Muddling through

The life of a multinational, strategic enterprise systems venture at BT Industries

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Abstract
This article is based on a longitudinal case study of a major, complex, multinational Enterprise Systems venture in a growing, international group. The process covers a decade, and is interesting both because of the differences between different groupings and companies in the Group, and because the Enterprise System implementation is an important part of a larger, strategic reorientation in the Group. Standardisation, a benefit normally associated with Enterprise Systems ventures, is problematised and explored. It can serve efficiency and learning, but also has implications for the power distribution and can give rise to conflicts. The shifting rationale for the project that seems to lead its own life is analysed and the roles of important actors in conducting, guiding and supporting the project are discussed. A finding is that the project participants, rather than being representatives of their “home organisation”, acting on its behalf and having its approval, became aliens, representing the project, its solutions and values. A proposition derived from this case is that benefits from Enterprise System implementation can stem from the learning the Enterprise System project has generated in the organisation and from specific applications made possible by the common platform the Enterprise System constitutes, rather than from the use of the Enterprise System in itself.

Introduction
From a strategic perspective, Enterprise Systems have over the years variously been touted as a road to efficiency, a must for international companies, a solution to the Y2K threat, a millstone around your neck, a bottomless pit, draining the company of money and energy, etc. Each one of these emphatically stated “truths” carries some grain of wisdom in them, but they are all extreme. This article contributes to a more nuanced understanding of the possibly strategic aspects of Enterprise Systems, and Enterprise Systems implementations, in a broader company context, through an analysis of a major, complex, multinational Enterprise Systems venture in a growing, international company in a longitudinal context.

The often long and difficult development and implementation processes that Enterprise Systems give rise to, especially in multinational contexts, raise the question “whether ‘tis nobler in the mind, to suffer the sling and arrows of an outrageous fortune; or to take arms against a sea of troubles, and, by opposing, end them?” Part of what makes these processes difficult and frustrating is power struggles and opposed interests, conflicts that do not disappear or solve themselves by not being acknowledged. In this study, I attempt to expose and analyse the conflicts.
The article is based on a largely retrospective case study of a decade of Enterprise Systems history at BT in Europe, a leading supplier of forklift trucks. The main Enterprise Systems project is interesting because it starts out as a strategic venture, an important part of transforming the multinational organisation and the way it works, but then seems to take on a life of its own. The analysis of this case concerning what has affected the process and in what ways outcomes of the process can be understood, draws on theory on strategy and strategic intent, standardisation, conflict and empowerment. The case is also compared with other published Enterprise Systems case studies that explore standardisation and conflict issues.

The discussion of research findings revolves around the dynamics for and against standardisation. It starts with an exploration of what drove this long and costly project. The analysis concludes that despite the early loss of the strategic intent, the project muddled through. It seems as though the size of an Enterprise Systems project provides an inherent momentum that can keep it going until an Enterprise System is finally in place. This calls for caution when contemplating starting such a project.

The analysis also shows that the Enterprise System project was started in accordance with a traditional planning focus, but based on assumptions that do not appear realistic if viewed from a critical research tradition. This seems to call for a more emergence-oriented view of information systems than that held by practitioners and strict planning-focused theory, especially concerning large and long ventures. But it also seems to call for more effective ways of bringing insights from more critical research to practitioner’s attention.

Next, the related question of the roles of important actors (top managers and project team members) in conducting, guiding and supporting the project is discussed. The case supports previous research suggesting the importance of multi-role management and lasting top-management commitment. It also supports previous research identifying the information systems project or development group as a specific and exposed group culturally and politically. Howcroft and Wilson (2003) talk about “the Janus role of the systems developer”. Poised between management and users, the developers are caught in a power struggle in which it is difficult to be neutral. The analysis of the BT case shows how project team members came to take on an identity project members, rather than representatives for their own part of the organisation. Drastically speaking, they became aliens to their colleagues “at home”. This has practical implications both for agreeing on standardisation solutions in project teams and for the anchoring process of getting the project results accepted in the organisation.
Then the focus of the analysis is shifted to communities of practice and borders separating and fragmenting them, and to the luring and frightening aspects of the transparency that standardisation can bring. Newell et al. (2003) demonstrated how a knowledge management initiative, promoting flexibility, helped offset rigidity associated with an Enterprise System that was introduced. The analysis identifies a similar ambition in BT Europe, where a conscious effort was made to help bridge boundaries and improve knowledge exchange by introducing new organisational roles. However, in addition to the difficulty of bridging existing organisational boundaries, the analysis reveals a cognitive problem; the focus on identifying and solving problems in the Enterprise Systems project is difficult to convert to an opportunity focus. Those who are expected to contribute with good examples of use and efficient routines find it difficult to determine what they are actually good at and what they excel in. This problem is interesting as such, but also calls for further research into why it arises and how it can be dealt with.

Furthermore, the case indicates that standardisation has both merits and drawbacks. An implication is that we should pay more attention to the (long) process of achieving insight into the pros and cons of standardisation, and in cross-country standardisation in particular. Instead of one-sidedly touting the transparency made possible by Enterprise Systems as something universally good and desirable, a more honest discussion of the ways of achieving an acceptable balance between nondisclosure and transparency is likely to be fruitful – in academic writing as well as in practice.

The discussion is concluded by examining a follow-on project to the Enterprise Systems project and how such new projects depend on both material and cognitive results from the Enterprise Systems project. A proposition derived from this examination is that benefits from Enterprise System implementation can stem from the learning concerning advantages and disadvantages of standardisation that the Enterprise System project has generated in the organisation, and from specific applications made possible by the common platform the Enterprise System constitutes, rather than from the use of the Enterprise System in itself. This proposition holds implications for the possibilities of conducting such projects.

The paper is structured as follows. I first briefly introduce the conceptual foundations of this research by reviewing aspects of the literature concerned with Enterprise Systems first as strategic ventures, where the connection between standardisation and efficiency is prominent, and then more problematising views on standardisation, such as its implications for the power balance in organisation. This is followed by a description of the research context and the methods employed in this empirical study. I then proceed with the
case description, chronologically organised, discuss the findings arising from the case study and conclude by identifying both theoretical and practical implications.

Conceptual foundations

In this section, based on Information Systems literature, I first discuss Enterprise Systems as strategic ventures, concluding that despite considerable research efforts the field is still divided between proponents and sceptics. The proponents tend to view the potential for standardisation as a main strength, while the opponents see it as a weakness. I then go on to review research related to standardisation and Enterprise Systems. In addition to the efficiency perspective discussed in strategy-focused research, studies exploring Enterprise Systems ventures identify issues concerning power and conflicts that standardisation gives rise to.

Enterprise Systems implementations as strategic ventures

Enterprise systems implementations are often large and important ventures in companies undertaking them, and project proponents tend to emphasise the strategic potential. However, it has been questioned if IT ventures in general (Carr 2003) and Enterprise Systems ventures in particular (Davenport 1998) can be of strategic importance. In this section I present views on connections between business strategy and information systems found in the IS literature, and draw implications for the strategic potential of Enterprise Systems.

The strategic potential or necessity of investing in information systems has been a popular topic for decades, but with no conclusive answer so far. Croteau and Bergeron (2001) find that companies with a more active strategy (Prospectors and Analysers) tend to be more profitable and make more active use of IS, than companies with more defensive strategies (Defenders and Reactors). The strategic potential would then be more based on the attitude and strategy of the organisation itself than of the type of information system employed. However, others maintain that the application as such is important, especially if it is large, encompassing and expensive. The past ten years, Enterprise Systems have been one of the major types of Information Systems investments in Europe and North America. Willcocks and Sykes (2000) calculated that by early 2000 the Enterprise Systems market generated over $20 billion in revenues annually for suppliers and an additional $20 billion for consulting firms. The individual projects are large, too. The sheer size and complexity of the projects motivates viewing them as strategic ventures, but the expectations and the evaluation in terms of strategic impact have varied over the years. Proponents
have suggested them as important tools for increasing productivity and efficiency, especially in international organisations, thus hoping to increase the organisation’s competitiveness (Davenport, 1998). The general connection between Enterprise Systems, productivity and efficiency has not necessarily been matched by more specific claims. Thus, the strategic intent and connection to business strategy – and indeed to business operations – has not always been clear in these ventures.

In the light of the general academic discourse, the lack of specific connections between actual Enterprise Systems ventures and business strategy could appear as somewhat of a surprise. For a long time, a strong current in the Information Systems literature has discussed the connection between business strategy and information systems strategy. Influential academic writers like Henderson and Venkatraman have been proponents of aligning information systems strategy with the business strategy (Henderson and Venkatraman, 1993). It has also been of concern to practitioners, often ending up at or close to the top of the list (e.g. Raphaelian and Broadbent, 1999). A number of methods for strategic information systems planning have been developed, proposed, and used, but have not seemed to solve the problem. A tentative conclusion is that strategic information systems planning is too abstract and too far removed from actual business practice and activities. Earl (1993) evaluated five alternative strategic information systems planning approaches in a study of 27 UK-based companies, and concluded that what he termed the Organisational approach was superior. It was neither top-down nor method-driven. This approach had no specific method or organisational roles at its heart, but rather emphasised a focus on the actual business, with “thinking IS all the time” as its metaphor, a partnership between business and IS people, co-operation in cross-functional teams, and an emphasis on learning. Successful IS investments would then be emergent results of IS-aware business practice, rather than systematic strategic information systems planning.

Broadbent and Weill (1997) could be said to elaborate on that idea when proposing that management should develop certain maxims to guide thought and action – succinct formulations of what IS use should accomplish in the business that could help people “think IS all the time” while keeping a business focus. Keeping an eye to how business could be developed given possibilities offered by IS use could in a more formalised sense be thought of as aligning business strategy with information systems strategy, thus giving IS a more prominent, rather than strictly supporting, role. Croteau and Bergeron (2001) prefer to call this “impact”, reserving the word “alignment” for when IS is given a more passive, supporting role. Kearns and Lederer (2000) find it important, but rare,
that top management signal commitment to strategic use of IS-based resources. There is a distinct difference in perspective between top managers and IS managers, who strongly believe in the strategic potential of IS. Bensaou and Earl (1998), comparing Japanese and Western companies, reach conclusions that are akin to the superiority of the Organisational approach found by Earl (1993). They propose the superiority of a more Japanese, eclectic approach to IS planning firmly based in practical business considerations, rather than a more Western, visionary alignment of strategic plans.

The Japanese approach is based on five principles: Strategic instinct (rather than alignment), Operational performance improvement (rather than a strict monetary focus), Appropriate technology (rather than leading edge), Organisational bonding and co-location of IS specialists and users (rather than trying to create business-savvy IS specialist who drive IS initiatives), and Human design to make use of the tacit and explicit knowledge that users already possess (rather than designing technically elegant systems that we then try to teach users to use). Application of these principles work against standard application packages, like Enterprise Systems, and favour the use of bespoke systems (ibid., 126.) Thus, if this “Japanese” approach is truly superior, we should expect that an Enterprise System implementation and a strong standardisation focus can not be expected to be strategically beneficial.

However, Hitt and Brynjolfsson (1996) found that on average the benefits of IT investments were passed on to the customers. IT investments would then be more of a necessity than a strategically effective weapon. Recently, Anderson, Banker and Ravindran (2003), using another set of measures, noted extremely high valuation multiples on IT spending. IT investments connected with the Y2K problem – where Enterprise Systems account for a large proportion of the spending – during the period 2000-2002 were correlated with valuation multiples of up to 30 times. Their tentative conclusion was that Enterprise Systems investments maybe are important and highly valued after all, although they are probably only part of a larger set of ventures that work together to account for the value increase. However, they could find no other single indicator that could better explain the high valuation multiple.

Thus, it is by no means clear from previous research whether ES implementations can be expected to hold strategic potential or not. Proponents tend to see the potential for standardisation as an important benefit of Enterprise Systems. Sceptics, on the other hand, tend to value idiosyncrasies in business processes, and view standardisation that Enterprise Systems encourage, as an important problem. I therefore now turn to aspects on standardisation noted in Enterprise Systems literature.
Enterprise Systems, standardisation, power and conflicts

In contrast to the Japanese tradition identified by Bensaou and Earl (1998) favouring bespoke systems, in the West, Enterprise Systems tend to be parts of strategically legitimised attempts to increase standardisation in international groups (Newell, Huang, Galliers and Pan, 2003). Installing a common Enterprise System may seem as a way to increase reach and range (Keen, 1991), and Enterprise Systems suppliers and consultants claim that this will also be the outcome. However, as noted by Markus, Tanis and van Fenema (2000), standardisation of software is just one of many levels of standardisation. Standardisation of software does not automatically imply either standardisation of how the software is set up, nor standardisation of the data handled by the software. As attested by case studies, range and standardisation can still be moderate and partial after the installation of the same Enterprise System in different countries (e.g. Manwani and O’Keefe, 2003). Manwani and O’Keefe also note the challenges involved in getting people in different countries within an international Group to work in similar manner, even when they have adopted the same Enterprise System. Such standardisation can require a far longer timeframe (ibid.). This agrees with Markus et al. (2000), who propose that it will be difficult to succeed with reorganisation and multi-site implementation simultaneously.

Scott and Wagner (2003) illustrate the importance of paying attention to the development over time, when trying to understand Enterprise Systems implementation and use. The process of setting up, adopting and using an Enterprise System in an organisation is a social process of structuration, where actions shape and reshape both the way the system is set up and the routines and interpretations that form around the system. Coalitions and networks form for and against the Enterprise System or inscriptions that it seems to hold. Some attempt to enlist the system to further their cause, with more or less success. Besson and Rowe (2001) view Enterprise Systems projects as a series of conflicts and negotiations between clans who see themselves as standing to win or lose from the changes. According to such a view, it will be important who is included, and able to influence the process, and who is excluded. The perspective also proposes that avoiding a confrontation will not resolve conflicts, it will simply postpone the confrontation. The system and people around it will always be subject to interpretations made by themselves and other people, interpretations that will shape and change over time. Scott and Wagner conclude that judgements of Enterprise Systems “success or failure are closely related to the timing of evaluation and the vantage point from which such observations are made.” (ibid., p. 310)
An Enterprise System implementation, once it has set in the organisation, may enhance efficiency, but also lead to rigidity (Besson and Rowe, 2001; Newell et al., 2003). Newell et al (2003) show, through a case study, how complementing ventures promoting learning and flexibility may be needed to balance the conserving effects of the Enterprise System. A related topic, but with more focus on the individual employee, is the question of Enterprise Systems as empowering or tools for controlling the users. Both Davison (2002) and Sia, Tang, Soh and Boh (2002) find little evidence of empowerment in Asian settings. Managers resent changes that reduce their power and view a freer flow of information as a threat to their status and power. Sia et al. (2002) find evidence of managers using the Enterprise System to increase their control over their subordinates. In a Northern European context, the idea of user empowerment would be likely to appear less threatening to managers. However, the perception of empowerment is likely to be subjective. Being able to influence the development process, or at least having a feeling of having some influence, is likely to affect acceptance (cf. Baronas and Louis, 1988), and the feeling of empowerment.

Considering that Enterprise Systems implementations involve many people with differing values, ambitions and vantage points, the potential for conflicts is considerable. Based on a theory-testing case study, Sarker and Lee (2000) conclude that top management focus is necessary to keep such a complex process as an Enterprise System implementation on track, but that neither co-operative teamwork nor honest communication are necessary prerequisites; coercion and deceit can be part of bringing the project forward. Besson and Rowe (2001), on the other hand, note how French managers tend to underestimate the power their subordinates have in stalling or thwarting changes related to Enterprise Systems implementations that they resent. Top management focus may be necessary, but according to Besson and Rowe, it is not sufficient.

A general conclusion based on these studies is that it is important to attempt to capture a multifaceted view when studying Enterprise Systems ventures. Many stakeholders at different levels in the organisation and in different locations can be expected to hold diverging views of the intent, the process and the achievements. The issue of standardisation, so strongly connected with Enterprise Systems, is not just a question of efficiency and coordination. It is in addition likely to hold aspects of shifts in power balance, giving rise to conflicts, power struggles and unexpected changes in status. These aspects are likely to remain hidden if the study is based on just one vantage point.
Methodology

This paper describes research conducted in an interpretivist tradition. To understand information systems, and the roles they play in organisations, the researcher will have to try to capture the social construction and reconstruction of information systems and their context that takes place over time. Walsham (1993; 4–5) proposes that interpretivist research methods aim at “producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context”. To achieve such a contextualised understanding, the project SSP in BT Europe, events preceding and leading up to it, and subsequent development in the organisation, have been studied through a large number of interviews and extensive project document studies. The longitudinal study, covering a ten-year period, was partly retrospective, partly concurrent, as contact with the companies was established in April 2001. The majority of the interaction with the companies took place during the following 18 months, but contact still continues to this day. During the 18 months, close to 70 interviews with 48 people in the projects, at headquarters and in three of the market companies and 10 people at the Enterprise System supplier were performed (see Table 1), and extensive project documentation was made available to a research team. (A few of the interviewees had changed over from the buyer to the supplier or were no longer working for either company.) We also held meetings and workshops with actors at both the buyer and the supplier. In addition to me, the research team included three additional researchers: <names disguised for blind review>, who had related, but somewhat different research goals. This collaboration between researchers made it possible to collect more empirical material than would have been feasible for a single researcher, thus increasing each researcher’s understanding of the Enterprise Systems venture and its context. However, the relevance of the entire interview in each interview varied more from a specific researcher’s perspective than would have been the case without the collaboration.

Table 1 Interviewees

<table>
<thead>
<tr>
<th>Interviewees at buyer</th>
<th>Interviewees at supplier</th>
</tr>
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<tbody>
<tr>
<td>Top managers</td>
<td>4 Top manager</td>
</tr>
<tr>
<td>Other managers</td>
<td>9 Project leaders</td>
</tr>
<tr>
<td>Project leaders</td>
<td>2 Consultants etc</td>
</tr>
<tr>
<td>Subproject managers</td>
<td>6</td>
</tr>
<tr>
<td>Project team members</td>
<td>14</td>
</tr>
<tr>
<td>Users</td>
<td>13</td>
</tr>
</tbody>
</table>
| **Total**                     | **48 Total**             | **10**
The social construction of meaning also takes place in the interaction between researcher and interviewee (Klein and Myers, 1999) and the interpretations made by the researcher will develop and change over time, as previously collected material is revisited and new material added, in dialogical reasoning (ibid.). Therefore, starting with the BT project manager and an Intentia manager (the Enterprise System supplier), each interviewee was asked for suggestions of people who could have complementing or contrasting stories to tell. The analysis of the material collected during the case study was continuously analysed in a grounded manner inspired by Strauss and Corbin (1990). However, I have not purely attempted to “understand phenomena through the meanings that people assign to them”, (Klein and Myers, 1999; 69) if “people” is taken to mean the organisational actors. Rather, I have taken a critical stance, in the weak sense employed by Ngwenyama and Lee (1997), in trying to question the organisational actors’ interpretations and look for alternative ones. In so doing, I have tried to identify inconsistencies between the views expressed by different interviewees, looking for indications of underlying differences in opinions and ambitions. Informal discussions over lunch with some of the interviewees at headquarters and at local sites have also helped identify such differences. In this way, I have tried to uncover also “politically incorrect” views and explore such leads in subsequent interviews and in re-readings of previous interviews. In addition, I have also throughout the study looked for inspiration from other published case studies of Enterprise Systems ventures and other research concerned with social processes in organisational change settings. Repeatedly, we reviewed the list of previous and potential interviewees, to decide on questions looking for answers and who could next help enrich our respective understandings. Requests for further interviews were subject to review by managers in order not to extend an unlimited amount of employee time to our research project. Although at times this caused delays in scheduling interviews, I did not in relation to the present article feel restricted in my choice of interviewees.

Typically, interviews lasted between one and three hours, and were tape recorded. No interviewee declined having the interview recorded, and what little introductory hesitation to share thoughts and views when being recorded that existed, typically resolved after the first few minutes and an open climate developed. The interviewees were informed that the researchers shared interview recordings with each other, but not with company representatives.

The interviews were performed on site, but uninterrupted by current operations. Typically, the interviewees were first asked to tell their version of the Enterprise Systems venture form the point
in time when they first came in contact with it up to the present day. During their account, we asked additional questions to get clarifications, additional detail and examples. We also signalled our acquaintance with possibly sensitive topics when the interviewee touched upon them, to reassure the interviewee that others had already begun to bring such issues to our attention. This tended to give rise to an open conversational climate. After the interviewees had given a more chronologically organised account, we brought up specific topics of interest to us that had not been touched upon in the previous narrative. In this way, we strove to limit the extent of our “co-creation” of the interviewees’ accounts initially, while ending the interviews in more of a mutual discussion mode. The “co-creation” element was stronger when, in addition to the interviews, we conducted meetings, workshops, and reflective dialogues (Mårtensson, 2001) to further develop our understanding of the process, and to test and explore our interpretations together with some central actors – managers, project and subproject managers and application architects. This provided important input, both when they agreed and when they disagreed with our interpretations.

Although critical to categorical statements made in Enterprise Systems research, this article is not “frame-challenging” in the terms of Hellgren and Löwstedt (1994), but rather tries to build on both ideas from more traditional, positivistic studies and on the growing body of interpretivist information systems studies and on organisational theory in a “field-developing” manner (ibid.). As noted by Lee and Baskerville (2003), all research is interpretative when it comes to assigning meaning to observations made, and an interpretative researcher can choose to view a positivistic researcher’s findings as interesting ideas to explore further.

The road towards co-ordination - the Sales Support Project in BT Industries

The organisation in focus for this study, today called BT Industries, now is part of the Toyota group. BT Industries is a leading supplier of forklift trucks, with a world market share of more than 20%, annual sales of €1.2 billion, and 8,000 employees. The company offers a wide range of forklift trucks plus servicing facilities and has manufacturing locations in Sweden, Italy, Belgium, USA and Canada. In 1990, BT was a far smaller, European Group where a number of influential actors had the ambition to grow the company. Coupled with the ambition to grow, the notion arose that Enterprise Systems could form an important part in co-ordinating the Group and in increasing efficiency.

The case description starts with the historical background and setting for the Enterprise Systems venture. The background
includes two previous attempts to acquire and install common standard packaged software. It also includes a Business Process Reengineering (BPR) study, aimed at determining success factors for business processes and demands on IS support. These three projects form the start of a process of increasing coordination and standardisation of Enterprise Systems and business processes in the European group. The case description then continues with the largest venture in this process, the BPR/IT project, later called SSP, and its subparts the Core project, the rollout and the postimplementation and results. (See Figure 1.)

![Figure 1 Enterprise Systems related projects in BT](image)

Although these specific projects have been completed, the process of increasing coordination and standardisation is likely to continue into the future.

The historical setting for the Enterprise Systems venture

The company history started in the late 1940s, when a Swedish entrepreneur began importing forklifts. By 1990, the business had grown to an international scale. There were market companies in most countries in Western Europe and retailers covering the major parts of the industrialised world, but the separate companies operated rather independently. "Local businessmanship" was a central concept. In Bartlett & Goshal’s (1998) terms the company could be considered a multinational. The companies were evaluated on the basis of operating profit – much in line with what was normal at the time (Besson and Rowe, 2001). In step with the sentiment of the time (cf. Newell, Huang, Galliers and Pan, 2003), the idea to identify and benefit from potential advantages from co-ordination began to grow stronger. At headquarters, there was a move towards evaluation based on residual income, each company’s contribution to corporate profit. The corporate management also prepared to launch initiatives that would lead to increased co-ordination and efficiency. In part, this was due to the increasingly popular "truth" that global customers demand global suppliers.

In 1992, the recession hit. For the first time in history, BT was forced to dismiss personnel due to lack of work. At BT Svenska (the Swedish market company), 430 out of 970 had to go. The reductions were not uniform across functions. BT Svenska chose to
keep the salespeople to keep a market presence when the business cycle turned back up. The following year, demand started to increase again, and BT acquired market share as well as in absolute terms.

Computer-based information systems in the group – early attempts

Now let us take a closer look at the use computer-based information systems. In Sweden, there had been experiments in BT with computer-aided administration of spare parts as early as the mid 1960s. At the end of the 1980s, a number of (typically bespoke) computer-based information systems were in use in Sweden as well as in other countries. The English subsidiary, which was both large and profitable, was also at the computerisation forefront. Other market companies had low computer use. As regarding other topics, the companies in the Group each managed as they saw fit. However, at this point in time, the first joint IT project was carried out, resulting in the installation of a limited Enterprise System (of English origin) in several companies. It had a focus on financials, and did not cover the entire needs of a market company. Thus, typically each company still had a number of different systems – one or more in each department.

At the beginning of the 1990s, it was time for the next joint IT venture. In the German company, which had not come very far in computerisation, the idea to acquire an Enterprise System was gaining adherents. Why then not partner with other market companies? Buying the same system for a number of companies ought to save cost compared with each country choosing a system separately. The corporate IT department supported the idea, and envisioned a number of concrete savings:

- the systems evaluation and purchasing process – why incur the costs of a separate process in each country?
- price – combining to form a larger customer, it should be possible to obtain a better price than the sum of a number of separately negotiated deals
- operation and maintenance – as a larger customer (through coordination across country borders) BT should be able to achieve a greater influence on the further development of the Enterprise System standard versions, and thus not have to spend as much money on modifications of upgrades. It ought also be possible to benefit from size and standardisation within the Group regarding direct operation (of both hardware and software) and development and maintenance of knowledge concerning the Enterprise system.
Furthermore, there was a hope that co-ordination of information systems across the Group would pave the way for other efficiency-improving ventures.

The initiators held the opinion that it would not be very complicated to change to a new Enterprise System, and they expected the implementation of a standard software package to be rather swift and straightforward. Sweden, England, Germany and Spain decided to co-operate, and settled for an Enterprise System called BPCS. However, the project turned out to be more difficult than expected. When asked about surprises in a more recent, problematic process, one of the sub-project managers of the BPCS project said that he is now difficult to surprise. "I had had this fiendishly difficult implementation project earlier [BPCS], so I was prepared for almost anything."

Those involved in the BT Svenska sub-project found BPCS to be an unacceptable alternative, and aborted their sub-project. It was far from able to offer the business support provided by the systems in use. Before the installation was completed, England backed out too. In Germany and in Spain, who did not have as advanced current systems as Sweden and England, decisions were taken to complete their sub-projects, and the Enterprise System was painstakingly introduced in both countries. However, the resulting implementations were not compatible. A lesson learned from the BPCS attempt was that installing the same software package is not sufficient to achieve information systems integration benefits. To be able to build, for example, a joint logistics operation in Europe, a software package would need to be installed in a similar way, using common definitions, agree on codes, parts IDs, etc. At corporate headquarters, people reached the conclusion that Enterprise Systems and co-ordination was a complex issue calling for a more thorough treatment.

The BPR project

One step towards more informed coordination was to try to figure out how business processes that took advantage of computer support would look. Business process reengineering (BPR) was in vogue and, headed by consultants from an international consulting company, groups of senior and possibly visionary people from a number of market companies performed a number of sessions that led to relatively high-level descriptions of a number of central processes: parts distribution, order fulfilment, rental management, service provision, and finance.

An overarching idea was to design the processes with customer value as lodestar – an ideal that was popular at the time. In April 1995, representatives from the workgroups presented their conclu-
sions at a board meeting. The focus was on success factors for each process and the major demands these factors would pose on information systems support. The possibility to replace the present information systems with modern standard packages, one best of breed for each function, had been discussed. However, there was stronger support for the policy to find an Enterprise System, avoiding a patchwork of systems joined by bespoke bridges. In parallel with the BPR studies, other groups had performed a thorough analysis of the Enterprise Systems market. Starting out with 25 products, they had narrowed the field down to two finalists in time for the April board meeting. It was decided that the final choice would be made in June, after further trial periods and reference visits.

Until then, the process owners should carry out the process changes that were not information system dependent. Regarding system dependent process changes, the question was how to perform live tests and how to implement. The main line at the meeting was to start with BT Svenska (the Swedish market company) or BT Rolatruc (the English company) – large, experienced companies in need of new software systems. BT Svenska’s present systems ran on outdated platforms, like IBM System 1 and ABC 800, and were increasingly subject to downtime. Neither the Swedish nor the English systems were year 2000 proof. Less favoured alternatives were to try out the new Enterprise System at a small company, which would be quicker, but perhaps not be a comprehensive test, or to choose one module and implement at all the companies. The final choice on how to proceed was deferred to a later occasion. However, it was obvious that a task force would be needed to conduct the work. Given that the roll-out should encompass all twelve companies in Europe, it was expected to take almost three years. Even if it could start in January 1996 this would mean that it would not be completed until the end of 1998.

Initiating and organising the BPR/IT project

Based on the ideas from the BPR study, the wish to find one Enterprise System that could serve all companies and business processes, and the desire to increase efficiency and to save money in the Group, the BPR/IT project was initiated by corporate headquarters. The goal for that project was to perform pilot installations at BT Svenska, and to lay the foundations for a roll-out to the European market companies. Such a roll-out would require a shared data communication network within and between the companies. Therefore, the corporate IT department carried out such an IT infrastructure project concurrently with the Enterprise Systems project. Concerning the choice of Enterprise System, the IT department
management was beginning to reach the conclusion that Baan’s Triton would be a suitable package. The decision to start at BT Svenska instead of BT Rolatruc was not arbitrary. In both companies, it was recognised that being the pilot site would mean a great deal of work, and probably frustration too. On the other hand, being the pilot site would increase chances of tipping design choices your way. In the end, management at BT Rolatruc was more reluctant, and the managing director of BT Svenska saw the Enterprise System project as more prioritised, and in line with his visions for the BT of the future.

The Enterprise Systems project, initiated in August 1995, had an ambitious time plan. Information analyses would be conducted for each business process in September and October. They would be reconciled with each other and with the BPR results in October and November so that test runs of Triton could be set up, tested in a lab environment and modified in November and December. According to the plan, a modified Triton version that could be tested at BT Svenska in January 1996 would be ready by Christmas. The trial period was expected to last up to the summer, and at the start of the third quarter, Triton should go live at BT Svenska.

It was recognised that this was a major undertaking, and formation of a dedicated project team and a proper project organisation was taken seriously. The manager at BT Svenska, who had been enthusiastic about the Enterprise Systems idea, would be project owner. A former service manager at BT Svenska, with 30 years of experience from the company, and with a history of several computerisation attempts over the years, was appointed full time project manager. He had retired a couple of years earlier, but had been called back into service to sort out one of the smaller European companies. Notified of the Enterprise Systems project in early summer 1995, he felt that this was what he wanted to cap his career with, and in parallel with his present job, he spent the summer reading the Triton system documentation to be well prepared when the project started.

The project group was organised as a matrix. Along one dimension, there were people responsible for Group standards, software, hardware, quality and information, plus project administration. They were mainly staff from corporate headquarters. The other dimension consisted of the business processes. There were project groups for each of the five processes: Products (from the BPR Order fulfilment process), Service, Parts, Rental, and Finance. The project group managers were line managers for the corresponding functions in Swedish or other Nordic companies in the Group. They still upheld their regular positions while leading the project groups part time. The other group members were experienced people, often business function managers, from different
companies – large, or small and progressive. There was more focus on staffing the groups with people with good knowledge of the processes and of some standing in their home organisations, than on achieving representation from all companies in Europe.

Around this time, the process idea started to spread in BT, and the words “process” and “process owner” came into use. Three leading managers were appointed process owners of the five business processes, but the previous functional organisation still existed.

The risk that the work performed during the BPR study would remain an intellectual exercise, with no real influence on the business, was tangible. To reduce it, a responsible for business process contract negotiations was appointed. The slogan “Keep BPR alive” signalled that BPR/IT should not become an “IT project”. The project manager formulated the project goal as “adapt, modify, simulate and implement Triton to support and improve BT’s Total Sales Processes – regarding specific needs from:

- Product development
- Engineering
- Production
- Parts availability and distribution
- Sales and after sales activities
- Financial reporting, control and steering
- Training and personnel development
- Information accessibility
- Communication
- Quality assurance”

The ambitions regarding the BPR process and the IT-project were further elaborated as:
“The BPR process and the IT project will demand and induce

- organisational change on all levels
- changed roles for many individuals, centrally and locally.”

The intention was definitely that this project should leave a profound imprint on the organisation and that it would affect individuals in substantial way.

Now from intention over to the process.

SSP kickoff and selection of supplier
The project was renamed SSP (Sales Support Project) and a kick-off meeting was held at a futuristic conference centre in a science
Everyone was waiting for Baan to be presented. Then the project owner entered with an Intentia top manager, who said. [Intentia is one of Baan’s competitors] “We have just received the order for a modified version of Movex. Many jaws dropped. Some people quit. People almost booed, but close to half of those present probably said then and there that they did not want to stay in the project. Some actually quit.

The project manager was as surprised as anybody by the announcement that Movex had been chosen, but having been a military before joining BT, he accepted the decision without questioning it, or even inquiring into its foundations.

But the choice of Enterprise System was no malicious coup against the company’s employees. The meeting had been preceded by strategic negotiations with Baan and Intentia. As neither supplier could deliver an off-the-shelf Enterprise System that met all of BT’s requirements, systems development would be called for. The project owner and some other prominent people within BT saw it as important to have a partner they could influence. Intentia was considerably smaller than Baan. It was also a Swedish company, and the top managers made a commitment to view the co-operation with BT as a strategic partnership. BT was Intentia’s largest customer, and was successfully conducting business of a type for which Intentia had not yet developed competitive modules. The new modules to be developed to support BT’s service and rental processes would form the foundation for new standard versions of Movex. Because of this mutual interest in the systems development, Intentia offered BT a highly competitive price. Being able to influence the development of future standard versions of the Enterprise System would make upgrades less complex for BT than if all deviations from standard were viewed as BT-specific modifications. The top managers of the other supplier were not as obliging. They were not prepared to view BT as a strategic partner, and Baan also had a number of large customers who could be expected to want to influence future systems development in other directions than BT would.

The project manager wanted more than an idea-based connection between SSP and the BPR project. He wanted it to be personalised too, by keeping the BPR workgroups “alive” as reference groups to SSP. However, this intention was never turned into practice, and the ambition to change the business in accordance with the BPR visions were replaced with the aim to get the functions within BT to still work with the new information systems support. The new Enterprise System was to be set up (and perhaps modified or
developed) to support the existing work processes in the different companies.

It is not apparent that this change of ambition was the result of a specific, conscious decision. Rather, there is much to indicate that the change was more spontaneous, as it gradually turned out that even a less revolutionary aim required considerable effort, and because other activities competed with SSP for people’s attention and time. The Enterprise Systems Project was not the only venture in the Group that was added to the everyday work. One parallel process that took much of the top management attention and energy was the introduction of BT on the Stockholm Stock Exchange in 1995. The Group was also expanding, and in 1997, a North American company of almost the same size as BT was acquired. The Group was restructured, forming three divisions – BT Europe (Western Europe), BT Raymond (North America) and BT International (other markets) – reporting to a corporate level (BT Industries). In 1998, BT International grew through a number of acquisitions in Eastern Europe. Furthermore, BT acquired a new production unit in Europe (CESAB in Italy). In the year 2000, BT Industries was bought by Toyota Industries Corporation and the BT share was removed from the stock market. Initially, Toyota showed no strong wish to affect the way BT was managed. All this time, SSP continued, but from 1997 in the newly formed division BT Europe.

The Core project – striving for standardisation

Through SSP, 22 systems in twelve companies in eleven countries would be replaced with Movex. A first stage of SSP, called the Core project, was to try to determine the common core of the information handling in the business at such a level of detail that it could guide the setting up of the system and, when needed, form the basis for systems modifications and systems development. What modifications of Movex were needed for BT Europe in general? For Service and Rental it was obvious that development of new modules was needed, so there the work was directed at deriving specifications for that development. For the other functions, there would mainly be some modifications of existing modules. Intentia suggested that three BT employees and two trainees hired for the project should be allocated to this sub-project. These BT-employees and project trainees, who all worked full time in the project, sat with Intentia’s project group in Intentia’s building, 20 miles from the BT head office. It soon became apparent that more resources would be needed and that it would take far more than a couple of months. It was also evident that there would be no system ready to test at the start of 1996, and a new date was set for the
following year. Soon some 20 BT employees travelled from different companies in Europe to the Intentia office every other week to participate in the effort. They were a mix of business people and IT people, with business people forming the majority. Recurrently, meetings were held with representatives from all business processes, but for most of the time, each process group worked separately from the other.

Modification and development of Movex was conducted concurrently with the core project. When the spring of 1997 approached, it became obvious that the core project would not even be ready in time for the new date for system trials at the central spare parts warehouse and the Swedish market company. It was not only a question of describing in detail how work was carried out in the different companies, but also a considerable amount of negotiation to find common work processes and systems solutions that were acceptable to all parties. An unforeseen and major part of the work concerned concrete, practical details, like what names and codes to use for the different spare parts. The project had grown to a size that neither BT nor Intentia people had foreseen. (This type of misestimating was not unusual. For example, Scott and Wagner (2003) describe a similar development in a strategic partnership between a university and Oracle.) The Intentia project manager and the BT project manager had repeated controversies regarding the time plan. The experienced and strong-willed Intentia manager argued that the time plan would require an absolute minimum of modifications, while the likewise strong-willed BT project manager claimed that the strategic partner contract meant that Intentia should find the resources to modify and build a system that would fit BT’s way of doing business closely, and that this should be accomplished within the existing time frame. Neither project manager would back down. The conflict escalated, and following discussions between the high-level project owners on either side, the Intentia project manager was replaced by a more junior and more negotiable colleague. The project was progressing far slower and was evidently going to take much longer than envisaged, and to try to start to put an end to it, the project management decided to start the system tests at the two Swedish pilot companies, although the systems development was not finished.

In November 1997, the pilot installations began. The BT project manager considered his task completed and went back to retirement. He was replaced by an able young manager from the finance department, who had by then also been made head of the IT department. This new project manager was also a friend of the Intentia project manager, and the two developed a co-operative collaboration climate. The pilot installation was by no means painless. Opinions such as “chaos” and “catastrophe, CA-TA-
STROPHE” were not entirely unfounded. Of course, there were some things that had been overlooked during the development of the “core”. There was also a large amount of functionality that users did not find acceptable and demanded that it should be modified. A number of modifications were also made. Furthermore, there were connections between modules that had not been noted until the system was put into actual use. In addition, the change that the system meant to the users’ was far greater than anyone had imagined. It took time before the system started working as intended and before the users had learned to handle it. One of the complications was that there was no input control in the fields. A user could enter any order quantity – the parts number, for example, and Movex would obediently accept it. The users would thus have to be more attentive and meticulous than before while simultaneously trying to understand the new program. Another complication was that the new system had another logic than the previous systems for when a transaction was considered as initiated and completed. This made users uncertain of what had actually been registered and not registered, especially before they learned ways of examining the data in the files. A challenge of another type, was that the integrated Enterprise System posed greater demands on the users’ understandings of what happened in other parts of the system (and in other parts of the organisation) in order for their own systems use to work satisfactorily, and in order not to create unnecessary problems for others.

Even when the work with individual transactions started to function acceptably well, problems remained. Aggregations and reports had not attracted the same amount of attention during the systems development as the basic workflows. A top manager at the market company commented: “November 1997, that was when we invented darkness. Not until 1999 did we feel that we had a good overview over the business again. Still today [2002] there are business critical reports that we create manually or in Access and Excel.” (This appears to be common. Scott and Wagner (2003) report similar experiences, and Soh, Kien and Tay-Yap (2000; 50) note that in their investigation, output misfit was by far the most prevalent misfit recorded.)

The roll-out

For the project team, the pilot installations gave rise to intense learning. The system steadily grew more stable and complete, and the project team learned much regarding both systems use in BT and how to train users. They started to believe that the system would be possible to implement in the other companies. The core project still was not completed, and some modules were still miss-
ing, but the two implementation groups should go on to success-
ively install the system in the other companies within BT Europe,
country by country. The project manager and the division manager
went on tour to the different market companies to convince them to
go through with the project, using a mix of arguments emphasising
the potential benefits of a common Enterprise System and the Y2K
threat – even forbidding local managers to Y2K-proof their existing
systems. They finally got the market company managers to commit
to taking project ownership for the local implementation and com-
mit the resources needed to plan and carry out the installation and
the training of the users, but they had not managed to get accep-
tance for a common database. Although the program would run on
the European computer centre, each country’s application would be
set up separately and would not share its database with the other
countries’ applications.

The new project manager also changed the climate in the proj-
ect team. Project team members described the first manager as
aloof and managing by the project plan. The second project man-
ger was much more attentive to the social climate, exhibited lower
power distance and soon also realised that newly employed young
women needed positive feedback when they did things well. Such
feedback had not been part of the previous project climate.

The implementation teams consisted of experienced BT
employees, young academics recruited for the project and a few
Intentia employees. The basic idea was that the BT employees
should learn enough about the system to be able to conduct the
implementations with a minimum of support from Intentia. Intentia
should concentrate on country-specific modifications. In this way,
important systems knowledge and implementation experience
would remain in BT to support the continued systems use.

The strategy for spreading the systems knowledge within BT
was “train the trainer”. Each implementation team should train
local key users, who would participate in setting up the system, and
then in their turn first train the other users and then continue to
serve as first-line support when users met problems or had ques-
tions.

Intentia, like its competitors, grew quickly at that time, and the
people working on the BT project came to be viewed as important
sources of competence needed in other projects. Some of them
were experienced and highly competent already when they had
been assigned to the BT project when it was new and important to
Intentia. Others had been inexperienced, but had learned much over
the years. Although there was a strong feeling of commitment
towards BT and social bonds with BT people, it was not unusual
that the Intentians started to feel that the project was dragging on
and that it would be interesting to move on to other projects or
tasks. The Movex version they were modifying for BT was no longer the latest one, and working full time on the BT project now meant not being up to date with the current and future versions. Several of the more experienced Intentians were replaced by more junior colleagues. The general IT boom and the extreme demand for consultancy services to deal with the Y2K problem made recruiting experienced people difficult. In BT, this loss of competence in the Intentia part of the project created tensions.

**Setbacks complicating the roll-out**

After a couple of implementations, the group that was introducing the sales support modules reached the conclusion that the Movex product configurer that was continuously being modified would never be acceptable. The basic design was for production support, and a long series of attempts to modify it into a passable sales support tool had led to an evermore unstable product, that also created problems in adjacent modules. Concurrently with the continued implementation, the group found another supplier and managed to swiftly develop a new product configurer that was acceptable. They then went on to install it also in the countries where they had previously tried to implement the first configurer. This added considerably to the workload, and to increase the speed of roll-out (which had been slower than planned) a third implementation team was created, and implementations were allowed to overlap. A team would thus start a new implementation before the previous one was finished, and then travel back and forth between the two.

When creating the third team, an idea had been to mix people from the existing two teams with new people to distribute implementation experience across all three groups. However, due to the intense workload these teams had, the new project manager judged it as preferable to keep the existing teams, who by now had strong social bonding, and create a new group as a third team. By now, the original BT project staffing of five project workers plus project manager and project assistant had grown to 23 people working full time on implementation and project administration.

The implementation teams were travelling three weeks out of four. This created a strong social bonding within each team. There was also considerable communication on an informal basis between people with the same task in different teams. Some were discussing with a counterpart over the telephone several times a day. But there was no co-ordinated, structured exchange of experience and knowledge between the teams. Originally, there had been an ambition to spend time each fourth week on knowledge exchange and co-ordination, but since the team members came from different locations they split up every four weeks when they all went home. In addition, the workload during the weeks on the road was too
intense to allow for meetings then. The result was that the intended, organised knowledge exchange never took place.

**Standardisation and customisation**

Implementation work came to differ substantially between countries. The three implementation teams developed somewhat different approaches, standards and solutions, but there were also other circumstances driving differences. In many of the smaller companies, the system was adopted with little questioning. People tried to learn to handle it the way the implementation team suggested. There were even companies where managers saw the introduction of Movex as an occasion when deeply routed routines would be broken, and took the opportunity to learn new ways of conducting business from other companies who were more developed. In other, primarily larger, companies, the implementation teams faced strong demands for tailoring of the system to suit local routines, and to set up and modify the system in such a way that it resembled existing programs to the largest extent possible. In such companies there was less openness towards learning from others (and in some instances perhaps also less potential to learn from others).

As time passed, the project management in BT became more and more restrictive with accepting modifications and program development suggestions. They started to question the conception that modification and further development of the Enterprise System would lead to an evermore functional system, and that the goal for the project should be to create the best system possible. The system was by now also far better and more stable than the version that had been introduced at BT Svenska. Thus the need to appease agitated users by promising them modifications was less pressing. Changing the culture proved difficult, and a new modification approval process was introduced. All modification requests should be substantiated with a business consequence calculation, or specification of local legal requirements necessitating it, and would have to be submitted to the project steering committee for approval. There were many reasons for the change. One was that the original fixed price contract with the supplier was no longer in force, and BT’s costs for modifications were mounting to considerable sums. Another was the growing insight that modifications would not be completely copied into new standard versions of the software, and would thus make future upgrades more difficult. Yet a reason was that each modification added to the already over-stretched project timeframe. They also often led to unforeseen complications elsewhere in the system. Finally, it became more and more apparent to the project manager and project owner that the development of shared work practices and benchmarking and learning between the companies was counteracted by the local modifications.
BT Rolatru in England, who had been one of the candidates for conducting the pilot installation, had grown wary of the problems encountered in the other companies. Several influential people in the core project and in installation teams came from BT Rolatru, so they had some influence over the development of the Enterprise System. However, having learned from the BPCS venture, they did not now want to risk their business by trying to implement an Enterprise System that was not reasonably complete and stable. Using their size and importance to BT Europe, they saw to it to gradually move to the end of the line of scheduled implementations. On the other hand, they used the delay to prepare for their implementation. Based on lessons from the attempt to implement BPCS five years ago, they now assigned key people from different functions almost full time to explore and learn Movex in depth, and to start training users. They did not intend to try to implement an Enterprise System they did not comprehend, and they were not going to be stuck after the implementation period with insufficient knowledge to handle the system. In all, this helped to make the implementation at BT Rolatru far smoother than in the pilot companies, and arguably the best of the large companies. Still, SSP took a lot of energy and necessitated considerable change in BT Rolatru.

Finally, more than four years after the project kick-off, but in time for the turn of the millennium, Movex was installed in all twelve companies. All new modules were not yet ready, and some requested functionality was not yet developed, but on the whole, the roll-out was completed and the companies in BT Europe had started to live with one common Enterprise System, or at least software from a common vendor and installed in largely similar ways.

Post implementation - striving for coordination and benefits

After the rollout, important challenges remained. One was to complete the Enterprise System, finishing the remaining modules and installing them. Another, and possibly more demanding, was to truly exploit the potential of the new Enterprise System. BT Europe started building an IS co-ordinator organisation. They appointed one person for each business process and assigned them the responsibility for dealing with the challenges and for being the point of contact with Intentia. Intentia had in a similar manner appointed a person as responsible for each part of the Enterprise System. Some of the people who had been hired for the project had decided to join Intentia after their trainee period. Others saw the IS co-ordinator role as more tempting. However, there were still gaps in the IS co-
ordinator organisation that needed filling and more people, fresh from university, were hired. Initial training and learning the job could be problematic in an environment were much experience resided in the heads of people, and relatively little was systematically documented. The project had been an intense work environment where the project members had worked closely together and had built strong, informal relations across organisational borders, and at the same time had had rather unique areas of responsibility. The new entrants needed to learn the business, the Enterprise System, who was who, what agreements that existed with the counterparts (in Intentia and in the market companies). They also needed to establish a new organisational role and to gain respect from the people they had to deal with.

**Project results**

By 2002, seven years after the kick-off, the entire Enterprise System was delivered. A shared administrative platform with 900 users was in place. The project turned out to be the largest one ever undertaken by BT Industries. Hundreds of man-years and seven-digit sums in Euro had been spent. What had been achieved? Some tasks had been facilitated, especially as a consequence of the integration between functions in the Enterprise System. An accounting manager said: “The close of books 2001 was the first time ever that I and my staff did not work weekends to perform consolidations and complete the financial statements. I almost thought something must be wrong!” The project had also raised standards in many of the smaller companies and given a cause (and an opportunity) to review business processes and learn from sister companies. At the same time, there were people, not least in larger companies, who felt they had greater aspirations than what had been achieved, and who believed that the time, effort, and money spent should have led to better results.

On an individual level, the project has been an important source of experience, a training ground and a forum in which people could show their competence and potential. For the project owner, the project manager and several others, the project has definitely not meant an end to their career. The project owner, managing director at BT Svenska when the project was initiated, is now President of BT Europe, and the project manager is now CFO of BT Industries.

We can also look at BT Europe as a whole. The originally estimated savings, that were once used to legitimate the venture, proved difficult to demonstrate. In a few functions, there were actually marginal reductions of staff, but new tasks and new organisational roles have also been called for, that were not in the original plan. However, it would be difficult to just count heads. All
other things are not equal. In 1994, prior to SSP, BT had a turnover of 3.2 billion SEK\(^1\) in Europe, and 3,600 employees. In 1999 the turnover was 4.8 billion SEK and the number of employees 3,900. Corresponding numbers for 2002 are 7.2 billion SEK and 4,300 employees. Proponents of the Enterprise Systems venture claim that this doubling of turnover per employee would not have been possible without the Enterprise System. However, the Enterprise System is not the sole explanation. Increased efficiency from restructuring and consolidation, and increased capacity utilisation also play a role. There are also indications that the back-office personnel now have a heavier work-load than in 1995 – much in line with general striving in Europe to trim administrative processes.

Now, with the shared administrative platform, the opportunities to compare work processes and system utilisation between companies have increased (although comparability is still somewhat limited). But the shared platform also opens up possibilities for new IT-related change projects: computer support for field technicians, upgrades of the Enterprise System, Enterprise Systems for Distributors, improved communication with large customers, and more. …

**Discussion of research findings**

The discussion of research findings revolves around the dynamics for and against standardisation. It starts with an exploration of what drove this long and costly project. Next, the related question of the roles of important actors (top managers and project team members) in conducting, guiding and supporting the project is discussed. Then the focus is shifted to communities of practice and borders separating and fragmenting them, and to the luring and frightening aspects of the transparency that standardisation can bring. The discussion is concluded by examining an epilogue to the Enterprise Systems project – a follow-on project – and how such new projects depend on both material and cognitive results from the Enterprise Systems project.

**What drove the project – strategic intent or inherent project momentum?**

Considering the timeframe of the project – eight years from BPR study to the close of SSP – it is not surprising that the idea that drove the development changed over time. Using the approaches suggested by Earl (1993) to describe the process, it could be argued that it was Business-led at the start, attempting to solve a perceived corporate problem of co-ordination and co-operation. The BPR

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\(^1\) 1 SEK is approximately 0.11 Euro.
study was then a mix between Business-led and Method-driven, suggesting that it was feasible to rethink the established business processes drastically. However, this drastic rethinking was in most market companies just a brief interlude. Once the SSP was under way, it was decoupled from the BPR results and turned Organisational, with a rather narrow focus on supporting existing work processes, or at least not disturbing them too much. As the project then threatened to overflow completely, and also miss the goal of increased standardisation in the Division, an Administrative ideal grew prominent, with strict rules and procedures, and centralisation of the priority setting to the steering committee. The project thus moved through most of the potential IS planning approaches, rather than staying with one. This gives the impression of muddling through; a project with a life of its own, adapting and surviving, rather than somebody’s planned and implemented vision.

As in Cendon and Jarvenpaa (2001), the originators of the Information Systems vision did not have organisational power to force it on the organisation. Gaining allies was important, and the proponents seem to have received support from top management and Finance. The Enterprise Systems idea seemed to fit with the wish for greater co-ordination and co-operation in the group harboured by a number of leading actors, and in line with signals from international customers. The strong local market orientation in the market companies (and among some corporate top managers) posed a problem for the idea of a shared information system. The BPR exercise in 1994-1995 could then be seen as a way of educating and convincing important functional managers and some market company directors that information systems could really improve the competitive capability, and help create efficient business processes. However, the BPR study did not go in depth to create detailed descriptions of the envisaged business processes and “open the Enterprise System black box”, to test whether the BPR visions were compatible with an Enterprise System. That was left for later. The concurrent Enterprise System test, also conducted in 1994-1995 could all the same draw the conclusion that no existing Enterprise System would meet the needs, but under the assumption that modification or redesign of an Enterprise System could close the gap, the SSP received go-ahead from corporate top management. At the time, the general rhetoric in the business community supported and legitimised the decision; Enterprise Systems still seemed to offer a solution to incompatible, fragmented and high-maintenance-cost information systems portfolios.

Once under way, the project seemed to take on a life of its own. When the time plan proved unrealistic, the project still continued, with postponed deadlines. When the budget proved infeasible, it received extra funding. Even when it became obvious that
the new system would not in itself help reach the goals from the BPR vision, the project continued. New arguments were mustered in support of the project in its present form. As described by Schein (1993), if the fear of not changing can be made greater than the fear of changing, people will accept the step into the partially unknown space the change leads to. In SSP, like in for example the case described by Scott and Wagner (2003), the Y2K threat was used to get reluctant managers and others in the organisation to view the new Enterprise System as the lesser of two evils.

Today, the Enterprise System is viewed as an infrastructure, making other ventures possible rather than being a large efficiency-enhancer by itself. However, during the first years of the project, this was not the dominant and legitimising “maxim” (cf. Broadbent and Weill, 1997). It seems to have grown to prominence towards the end of the roll-out period, when it became apparent that the projected savings would not materialise immediately, partly because of problems in attaining the organisational and administrative infrastructures (cf. Croteau and Bergeron, 2001) that would help create good use of the Enterprise System.

Perhaps it would not even have been possible to get a go ahead for the Enterprise Systems venture based on an infrastructure maxim. Bhatnagar (in Shirley, 2003, 326) asks, concerning large organisational IT-investments “Are they what people wanted? Do they deliver value, recognised by the prospective users?” From his own experience, the answer is no. The usefulness of an infrastructure is likely to be more apparent when viewed from the top than from the perspective of individual users. In their study of Enterprise Resource Planning adoption by European midsize companies, van Everdingen, van Hillegersberg and Waarts (2000) find that “From the viewpoint of clients, the fit with current business processes is the most important selection criterion for a new system” (p. 31). Infrastructure in a Group implies compromises. The market companies in BT are midsize, and reluctance to commit resources for the sake of increasing standardisation within the Group would then only be expected. The clash between the opposing ideals at corporate and at local level led to compromises that to a large extent went in favour of the local ideals. The initial grand visions of efficiency-enhancing standardisation held by the project initiators at the corporate level were thus not met, in large part due to the local market companies’ demands for customisation to the existing idiosyncratic business processes. But despite the early loss of the strategic intent, the project muddled through. It seems as though it was too large to terminate – once started, it had an inherent momentum that kept it going until an Enterprise System was finally in place.
The role of top management – directing or rescuing?

Top management attention to the strategic aspects of IS in business is supposed to be important (Bensaou and Earl, 1998) but rare (Kearns and Lederer, 2000). Top management support for major IS projects is often claimed to be a critical success factor, and Sarker and Lee (2001) found support for that notion. It is then interesting to note that by the time Markus and Benjamin (1997) called for more continuous attention from top managers after the initial decision to fund IS projects, top management in BT had demonstrated an interest in the project, seen to it that the development of the Enterprise System was in the form of a strategic partnership with an Enterprise System supplier, and on several occasions had attended to problems that had threatened the project. For example, they resolved the clash between the first two project managers (by replacing the supplier’s project manager); they renegotiated the fixed-price contract when the project dragged on and escalated; they took part in the tour to convince (and compel) the market company managers to agree to and participate in the roll-out.

Similarly, the second project manager in BT behaved as Markus and Benjamin would have recommended. He took on multiple roles: project manager in both an administrative and a social sense, design team member, IT manager, strategist and negotiator with market company managers and top management, etc. Both top management support and project management commitment probably helped see the project through on its long, and often difficult, journey. However, this can create a push, rather than a pull relation vis-à-vis the business managers (cf. Jarvenpaa and Ives, 1991). There is some evidence that this happened in BT. From an IS perspective, this is obviously a problem, but not necessarily from a business perspective. An Enterprise Systems project is large and demanding. Unless the local business managers try to keep people in their organisation focused on everything else that needs doing – running the business, for example – there is a risk that the organisation would implode around the Enterprise Systems project (cf. Westelius, 2001). It is worth noting, however, that there was no general abdication of responsibility from the project ownership that the market company managers had been given for their respective implementation projects. In a number of companies, top management played an active part in the project or assigned competent and highly respected people from their organisations to work in the project. Such actions certainly facilitated those projects.

Despite the top management support and the “exemplary” project manager, the project turned out to be unwieldy and not follow plans and expectations. As noted by Besson and Rowe (2001), the power that is often expected to lie in the hands of management is
limited if the intended course of action is not favoured by those lower down on the hierarchical ladder. Obviously, top management support and good project management are not sufficient to guarantee success, but without them it seems likely that SSP would have died on the way to completion.

The project group – representatives or aliens?
The project group in an Enterprise Systems project, being actors charged with a difficult and possibly controversial task, have a difficult position. Howcroft and Wilson (2003) talk about “the Janus role of the systems developer”. Poised between management and users, the developers are caught in a power struggle in which it is difficult to be neutral. The authors suggest that, like Janus, the developers try to solve this by having two faces. When talking with users, they tend to appear more sympathetic with user views, and when communicating with managers, they show a stronger leaning towards management values. This bears some resemblance with the project group in SSP, but there are also interesting differences. One difference is that in SSP, there was no sharp division between managers and users. There were managers on both the commissioning and on the receiving side, and in some respect, everyone in BT is a user. Another difference is that the project group in SSP consisted of people from both corporate and local company level in BT, and with both BT and Intentia participants. Also, due to the strategic partnership between BT and Intentia, Intentia was not purely a “supplier”; the resulting software and ideas built into it was of interest to them too, and the price in the original contract reflected this.

Having your representative in the project can be expected to be important. It can be expected to give you a better chance to influence the development (Westelius, 1996). Besson and Rowe (2001) talk of it in terms of a governance struggle between clans – having your clan members in the project group will give you control. The importance of representation was taken into account in SSP too, but consideration was also given to the general standing of the individuals in the organisation; it was considered important that the people in the Core groups, for example, were widely respected as competent and preferably held management positions. Preference was also given to people who were in favour of co-ordination and standardisation, and could be expected to think about BT rather than primarily about their own home company. But in addition, there were newly recruited people in the project organisation. Bensaou and Earl (1998) found co-location of IT specialists and business people to be a trait of the “Japanese” approach they considered superior. In SSP, co-location was definitely present, with the Inten-
tians and the BT project group members sharing office space – a separate section of the Intentia building. There are obvious signs that companies who had members in the project had a closer fit between the resulting Enterprise System and their way of working than companies without representation. As could be expected, it also made a difference who was more experienced, a better negotiator, and who had the best command of the language used in the project.

But there is also evidence that the project formed a culture of its own. Especially among the younger project members, a common comment has been “I did not think of myself or the others as Intentians or BT people; we were SSP members.” Among those experienced members who came from market companies, the project membership also made a difference when they were in their home environment. They became “project members”, attaining some of the Janus qualities described by Howcroft and Wilson (2003). They found that they had to start to try convincing and negotiating with their colleagues that the solutions they had devised and agreed on in the project were acceptable or even good. The extent to which they did this – and succeeded with it – also differed. There were those who acted more as “experts” in the project than on achieving understanding and agreement as negotiators and change agents in their home organisations. It is often assumed that a department having a representative in a project will accept the project outcome, but like in Westelius’ discussion of “the local partner” (Westelius, 1996; 299-302) the SSP case indicates that this assumption is a dangerous one.

To some extent, some project members served as clan representatives, furthering the cause of their clan. But to a much greater extent, the project members came to take on a new identity, having spent a major part of their time in the project, away from “home”, negotiating with other project members to find mutually acceptable solutions that were in line with the standardisation ambition. They became project members, rather than representatives for their own part of the organisation. Rather than meeting acceptance for project solutions because they, as clan representatives, had had a say in shaping these solutions, they became aliens to their colleagues “at home”, and had to negotiate with them and “sell” the project solutions to them – with differing success.

Bridging communities of practice

In this age of globalisation, companies dream of breaking down barriers or bridging boundaries for example with the help of Enterprise Systems (Newell, Pan, Galliers and Huang, 2001). However, Newell et al. (2001) give examples of how information systems
have resulted in reinforced or new boundaries. Completely boundaryless communication will probably remain but a dream. Some have believed that an Enterprise System as such, built on the idea of co-ordination and sharing, carries so strong an inscription that it will remove all boundaries that exist between previous information systems. The case in this article demonstrates how the naïve dream, that using the same software will remove barriers, foundered at an early stage with the BPCS project. The Sales Support Project then set out with more realism, but still with a vision of uninhibited computerised communication between companies. Due to a combination of reluctance against sharing data freely, and the practical complications involved in reaching an agreement on standardised work processes, data structures and register items, identifiers, etc, led to the decision to keep the company boundaries as information system boundaries too. The range (Keen, 1991) was thus restricted. This partly politically motivated decision was believed to be possible to retract later on, but despite an almost constant discussion ever since, it is still in force today (2004). However, the standardisation that had been achieved by 1999 is far greater than it was before the SSP. Also, given the shared technical infrastructure, the reach has grown. It is now technically possible to access each other’s data, but it has been agreed not to authorise this.

But boundaries may exist, or emerge through diverging enactment of routines, even within a shared Enterprise System set up in a specific way. As noted by Newell et al. (2003; 28) any given information system has interpretative flexibility, and unless extreme care is taken to avoid it, the outcome of any information system will be emergent. Probably these emergent properties will differ between users, especially those who are not in constant contact with each other (cf. Westelius, 1996; Petri, 2001). Such diverging uses would decrease comparability and make benchmarking between similar parts of the organisation difficult. In BT Europe, there were hopes of continuous positive effects from benchmarking, but spontaneous learning between market companies typically took place during implementation, if at all. The disruption caused by the introduction of a new systems support provided an opportunity to learn from those sister organisations that were considered more advanced in some respect. For example, a small company, whose managing director had actively participated in the project, took the opportunity to learn about service rental from a larger company. However, spontaneous learning after implementation did not take place to any greater extent. This rigidity that arises around the use of an Enterprise System has also been noted by Besson and Rowe (2001) and Newell et al. (2003). It signals more of faithful
re-enactment than of constant modification and experimentation that would lead to new emergent properties.

A positive side of the potentially emergent properties of an information system is that users could learn from each other, and develop better ways of using the system, even if the rest of the work process is unchanged. Here too, there has been little spontaneous activity in BT Europe after implementation. Newell et al. (2003) provide an example of where a knowledge management initiative, promoting flexibility, offsets the rigidity associated with the Enterprise System that was introduced. In BT Europe, where pre-existing boundaries proved to survive the introduction of the Enterprise System, new organisational roles were created to help bridge boundaries and improve knowledge exchange. Pan and Leidner (2003) provide an account of attempts to create global knowledge sharing within Buckman Labs. There, the global information systems arena proves to be inhibiting because the underlying cultural communities are regional rather than global, and for example the Latin Americans and non-English Europeans hesitate to enter this English-speaking, predominantly North American arena. A division into regions helps matters, but after a while the fragmentation caused by that division is replaced by a new division into lines of business with global access. Their case stops there, but it seems probable that with time, this new division will in turn be modified. The delicate balancing between agoraphobia due to too few boundaries, and the dull fishpond created by too limiting boundaries, perhaps has no stable endpoint.

In BT Europe, the original “global”, unfacilitated knowledge exchange arena was replaced by a set of IS co-ordinator-facilitated arenas. Each IS co-ordinator should try to develop a network of local contacts within his business process and help them compare and share ideas and experience. Thus, new boundaries were put in place (between business processes) to facilitate the creation of contact and knowledge exchange within each business process. But it is easier to share knowledge and experiences with people you know, thus restricting yourself to limited communication networks (cf. Westelius 1996, section 6.2.5). So far, building functioning networks, to forge each larger community of practice out of the smaller ones within each market company, has proven to take time. It resembles the forging of *Ba’s* described by Brännback (2003). Fruitful development and sharing of knowledge in the networks can be expected to depend on the development of a shared purpose among the individuals in the network, and a shared understanding of what is useful to communicate. This may take time, as stated in a quotation in Newell et al. (2003; 37-38): “It took us more than five years to put our total quality management program in place. I wouldn’t be surprised if it takes us another five years to learn why
this process took so long and then how to share with others what we learned from the whole process.” The IS co-ordinator network in BT Europe has not been in operation for more than a couple of years so far, and in addition to establishing a functioning network, there is the additional challenge of getting people to refocus their attention to finding ideas and practices worth sharing. As a local manager and IS co-ordinator expressed it: “They are getting bald from scratching their heads. Up till now they have been looking at problems. They do not know what they really are good at – uniquely good.”

**Standardisation, learning and fear of the Panopticon**

Learning across company borders presupposes comparison. Some proponents of the SSP venture saw great potential in the internal benchmarking that a shared information system would make possible. If the different units were trying to conduct similar business processes, and these processes were described by agreed, standardised measures captured in the shared Enterprise System, comparison and benchmarking would be easy. There would be little question as to who could benefit from learning from whom. However, Newell et al. (2003) noted how competition within the company hindered knowledge exchange and learning, and led to the construction or defence of boundaries. In BT, modifications of the system to better fit local idiosyncratic processes also re-erected boundaries. Without similar processes and standardised measures, it is always possible to find explanations of why a comparison does not make sense. Benchmarking that can help you learn is interesting, but benchmarking that exposes you to your colleagues or to your superiors as below average, is frightening. It invokes the image of the Panopticon, Bentham’s “perfect penitentiary”, wherein a prisoner, worker or student would always potentially be visible to the guard, foreman or teacher, but not know whether or not he was actually watched (Bentham, 1778).

The design feature making the Panopticon “perfect” is a partial wall to each cell, giving the individual some measure of privacy. In a company, there is always a degree of visibility making members potentially subject to scrutiny. At the very least, there are financial measures, but increasingly also non-financial. Separate information systems and incomplete standardisation within the organisation affords each unit some discretion – a partial wall against scrutinising gazes. But an Enterprise System accessible by top management, and even more so, a shared Enterprise System with lateral accessibility too, decreases the “partial wall” substantially (Westelius, 1996). Thus, while an Enterprise System can give increased transparency for benchmarking and learning, that same transparency can be perceived as threatening, and can lead organisational members
to resist standardisation. Sia, Tang, Soh and Boh (2002), studying an Enterprise Systems implementation in a Singaporean hospital, found that management used the controlling potential and resisted employee empowerment. In BT Europe, both resistance against standardisation to avoid increased scrutiny, and a will to achieve greater transparency to facilitate benchmarking seem to have been in operation. The former was disguised as a preoccupation with the wishes and demands from local customers and local regulations, necessitating deviations from the Core standard. It also showed itself in the market companies’ refusal to use a shared database. The will to achieve greater transparency was mainly advocated by people at the corporate level. However, as noted earlier, market-company-initiated benchmarking, on a rather informal basis, seems to have been more common during the implementation phase than later on. Since then, corporate staff and managers have been trying to promote further standardisation, but so far, without achieving any major changes to the way the Enterprise System is set up. My interpretation is that the potential for greater scrutiny from central level – and from sister companies – is an important factor in making people at market company level reluctant to accept greater standardisation.

Infrastructure and add-on projects – an epilogue

As noted earlier, the original vision in BT of the Enterprise System as a sales support system, increasing competitiveness and enabling new design of the business processes gave way to an infrastructure view, where the new system was viewed as a more modern, more unified, and more secure information infrastructure, supporting the existing processes, and possibly facilitating benchmarking and gradual improvement of business processes. However, the present Enterprise System is a modification of a by now old version. Three new versions of the standard system have been released since – some of them being major improvements in functionality. Some problems BT is contending with would be solved by upgrading. Some process changes that are beginning to appear desirable, but would require modifications of the existing software, would be supported by an upgrade. But so far, BT Europe has not upgraded. However, this is not unique. Kremers and van Dissel (2000) have studied upgrades and migrations (the term they prefer for major upgrades) from supplier, customer and consulting company perspectives. They note that once a company has entered on the Enterprise System track, migration is unavoidable. The question is when to do it. The time, cost and strain are reasons to decide that the preferred time to migrate is “later”. What has kept BT Europe from migrating is the experience that the implementation diverted almost
all energy from other business development activities for years. This also keeps other companies back. ‘[B]ad experiences in the past with either migrations or implementations of ERP systems was also a factor in explaining the reluctance to migrate: “Not that again, unless there is really no other way out…”.’ (ibid., p. 56)

Migration is, however, not the only road forward. As suggested in the case description, it is likely that the system enabled increased efficiency in the back-office administration when turnover increased, but an infrastructure could also be a platform on which to build additions. Ash and Burn (2001) describe a successful add-on to a multi-country Enterprise System implementation; an HR application was made available via the Internet and mobile telephones. In BT Europe, the infrastructure provided by the Enterprise System has also proved to be valuable as a platform for ad-ons. Here too, it is a question of mobile technology. The 1150 mobile service technicians in Europe have hitherto communicated by telephone and paper forms with the administration and parts warehouses. In 2003, they were supplied with Pocket PC-based Personal Digital Assistants (PDAs) with an application (EASY) that allows them to access and send data to the Enterprise System. Now they receive their job notifications, order spare parts, report jobs, and update their inventory via their PDAs. (Each of the 1150 vans is now a warehouse in the Enterprise System.) This has dramatically reduced the need for back-office treatment of paper-based reports from the service technicians, decreased the amount of capital bound in spare parts and service jobs performed but not yet invoiced, etc.

The project EASY has, by and large, worked to schedule and budget, and appears to be even more profitable than budgeted. Had the Enterprise System not been in place, EASY would not have been possible. The shared technical and software platform made the shared service technician application technically possible and economically viable. The shared experience of how local modifications led to drawn-out, complicated and expensive projects has built a mental basis for standardisation. The shared experience from previous co-operation has created a social and mental basis for EASY (and other co-operative ventures). It has also provided valuable project management know-how regarding multi-country projects. The previously unfulfilled dreams about information systems delivering business benefits have created a demand for concrete, profitable, specific ventures, such as EASY. The experience of problems in achieving modified user behaviour in SSP has led to a strong focus on end-user participation in the development and on user training in EASY. The commitment market company managers made to corporate top management regarding specific savings and income increases that would make the project profitable has led to a focus on finishing the project on time and then realising the
promised potential benefits. In many respects, EASY appears to be a project in the “Japanese” tradition (Bensaou and Earl, 1998). Perhaps it is simply a project where service managers in midsize companies have led the way and division headoffice has co-ordinated. But undoubtedly, it is a project where the learning achieved through the Enterprise Systems projects has played a crucial part.

Conclusions

Theory concerning strategic information systems tend to be static and propose the definition of a specific goal or aim that should guide investments in a well-planned manner. An alternative, but so far smaller, strand maintains that information systems are inherently emergent, and that seemingly beneficial emergent properties can at best be supported, rather than directed. The Enterprise Systems project in this article started out with a strategic intent, but soon the path was more one of emergence than planned. Once under way, the project seemed to take on a life of its own. When the time plan proved unrealistic, the project still continued, with postponed deadlines. When the budget proved infeasible, it received extra funding. Even when it became obvious that the new system would not in itself help reach the goals from the BPR vision, the project continued. New arguments were mustered in support of the project in its present form. The legitimising “maxim” (Broadbent and Weill, 1997) was adapted. Despite the early loss of the strategic intent, the project muddled through. It seems as though the size of an Enterprise Systems project provides an inherent momentum that can keep it going until an Enterprise System is finally in place. This calls for caution when contemplating starting such a project.

Given a more critical stance to “conventional wisdom”, IS supplier rhetoric and management fads, some of the unachieved goals would never have been set in the first place. Creating a substantially modified version of an Enterprise System and implementing it in 12 companies within an 18 month timeframe was unrealistic. Expecting large scale standardisation of business processes and business data across 11 rather independent market companies largely based on voluntary cooperation was not very realistic. Envisioning marked savings from reduced administrative headcount due to facilitated administration, but not counting on the new roles needed to operate, maintain and improve the new Enterprise System and its use was naïve. This seems to call for a more emergence-oriented view of information systems than that held by practitioners and strict planning-focused theory, especially concerning large and long ventures. But it also seems to call for more effective ways of bringing insights from more critical research to practitioner’s attention.
The case supports previous research suggesting the importance of multi-role management and lasting top-management commitment. It also supports previous research identifying the information systems project or development group as a specific and exposed group culturally and politically. The analysis goes on to demonstrate how people from “user” parts of the organisation come to be influenced by this exposed position, becoming part of that culture and role, both in their own mind and in the eyes of others. Rather than being representatives of their “home organisation”, acting on its behalf and having its approval, the project participants became aliens, representing the project, its solutions and values. This enculturation and alienation process deserves more attention from both researchers and practitioners, as it facilitates standardisation, the reaching of agreement in the project, but impedes the acceptance of the project outcome among local non-project-group actors because of compromises against local customisation.

Newell et al. (2003) demonstrated how a knowledge management initiative, promoting flexibility, helped offset rigidity associated with an Enterprise System that was introduced. With a similar ambition, a conscious effort was made in the SSP case to help bridge boundaries and improve knowledge exchange by introducing new organisational roles. However, in addition to the difficulty of bridging existing organisational boundaries, the analysis reveals a cognitive problem; the focus on identifying and solving problems in the Enterprise Systems project is difficult to convert to an opportunity focus. Those who are expected to contribute with good examples of use and efficient routines find it difficult to determine what they are actually good at and what they excel in. This problem is interesting as such, but also raises the question of why it arises and how it can be dealt with.

Learning across company borders presupposes comparison, and such comparisons are often claimed to be beneficial. However, they can also be viewed as threatening. Standardisation supported by an Enterprise System can facilitate comparisons, but such facilitation can be viewed not only as an opportunity for learning but also as a threat of increased surveillance and scrutiny. This duality is apparent when viewing the Enterprise System as a virtual version of Benthams (1778) Panopticon. In the BT Europe case, people in market companies seemed ready to learn from each other based on informal comparisons during the Enterprise Systems implementation, but were sceptic to subjecting themselves to the transparency that standardisation connected with Enterprise Systems use could bring.

The case indicates that standardisation has both merits and drawbacks. An implication is that we should pay more attention to the (long) process of achieving insight into the pros and cons of
standardisation, and in cross-country standardisation in particular. Instead of one-sidedly touting the transparency made possible by Enterprise Systems as something universally good and desirable, a more honest discussion of the size and placement of the partial wall in the Panopticon is likely to be fruitful – in academic writing as well as in practice.

Much academic writing, and views widely held by practitioners, maintain that Enterprise Systems increase efficiency and coordination in companies, especially if they have an international spread. In this case, there is circumstantial evidence that the Enterprise System installation has provided benefits compared with the pre-standardisation business processes. A considerably higher turnover is now handled with a fairly stable amount of back-office and first-line employees. However, it is not universally agreed that this is a result of Enterprise System use. Which side is right, if any, is not clear. The divergence in opinion could derive from frustrated expectations for an even better outcome, rather than from a strict comparison between the previous and the present IT-supported processes. A proposition derived from this case is that benefits from Enterprise System implementation can stem from the learning the Enterprise System project has generated in the organisation and from specific applications made possible by the common platform the Enterprise System constitutes, rather than from the use of the Enterprise System in itself. However, it seems unlikely that this infrastructure view of Enterprise Systems would compel local managers to support an Enterprise Systems venture. An implication for practice is then that unless Enterprise Systems ventures can be bundled with add-on applications that are truly attractive to local actors, such ventures will need to be conceived, promoted and financed at a corporate level. However, the BT Europe case illustrates a number of difficulties associated with conducting Enterprise Systems ventures that way.

References


