with the specific unit only seeing the benefits (mainly increased quality and support of financial services) in the future. However, with such openness in corporate-level communication about the initial costs and future advantages of the change, it was possible to improve the internal dialogue about the transformation.

By using isograms, the model illustrates that the transformation consisted of on-going projects and activities with different phases being performed simultaneously. Based on the model, the whole transformation programme can be described as an upwards spiral in which different subsidiaries have different levels of experience and conduct different activities at the same point in time. One company could be working with early activities related to organising their own CFO activities while another company could simultaneously be preparing for implementing standardised work processes. For example, in April 2005, the South Eastern Europe MU served by Rijen passed Tollgate 3 (TG 3;, i.e. reaching a significant sub-goal during a project) while the Central Europe MU, also served by Rijen, passed TG1. At a specific point in time, the degree of maturation in the total transformation programme could vary from TG1 (start/introduction) to TG 5 (full implementation) in different geographical locations. Owing to this ability to work in parallel, instead of having one sequential project flow, there were gains for the transformation programme with regard to time, cost reductions and the exchange of knowledge. For example, one respondent explained the importance of earlier knowledge: "We used the knowledge from the F&A and IT people that was acquired from the earlier projects". Indeed, in this period Ericsson exploited the organizational and technological know-how from earlier periods. One interviewee explained for instance: "After the unsuccessful projects there was stuff left, there was an embryo for something new, 'we have done something useful after all".

Another important aspect of the model is the reliance on process management as a driver and enabler for the transformation. The process management activities of Ericsson defined new ways of working with F&A activities. The ability to apply the new design of F&A work was in most cases dependent on increased experience with the SAP/R3 system (because processes were connected to the system). In a theoretical sense, organisational and social issues were related and intertwined with IT and material issues (Iveroth, 2010; Iveroth, 2011; Orlikowski and Scott, 2008). Without specific knowledge of the system, with its broad and deep functionality, it was difficult to realise many of the roles, routines and rules defined in Ericsson's process management. One interviewee explained:

> The [ERP] system is part of the solution. But we work with all dimensions. We work with the organisation, we work with the people, we work with the processes. The system is only one of these dimensions. Another interviewee noted similarly: We have change managers who have an important competence that can help the local organisations and their employees change their behaviour [...] Change management plays a key role.

However, the significance of working with process management was not immediately recognised in the transformation programme. This soft side of transformation activities (which also included devoting resources to what they referred to as people management) only gained priority once stress and work overload became apparent

in internal surveys and performance measurements. As a result, a specific unit for process management was formed in February 2005.

More specifically, the transformation was executed by dividing it into the four phases of organise, standardise, globalise and optimise, as shown in Figure 1. In the first phase of organising, the main question was to create transparency and get an insight into different local CFO-units, and from this initiate different activities leading to a common SSC. In the next step, the focus of activities were to standardise different earlier unique processes and routines into one standardised best practice. In the following phase, the processes were embedded into the SAP system and thereby being accessible globally. By this virtualisation of F&A work, it was finally possible to re-engineer, redesign and optimise work processes. Below follows a more detailed description of every phase.

Phase 1. Ericsson began the global transformation of F&A by organising and reallocating national F&A activities. The large number of local subsidiaries was divided into geographical areas, and based on geographical closeness. Activities in the different CFO departments in specific countries in these regions were identified and organised according to a specified process (Service in scope). For example, in newsletter No. 6 of November 2004, it was stated:

> So far F&A Service in 5 companies have been migrated into the SSC in Beijing: ETC, BCC, HEC, CET and DEC. The Services in Scope are Accounts Payable, Accounts Receivable, General Accounting and Closing, Time Administration, Travel and Expense and Payroll.

Phase 2. The next task was to standardise all the different F&A activities, at every defined SSC. The aim was to stabilise the situation through implementation of process standards across SSCs and to build competence at the regional SSC level. In other words, Phase 2 implied an ambition to implement common ways of working. In addition, since F&A activities had traditionally been functionally organised using a vertical logic, the activities now had to be transformed into processes with a horizontal logic. By doing so, the activities were better aligned with the horizontal logic of the new ERP systems. So, while the first phase included supporting business units with their ordinary F&A activities, this phase entailed changes in activities, conversion into processes, and standardisation of these processes.

The crucial objective of standardisation was to achieve one way of executing F&A, independent of where the SSC or the customers were located. Alignment was a central concept in this work, as was expressed: "Our different models for the business, the processes and the systems must work together with our financial model". The standardisation made it possible to align F&A processes and to reach the desired end-state where reporting is a non-event. According to the respondents, such a situation had the three main features of straight-through processing, one-day closing and information available online. First, the desired end-state required that Ericsson have straight-through processing, where the common master data and a specific process are aligned in such way as to result in high-quality incoming data, thereby avoiding the need for manual corrections. Second, One-day closing refers to the automation of the reporting process, where systems and processes must be set up in such a way that financial reporting is more infused by IT and less dependent on manual work. Third, information available online means that the reporting information is directly available online when the closing is complete. This ambition not only supports the timeliness of financial

information but also contributes to the increase in accountability for important management action

Phase 3. The purpose of the globalisation phase was to consolidate the standardised services into global SSCs, to facilitate cost synergies, and to secure global control. Moreover, this phase implied centralising transactional F&A work to a few specific SSC locations, which then supported the entire organisation. For example, the handling of all invoices was migrated to the SSC located in Manila and from there, the majority of the enterprise was globally supported.

Phase 4. The final phase was an ambition to optimise the SSC processes by end-to-end process re-engineering. The idea was to improve the existing processes by comparing the activities of the geographically dispersed SSCs. With such process re-engineering, the organisation aimed to integrate and automate the F&A processes, and subsequently achieve substantial cost reductions.

7. So what: discussion

The empirical data suggest that Ericsson was able not only to cut costs, but also to design an organisational solution that enhanced their flexibility for future changes. In other words, the findings propose that the outcome of the new global network of SSCs increased the efficiency and effectiveness of Ericsson's F&A activities. The new organisational structure was not a traditional "either/or" solution but more of a "both" solution (Cooper, 1995). For example, on the efficiency side, the achieved result is summarised by a statement from the internal "owner" of the programme, the company's CFO:

> By the end of 2006, we have concluded this programme [F&A transformation] with more than 90% of our business being supported by our global SSC structure. [...] We supported standardisation of services and processes and lowered the total F&A cost from 0.61% of Group net sales in 2005 to 0.34% in 2006.

Ericsson's new CFO function also managed the important external demands of the initial transformation programme: making Ericsson SOX-compliant and acquiring new businesses that were important for the development of Ericsson's products and services (e.g. the acquisition of Marconi and Tandberg Television). This was most likely made possible by the new flexible organisational structure that emerged from the F&A transformation programme. For example, by defining, implementing and using standardised F&A processes, it was easier to scale up production of services, and by doing so making it easier to integrate acquired companies into this given structure. One respondent figuratively and metaphorically described this new flexibility and its importance: "We [previously] had a much slower pace, no focus on these questions, no management attention, nothing, things went rather sluggish [...] Ericsson would not have existed if we had not done this – it is that simple". However, there were also drawbacks connected to the transformation. For example, F&A work was because of the transformation more competitive (through, e.g. global career paths), had a higher level of complexity than earlier, and the F&A work were to a large extent tied up to the global ERP system. In all, the focus on both effectiveness and efficiency created an increased need for F&A competence as well as increased transparency in terms of management control.

At a more theoretical and analytical level, Ericsson's successful transformation has two important features. First, the case study illustrates how IT-enabled management

control change can be a continuous interaction between a dynamic organisational structure (a social dimension) and a less, but still, dynamic IT structure (a material dimension). These two dimensions reciprocally interact and shape each other across time, and in so doing they influence the change process. Such interaction implies, for example, an initial situation in which the people of an organisation are free to design and develop IT solutions for control, which will in the next step or period of time be more or less restricted and controlled by the IT solution created previously (Nye, 2006). As is commonly said, "We shape our tools and thereafter they shape us." In this way, the case study demonstrates that there are benefits that can be gained from viewing the organisational side of IT-enabled management control change as dynamic structural and organisational solution and from viewing the IT side as socio-material phenomena.

The managerial implications of such a standpoint suggests that IT and organisation should be treated as dynamic and unstable entities that change continuously as new features are added to IT and as new practices emerge in the organisation. For example, Ericsson ascribed asymmetrical, fluid and dynamic attributes to both the technological and the organisational side of their transformation. What they are today is not what they will be tomorrow and such moving targets should be managed accordingly. This one of the reasons why some argue that IT-enabled management control change should be viewed as an on-going programme rather than a project with a fixed end point (Harris and Davenport, 2006). Furthermore, because IT is a sociomaterial phenomenon it influences structural properties of the organization. IT is more than the technological artefact *per se* and involves close interaction with people that ultimately calls for considerable investments in process management, people management and change management. This means, among other things, that in order to obtain the greatest possible benefits from IT-investments, complementary changes to the organisation are required. In other terms, organisations more or less have to change to realise IT-enabled management control change.

Second, in a metaphorical sense, Ericsson's transformation resembled a hermeneutic spiral (Weick and Quinn, 1999) because the success of the change was dependent on active and engaged interpretation, as well as knowledge gained through experience. In this way, Ericsson's transformation process can be seen as an upward spiral of interpretation and re-interpretation of ideas and information from earlier experiences – which they subsequently tested out against reality in trials. Such a notion differs from the traditional and common view of change, presented in the literature, where a planned approach has long been the dominant paradigm (Burns and Vaivio, 2001; Chenhall and Euske, 2007; Weick and Quinn, 1999), despite having been criticised (Burnes, 2004; By, 2005). According to the traditional rationalistic perspective, the future lies in a linear and sequential direction, from the current state to the future state – an arrow rather than a spiral. As such, change is discontinued (change instead of changing), and is driven from the outside (since managers are standing outside the process while others are persuaded to act by the managers' observations and analysis). With such an approach, change is an instrumental question of managing means and ends. That approach often implies a static and monolithic view of the means. For example, IT is treated as a stable, fixed and narrowly defined tool or artefact (Orlikowski and Iacono, 2001) that almost automatically transforms the organisation like a "magic bullet" (Markus and Benjamin, 1997).

By contrast, the metaphor of change as a hermeneutic spiral stresses the importance of experience-based knowledge and pre-understanding, and trials across time.

Experienced-based knowledge and pre-understanding provide the change process with both resources and restrictions. They afford resources that bring the change forward because of the cognitive-based knowledge and emotional-based insights created by the past. But they also set restrictions due to the path dependency of change. Knowledge is important for action, although such knowledge needs some form of experience of action before it becomes useable and actionable. For example, many of Ericsson's decisions and actions were made possible mainly by their earlier technological and organisational experiences. As one respondent summarised: "We needed this journey to understand".

Trials across time are also important for the hermeneutic spiral of change, since they affect the future direction of the change process. Such trials, when they occur in a change process, may seem minor attempts but through their continuous occurrence they create new and deep insights that influence the future change process. In the contemporary literature, this is often expressed as openness to experiments (Brown and Eisenhardt, 1998; Pfeffer and Sutton, 2006). The trial consists of testing an idea against a reality, with new knowledge being created in doing so. In the case study, the idea of an SSC solution was, in different ways and during different times, tested against reality. The global SSC solution was more or less inspired by, and a consequence of, earlier, more restricted, national and regional versions of SSCs. When Ericsson started their global transformation, the company was dependent on the use of organisational and technical competencies from earlier trials. Thus, as Ericsson became more acquainted with the ERP system and the developing organisational solution, the company could realise different opportunities for additional changes. As well, the transformational strategy was not determined by a fixed state but was steered by guiding ideas that were continuously tested. As one corporate manager explained:

When you recognise that you are sitting on a dead horse you better get off immediately. When you discover that the things you are doing are in a deadlock, when you are in a blind alley, then don't be afraid to get off and change direction. [. . .] We have turned around many times and we still do this when we discover that a certain idea is not good enough. We simply try something else – one should not be afraid of this.

In many ways, this quote summarizes the practical implication of viewing a change process as a hermeneutic spiral as it calls for persistency, endurance and the ability to treat trials as an opportunity for learning that drives the change process forward. In this respect, a set back can, with the adequate mind-set, be a step forward. Such a practical implication of IT-enabled management control change extends the findings presented in a recent issue of *Harvard Business Review* (Ignatius, 2011) that suggest that there are considerable benefits to be gained from viewing failure as an opportunity for learning.

Overall, Ericsson's initial idea and vision of a possible future organisational solution, an idea initially created just by a few persons, later provided both intellectual guidance and emotional energy for many employees during the entire transformation programme. Consequently, this initial objective, even though it was cultivated and modified over time, was an important base for the creation of the global network of SSCs. The subsequent development then evolved as an open and continuous interplay between the existing CFO organisation and their IT solution. The interaction sometimes ran into what might be seen from the outside as failed trials. However, such problems and hindrances forced the managers to reassess, with the new insights and knowledge acquired from trials, and develop what would be the next great leap forward in the transformation sequence. The driver in this interaction was access

to experienced-based knowledge, pre-understanding, and trials across time. The common denominator of the exploitation and exploration of such resources was their practice-based nature, and their orientation to the more concrete question of how work is done (Cook and Brown, 1999; Orlikowski, 2000). Therefore, this paper further contributes by demonstrating that if we set out to understand IT-enabled management control change, then we must be willing to explore the practice of such activities – how these things are done. The practice-based perspective is powerful because it is based on a collection of practices and is, therefore, abstract enough to generalise and contribute to theory (e.g. change as a hermeneutic spiral), but equally detailed enough to explain how things emerge through micro-activities. Without the inclusion of such a perspective in some of our research, we risk rendering our work incomplete.

In conclusion, the case study shows the importance of IT for contemporary management control practices as it is both the key enabler of current practices and the driver for improving these practices. In this way, there is a power (and agency) in the materiality of IT (Leonardi and Barley, 2008; Orlikowski, 2007) that influences and steer a management control change process (Burns and Scapens, 2000; Scapens, 2006). The material dimension is, however, less successful if it is not combined with a more dynamic social dimension (Boudreau and Robey, 2005; Iveroth, 2010; Iveroth, 2011; Piccoli and Ives, 2005). Indeed, the social dimension and their actors transcend the boundaries of materiality. Thus, it is in the combination and interplay between the social and material dimension across time where we can find a deeper understanding of IT-enabled management control change.

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