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MANAGING STOVEPIPED ORGANISATIONS

- A COMPARISON OF PUBLIC AND PRIVATE ORGANISATIONS

HÅKAN P. SUNDBERG
Mid Sweden University
871 88 Härnösand, Sweden
Hakan.Sundberg@miun.se

KARL W. SANDBERG
Mid Sweden University
851 70 Sundsvall, Sweden
Karl.W.Sandberg@miun.se

Abstract

Stovepiped systems and difficulties associated with managing cross-functional boundaries are problems that are hindering the successful implementation of customer-centred systems and processes within public organisations. The present study covers public organisations, and discusses and analyses the results in relation to those from a previous study in the banking sector. While problems with stovepiped systems and departments have, in general, been solved in the banking sector, the results from the interviewed public organisations confirm that the stovepipe problem is still evident and that cross-functional collaboration, processes, customer focus and integration of services and channels all require additional improvement or development. The present study concludes that the goals with the highest priority for leaders in public organisations are not those associated with customer relations and that the political level rates higher than the customers' demands. The public organisations are following a similar path to that of the private sector, but there are differences in both the time-frame and ability to implement changes due to weaker incentives for customer related work, and additionally, a larger organisational inertia of both culture and collaboration to overcome. Similarities are found in IT organisations and projects, and in the views regarding business organisations and the necessity for an enterprise architecture.

Keywords: Public information systems, public sector, financial sector, systems development process, e-government, Swedish case study

1. Introduction

Differences between public and private sector organisations have long been recognised. Public organisations, in general, face multiple objectives and restrictions with regards to their ability to generate new revenue, with ultimate control over their existence held by publicly elected bodies [Johnson et al., 2005]. In general, public sector organisations have a number of specific characteristics, including [McAdam and Donaghy, 1999]:

- rigid hierarchies;

- culture and values such as continuity, predictability and fairness rather than change and innovation;
- multiple stakeholders for many processes – boundaries cannot be crossed, stakeholders and processes often extend beyond the boundaries of a department or agency;
- changes in policy direction can be sudden and dramatic;
- overlap of initiatives,
- wide scope of activities – unrealistic expectations.

Furthermore, public sector organisations often find that they are required to deal with increasing citizen demands, in which there has been a dramatic rise over recent decades, whilst operating with constraints on spending [Appleby and Clark, 1997]. These pressures have narrowed the perceived gap between private and public approaches to management. A number of private sector "phenomena" such as Total Quality Management (mentioned in e.g. Appleby and Clark [1997]) or Business Process Re-engineering [Davenport, 1993] have also appeared in the public sector over the years [Macintosh, 2003].

Electronic services are now used to modernise the field of public administration, but the challenge of improvement in public services has not yet been fully addressed. Taking into consideration all the potential benefits and obstacles there is a need for a rational approach to the implementation of e-government as a platform for better government and governance [Sandberg and Sundberg, 2004].

Organisations change as they implement and depend more upon new technologies. Internally, hierarchies are disturbed, boundaries are blurred, learning processes re-allocate status and merits and interactions become more efficient and more complex [Sandberg and Sundberg, 2004]. Change is not necessarily easy and the cultural changes required within the public sector, are perhaps greater than those involved in other sectors [Hutton, 1996]. Many of the issues requiring to be considered are "soft", which means that staff, ministers, customers and other stakeholders must be convinced of the necessity for, or advantage of, change. The staff are a crucial part of most public sector organisations and they may have to suffer a revolution in their work environment.

1.1. The public sector and information technology

According to Aichholzer and Schmutzer [2000] the basic drive towards e-government lies in "the hope to achieve goals of improved service quality and cost savings in service by the same means – the use of ICT". The business processes of an organisation deliver value to the customers. The information systems should align and integrate in accordance with the business processes. Integrated systems enable a more efficient and effective delivery of value to the customer [Gulledge and Sommer, 2002].

However, in many present day IT configurations within organisations, many standalone applications can still be found, each with its own presentation layer, business processing logic, and database [Britton and Bye, 2004]. These silo applications, or stovepipes, were built on behalf of departments and were typically tuned to computerize paper-based systems and were designed to improve and ease the facilities within a single department. Now, several generations later, the departmental boundaries are different, and, most significantly, the systems are, in many cases, opened up to the public via electronic services through multiple channels, e.g. WAP interfaces, a call centre or a web commerce portal. The IT organisations face multiple

challenges in improving cross-functional business process control, providing accurate online information, and supporting multiple presentation devices.

Silo thinking is deeply embedded in the organisations. Equally stovepiped departments simply do not want to lose their power in large integrated systems. The result of this is a general fear of any change to existing applications. Furthermore, several development methodologies have been silo based and project management requires self-contained projects over which they have control, often for budgetary reasons [Britton and Bye, 2004].

Stovepiped systems and difficulties associated with managing cross-functional boundaries are problems that are hindering the successful implementations of customer-centred systems and processes in public organisations [Sundberg and Sandberg, 2004a; 2004b]. The speed and strategy of customer frontline changes have placed the focus on the processes and a possible requirement for a closer integration between IT and customer-close activities. The problems associated with stovepiped departments can be found in many large organisations, not only within the public sector, but initiatives involving frontline customer services and the degree to which e-services are used also vary considerably. Services also require to be integrated between organisations, e.g. between government agencies or other public organisations. Layne and Lee [2001] foresee that the full potential of IT can only be achieved by integrating the government services across walls between organisations. The type of integration discussed in this paper, however, is intra-organisational.

1.2. Background to the present study

The background to the present study is based on the stovepipe problem in financial sector organisations, mainly banks [Sundberg and Wallin, 2005a]. In the bank study, the stovepipe problem is examined in order to find success factors and areas of improvement for the co-ordination of the business and IT development processes.

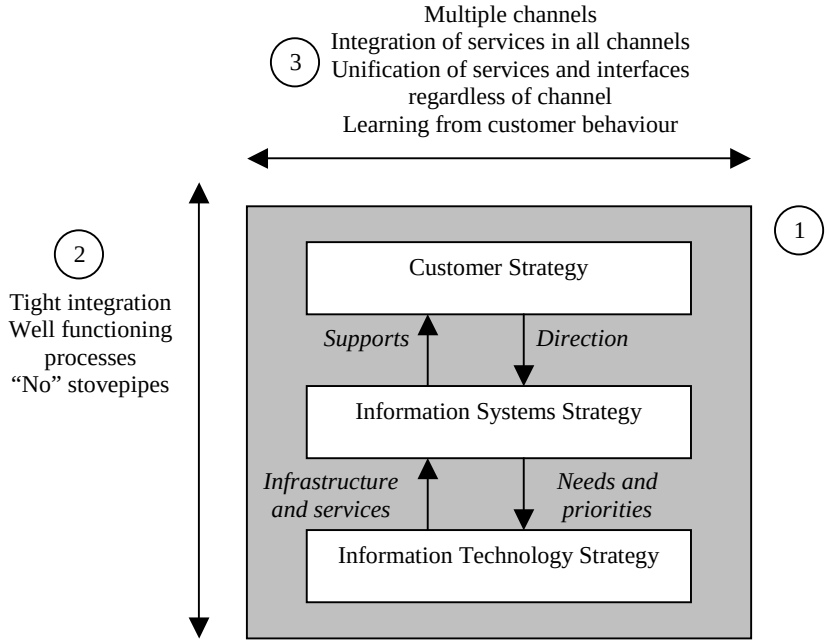

Figure 1. The relationship between customer, IS and IT strategies [Knox et al., 2003] and the main results from the study, Sundberg and Wallin [2005a]

The theoretical background is supplied by Sundberg and Wallin [2005b]. Theories from CRM (Customer Relationship Management) [Knox et al., 2003] coincide with e.g. government reports on e-services [SOU 2003:55], with reference to the means by which information and IT strategies integrate with customers and e-services, see figure 1. These relations, and the order of dependencies, can also be found in e.g. the Balanced Scorecard [Kaplan and Norton, 1996; 2001], adding the perspectives of processes, finance and measurement. A model consisting of the following aspects: IT strategy, information resources strategy and customer/e-services strategy is discussed and is exemplified by the CRM view, see shaded part 1 of figure 1.

Results	Comments
• The problems associated with stovepiped systems and departments had been solved in all the interviewed organisations.	See 2 in figure 1.
• Well functioning development processes. Little friction between departments, system owners, purchasers and contractors. Territorial product departments and silo thinking have been subordinated by overall business goals and collaboration introduced.	See 2 in figure 1.
• The integration of customer, information and IT much tighter than previously. A shift has taken place from a situation ruled by the IT organisations to a situation where the business organisation gives direction, translating needs and setting priorities for development projects.	See 2 in figure 1.
• Customer strategies and activities enable the integration of all the organisations' services via a variety of channels such as the Internet, telephone, ATMs and offices and in many cases crossing national borders. At the other end, IT departments have invested tremendous efforts into the integration of legacy systems and silos, cleaning up the "backyards".	See 3 in figure 1.

Table 1. Main results from study Sundberg and Wallin [2005a]

The main results and conclusions from the study [Sundberg and Wallin, 2005a] are summarised in parts 2 and 3 in figure 1 and in table 1.

Categories	Factors
General business environment factors	• Organisational changes and mergers • Economy and financial situation • Customer focus
Factors related to project and process	• A well defined and well known development process • Project size, modules and releases • Open discussion about stovepiped departments and general requirements
Areas to improve	• The purchaser role • Infrastructure and the need for an enterprise architecture • The document interface and the use of RUP and UML

Table 2. Categorisation of factors and areas to improve from study Sundberg and Wallin [2005a]

Furthermore, a number of factors were found which explain the results and were categorised into nine factors or areas, see table 2. There are three factors in the general

business environment which explain the results and the success of the organisations. This is also expanded by three other factors relating to the project and process. Lastly, three areas for improvement are discussed. Table 2 will be used for comparison with the organisations in the present study.

1.3. Purpose of the present study

The present study is one of public organisations, and discusses and analyses the results in relation to the results from the bank study [Sundberg and Wallin, 2005a] and the factors from table 2. The background and problem are the same as in the bank study and the objective is to offer a more in-depth analysis, to explain differences and to draw conclusions for the public sector.

2. Research method

The present study is based on a series of interviews with organisations from the public sector in Sweden. As the aim of this paper was to identify and understand experiences of the work processes, a qualitative research method has been employed [Hartman, 1998]. A total number of six semi-structured interviews were carried out between September 2005 and November 2005 within three public organisations. The three organisations were: Two small to medium-sized government agencies (475 and 345 employees), one without and one with public funding, and one medium-sized municipality (93700 inhabitants, 8000 employees). Furthermore, one large government agency (16000 employees) has previously been studied [Sundberg and Sandberg, 2004a; 2004b]. The results from the bank study have been presented and discussed with this organisation. Thus, results from four public organisations and six private organisations from study Sundberg and Wallin [2005a] contribute to the present study.

Personal interviews were carried out with individuals from the IT organisation in addition to those from the business organisation. The reason for this approach was in order to enable exploration and comparison of the internal processes and capabilities from two different viewpoints, i.e. the purchaser view (business) and contractor view (IT). Altogether three people were interviewed from IT, e.g. department managers and IT architects, and three from the business organisation, e.g. managers of the Internet services.

Pre-interview preparation involved sending out a document describing the background and purpose of the interview. During each interview, the background to the study was presented, and the trinity model (see part 1 of figure 1) was used as a starting point and basis for questions in all interviews. The total length of each interview was between 1 and 1.5 hours with two interviewers and one interviewee. The interviews were recorded on paper and tape. The contents have been analysed in relation to the main results from the bank study and the factors in table 2.

3. Analysis of empirical data

The results from the interviewed public organisations confirm that the stovepipe problem is still evident within their organisations and that cross-functional collaboration, processes, customer focus and integration of services and channels still require improvement or development. One of the public organisations, however, has made more progress than the other organisations in solving the stovepipe problem. This case is discussed in a separate chapter below, and the lessons learnt are added to the conclusion.

The major differences between the previously studied private organisations – the banks – and the studied public organisations were found in the general business environment factors. Where large differences were found considering e.g. customer focus and organisation change programmes, small differences – *or none at all* – were found when considering the areas to improve, e.g. the purchaser role and the need for enterprise architecture. Figure 2 illustrates the differences overlaid on table 1.

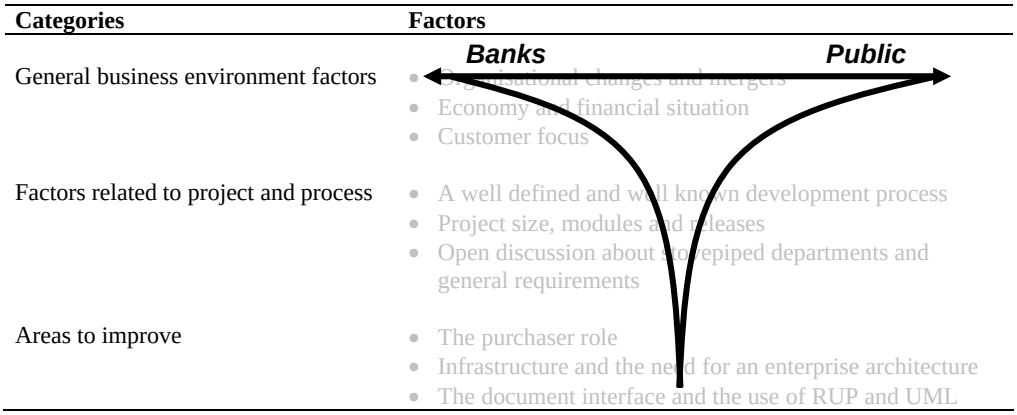

Figure 2. Illustrating differences between banks and the public organisations overlaid on table 2

In the following, the nine factors from table 2 will be discussed and analysed.

- The first three factors relate to differences between public and private organisations and provide the major part for the explanation of, and drive towards, the stovepipe problem in relation to the differences between the public and the private organisations.
- The last six factors basically take an IT point of view and discuss problems, obstacles, and possible solutions to the co-operation between the business organisations and the IT organisations.

3.1. General business environment factors

3.1.1. Organisational changes and mergers

The results from the previous bank study told of decades with several mergers and acquisitions within the financial sector. Several of the Swedish banks are now international banks with offices and branches in several countries. There is a clear ambition to show a united face towards the market, regardless of the market character. The unification has been significantly driven by top management, and is even considered the bank's core values or central efforts. This has inspired work with

shared solutions and processes resulting in an inner focus driven by outer changes (or "threats"). In the private sector, those attempting organisational change are driven by the requirements for companies to adapt to changing competitive conditions [O'Donnell et al., 2003].

The studied public organisations have certainly have had their share of changing programmes or reorganisations, but not of the same significance as in the banks where mergers, acquisitions and internationalisation are at stake. The public organisations have adopted different visionary change programmes but confessed that there had been problems in facilitating such changes without any real drivers of change or motivation. One interviewed organisation had only achieved about 30% of their process orientation change programme. Several banks had significant upheavals when merging with external organisations. In many cases, functions (e.g. customer service and call centres) have been merged and co-ordinated over national borders. These outer changes, or "threats", have been strong drivers of change.

Another difference is the timescale involved. One of the public organisations had begun a large programme towards customer and process orientation only two years ago, while the restructuring and internationalisation of the Swedish banks has taken place over a period of ten to fifteen years. Another public organisation has been involved in a visionary change programme over the past seven years, but the programme has not been altogether consistent and the focus has changed during this time.

3.1.2. Economy and financial situation

The economy and financial situation can certainly act as a driving force for change. The results from the bank study show that the economic incentive is strong, working as both a stick and carrot and affects information technology as well as related processes. In many of the studied private organisations, top management has placed an absolute limit on the costs. The total cost of IT is one of the most important key ratios set by top management and is clearly and distinctly measured. At the same time, the business organisation, or purchaser, is also controlled by a strict purchasing mandate. One issue is to find profitability, or rather, how to facilitate large investments that are actually only profitable from a longer perspective.

When interviewing the public organisations, there are no differences when discussing the actual view of IT costs, measurements, processes and the co-operation between the business organisation and the IT organisation. In both the private and the public organisations too much focus on costs can affect the relation between business and IT: The business organisation focuses on deliverables, and there can be a general mistrust between business and IT.

Rather, differences between public and private seem to lie in the magnitude and speed of change. Reductions or other economic aspects, affected all of the interviewed organisations. While this had been apparent for many years in the banks, and was frequently mentioned in the interviews, the discussion of the economy and costs in the public organisations is more recent and was less frequently discussed. However, there is a great deal of change taking place, e.g. one of the public organisations' IT department has recently started a three-year cost reduction programme. Another public organisation is on the brink of making personnel reductions, the first in many years.

3.1.3. Customer focus

Perhaps the largest differences can be found with reference to the customer (or citizen) focus. The banks have had electronic services for customers in operation since the emergence of the telephone banking system in the early and mid 1990's. Today, work is directed towards integrating services in all channels, such as the Internet, telephone, ATMs and offices. This strong focus on services and on the customers was present in the bank study and permeated throughout the interviews. Beyond Internet services, the inside-out perspective has slowly and deliberately been twisted into an outside-in perspective, e.g. by organising by customer and customer segments and by shifting control to units with close customer relations. The shift has increased the impact of customer influence; ideas for improvement and development of new products and services are gathered from all units which have customer contact.

The situation is relatively new for public organisations. The emergence of e-government has meant that there are an increasing number of services public on the Internet. However, electronic services in the public sector have still not reached their full potential and cannot (yet) compete with the banks' integration of services and multiplicity of channels. One of the interviewed public organisations had not started their internal "customer orientation programme" until recently and predicted that changing the employees' attitudes towards the customer will take a significant amount of time.

It appears that one important factor is the banks' longer experience of developing systems where the customers are the end-users. However, it is not only time that is of importance. The public authorities have a different situation to that of private organisations as for those in the public sector as laws and political decisions are the basis of their existence; responding to, interpreting and applying any sudden political change.

Experiences from the private sector are only transferable to the public sector to a limited extent [Aichholzer and Schmutzer, 2000]. Laws and guidelines rather strictly regulate administrative processes in the public organisation, which means that radical change is limited. There are also other conditions impeding organisational change. Administrative departments act as service providers but cannot simply select target groups; their customer segment is, to a large extent, given by law. Furthermore, customer profiles and services are not easily created when data on citizens must be collected from and co-ordinated between different administrative departments. Altogether, the increasing demands from citizens form relatively new elements for a public organisation. When systems are opened up and services are made public, citizens require everything to be perfect immediately; they have often experienced poor service when dealing with government, such as long delays and queues [Hutton, 1996].

3.1.4. A discussion of government agility

The discussion in this section will mainly focus on a further analysis of the factors from chapter 3.1 and an explanation of the stovepipe problem in relation to the differences between the public and the private organisations.

The alignment between redesign of internal processes and redesign of external relations is often underestimated in administrative reorganisation [Aichholzer and Schmutzer, 2000]. Integration and co-ordination of requirements occupy an important place among the organisational demands and problem areas, e.g. co-ordination of organisational reform and process innovation through the use of IT, and co-ordination

of internal changes in the administration or organisation of the external relations with service customers.

A recent study of agile government [A.T. Kearney, 2003] found a number of factors acting as drivers of speed flexibility and responsiveness. These include organisational change capabilities, leadership, culture and values, and, customer service. These factors will be discussed further in the following section.

Organisational change

In an overview of e-government transformational aspects [O'Donnell et al., 2003], one important point discussed concerned organisational change as being the key to realising benefits from ICT. However, other reports, in the same overview, describe that there is a lack of awareness of the synergies arising from joint implementation of organisational change and ICT. Among these possible synergies, a flatter organisation with fewer hierarchical levels, decentralised operation, transformation of hierarchical structures, and the creation of new horizontal and strategically autonomous agencies are cited. However, it is often the case that ICTs are overlaid onto an existing organisational structure without any thought being given to possible improvements. Since it is much more difficult to change agency behaviour and establish co-operation, it has, according to reports in the overview, "been easier for governments to create national web portals, but this amounts to information being rearranged without a fundamental shift in processes or procedures".

The concerns that the issue of organizational rigidity and silo structures and thinking inhibits co-operation and communication throughout agencies are brought up in the study of agile government [A.T. Kearney, 2003]. The study reveals that 90 percent of the most agile agencies also rank amongst the top performers in organisational culture and values, being open to the reconfiguration of structures and processes. In a scenario for future e-government, Aichholzer [2004] sees that "the need of horizontal and vertical integration of back offices is of high priority for public administrations and increases service quality for citizens and businesses". These implementations require investments in human resources, technology and change management. New work processes need to be accompanied by training programmes, structured communications, strategies and redesigning of jobs in order to realise the benefits from ICT investments [O'Donnell et al., 2003].

Internal governance frameworks can however be obstructions when facilitating ICT-enabled reform [O'Donnell et al., 2003]:

- The process for design and distribution of information resources affects both inter- and intra-organisational relationships in ways that are not easily controlled or reordered. The outcomes emerge from the interaction of managerial, political, professional and commercial stakeholders.
- Re-engineering processes may cause imbalances to occur in the roles and responsibilities between different functional areas or between the agency's central office and local offices.

Interestingly, several see the main online information services organised around the "life events" of individuals or "business events", rather than around the bureaucratic structures of government [O'Donnell et al., 2003; Aichholzer, 2004]. Structuring of services in this way is, according to the user perspective (in contrast to administrative criteria), considered to be good practice. These restructured frontline services require substantial process redesign and a general reorganisation of back offices, e.g. one-stop service portals allowing for complete online transactions, which

will eventually be able to cross different levels of government and sectors [Aichholzer, 2004].

Leadership, culture and values

The A.T. Kearney study [2003] sees that "in truly agile cultures, employees are able to flourish". In these agencies, leaders favour collaboration and gaining consensus, creativity is cultivated, new ideas and innovative behaviour is promoted, and leadership responsibilities are empowered throughout their organisations – rather than issuing directives. In the bank study [Sundberg and Wallin, 2005a], customer satisfaction is not seen as something achieved without hard work; it requires:

- empowering the co-workers to co-operate over the borders,
- strong focus from leadership with regard to overall goals and objectives,
- capabilities to both lead and motivate.

While management commitment and communication appears to have been a factor in the organisational changes and mergers, it is also necessary in order to empower organisations to work in a customer-focused manner.

This is also discussed in the A.T. Kearney study [2003], or rather; the lack of strategic clarity and commitment from senior leaders are seen as obstacles to change initiatives. While "leadership ranks among the most important aspects of agility, it is also one of the biggest obstacles". Effective leaders can improve investments in agility and successful organisational change by providing a clear vision for the organization, focusing on new trends, and understanding exactly how to deploy resources.

Customer service

The study of agile government [A.T. Kearney, 2003] describes an agile agency "…like a good private sector company responsive to its customers. The agency seeks to understand the demands and needs of customers in various segments and organizes products and processes accordingly." One of the lessons, from the e-government scenarios of Aichholzer [2004], is that demand and user centeredness is one of the most basic design elements to be prioritised.

As an agency becomes agile, is also improves its customer relationships. The agency might adopt several, more efficient, cost-effective channels and offer customer incentives to use these channels [A.T. Kearney, 2003]. Aichholzer [2004] foresees the necessity of offering alternative forms of interaction with governments in the future, despite the increase of private Internet access. While many still opt for Internet access, a Bavarian study shows that a high proportion opt for alternative channels including call centres, electronic kiosks, as well as traditional personal and mail contact. However, the shift of customers from high-cost to low-cost channels has only been successful in a few cases. One of the reasons for this, from the A.T. Kearney study, is that the majority of government agencies focus more on changing customer behaviour through rules and penalties rather than through incentives.

Carter and Belanger [2004] consider the political nature of government, and mandatory relationships, as the feature distinguishing e-government from e-commerce. In e-commerce, the businesses are allowed to choose their customers, but in e-government, legislation, in many cases, places an obligation upon government agencies to provide electronic services to the entire eligible population, including individuals with lower incomes and disabilities. Consideration of services as "in the best interest of the public" can burden and constrain agencies when allocating resources.

3.2. Factors related to project and process

There are similar views expressed by both the banks and the public organisations to development processes and projects, e.g. the trend is towards smaller and more manageable projects which can be brought to the market within a brief and well defined time cycle.

Other similar views can be found with regards to the roles and organisation of development projects. It is difficult, within any of the interviewed organisations, public or private, to obtain one clear and unanimous picture of the roles and organisation of development projects. The standard basic approach is that the business organisation initiates and creates the projects, but that the knowledge of project management, description and documentation requirements and the production of other necessary artefacts is very much stronger within the IT organisations. This leads to situations where the IT organisations sell resources in project management and documentation to the business organisation. In reality, it is a seamless transfer with involvement from the IT organisations from day one. Traditionally the IT organisations have ruled all parts of the development, but the pendulum has now swung towards the business side, who are now seeking advice and suggestions from the IT organisations, whilst, at the same time, not relinquishing the power to make decisions.

Within the IT organisations, there seems to be practically no differences between the public organisations and the banks. In the following, however, a few differences will be discussed. All the interviewed organisations from the previous bank study have development processes that are well defined, well structured and, in most cases, well known within the organisations. These processes were pointed out by several of the interviewees as being important resources for their organisations and critical factors for success. The results from interviews with the public organisations differ slightly from this picture. In general, the IT organisations in both the public and private organisations are experienced in and are willing to use the development processes, while the business organisations are less experienced. This gap, however, seems to be larger in the public organisations. Stovepiped departments, as owners of stovepiped systems, have been more reluctant to relinquish power and possession of information, and subordinate to new rules and processes.

An openness and suitable discussion process appear to be missing in the public organisations. Interviews in the bank study told of open discussions, increasing the awareness of the necessity for horizontal co-operation. In general, there is no rivalry regarding information. There is, of course, a tension – or rather difference of perspective – in the intersections between vertical business units and the horizontal solutions. Both a meeting place and a discussion are thus required.

There is a requirement for co-operation, as far as the public sector is concerned. The spirit of co-operation must firstly inspire the public organisations, where at present fragmented hierarchies, with a narrowly conceived optimisation of the results of smaller units, prevail [Lenk and Traunmüller, 2000].

3.3. Areas to improve

In this category, practically no differences were found between the public and the private organisations. Instead, a number of interesting areas for imminent implementation were found to be high on many of the present day organisations' agendas.

- In both the public and the private organisations the business organisations' roles and competencies as purchasers were questioned. It was felt that there

was a necessity to increase the competence, with less focus on deliverables and more responsibility being taken with regards to knowledge concerning ones own business and processes.

- There is a general trend towards harmonisation and reduction of platforms. Furthermore, the capture of general requirements, for systems able to traverse the range of stovepipes often raises infrastructure and architectural issues. Most of the organisations have architectural units within their IT department, but this is often not the case within the business organisation.
- Several interviews raised the issue of the enterprise architecture, revealing a general need for enterprise architects. The role of the enterprise architect is to tie the business processes, the information and the requirements together. The enterprise architecture, and a business and IT alignment competency, were all considered to be extremely necessary responsibilities for the business organisation.
- Business organisations are generally not aware of the level of detail required in business modelling and rely on the IT organisations. The reality is that the use of tools and methods for business development is scattered and inconsistent and that the knowledge does lie within the IT organisations.

How can the similarities between the public and the private organisations be explained? An observation from all interviews is that most issues are urged on by the IT organisations, while it is harder to convince the business organisations of the necessity for change. Frequent comments from the IT organisations suggest that the business organisations must improve their process definitions and enterprise architectures. On the other hand, there were few comments, besides those with regards to costs, from the business organisations that the IT organisations should be more flexible and responsive.

The IT community in general is quick to adopt new trends and concepts. The IT organisations have come further than the business organisations and are more universal in the sense that they have elaborated standards, processes and structures. RUP, UML, C++, Java and many database managers and ERP systems are recognised across lines of businesses. It seems to be a question of the IT organisations having reached a level of maturity and knowledge in the development process vs. the inexperienced business organisation, rather than a difference public vs. private. Perhaps, this is because the shift of control from IT organisations to the business organisation is relatively new, something that also shows itself in business development projects. The business organisation seems to lack structured project experience and the IT organisation often has to manage both the IT sub-projects as well as parts of the business projects. The work with enterprise architecture has yet to reach its peak and, in this field, the pace of progress within the public and the private organisations appears to be similar.

3.4. Exception: One public agency without public funding

Interviews in one of the public agencies resembled the private more than the public. Stovepipes are not regarded as large problems in this organisation, and work seems to function very well across the departments and between the business and the IT organisations. This organisation has undergone a reorganisation and a successful change to a process organisation. Designated owners of processes and complete maps of process flows and dependencies count as success factors for a well-functioning co-operation and development process.

However, in addition to the orientation towards processes there are other features which assist in the understanding of the different results obtained from this public organisation. Public funding does not finance the operations and therefore services provided are charged to the customers, which, in this case, are companies. The agency is empowered with control over its own economic resources which leads to a freedom of choice and a good and stable financial situation.

Over the years, web information and services have been designed and redesigned in order to ease interactions with the customers. Ideas, complaints and viewpoints are constantly collected, customers are educated by the organisation and meetings with large customers are held on a regular basis. Furthermore, the organisation is relatively small, with around 475 professionals and a turnover of approximately SEK 200 million annually.

In this case, the process orientaton and customer collaboration together with the size and the fact that their financial situation is not dependent on public funding count as important factors. The agency showed, in many ways, similarities with the private organisations.

4. Conclusion

In conclusion, the previously studied private organisations have come further in solving their stovepipe problems, but the public organisations appear to be on a similar path to that adopted by the private sector. Economic and business factors of the information age gradually drive organisations, both private and public, towards transformations of their production processes and structures [O'Donnell et al., 2003].

Figure 3 summarises the interaction between factors from the present study, presented in sections 3.1.1 – 3.1.3, and their influence on the stovepipe problem. Leadership is mentioned throughout the discussions, and can be seen as a steering mechanism to the processes, influencing the nature of change.

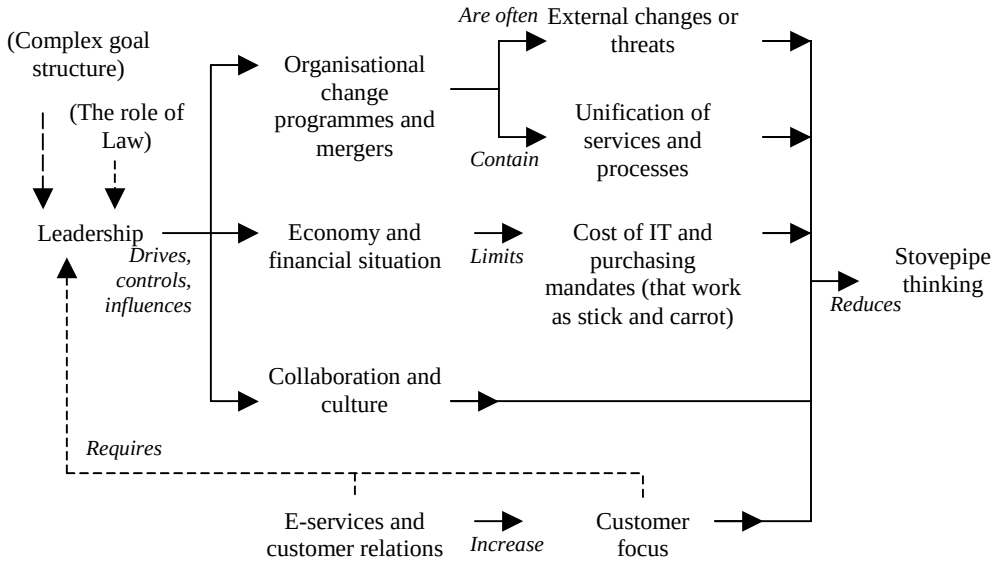

Figure 3. The interaction between factors from the present study

When analysing the relations further, and offering possible explanations for the differences between the public and private organisations, a question arises: Leadership

is a factor that drives many other factors, but what are the drivers for leadership in a public organisation?

Several matters distinguish the public sector from private business. Public administration has a complex goal structure to guarantee a well-organised, structured and safe society with standards of quality of life [Lenk et al., 2002]. Basic goals include proper functioning of legislation and jurisdiction, economic development, protection of civic rights etc. There are many ambiguous and even contradictory political demands that must be executed by the public administration. Furthermore, the role of law is a specific aspect. Many public administrations are highly regulated by legislation at national, regional and local levels.

But the perhaps most important point relates to the administrations' customer relations. Customers have a weak position in relation to the public organisations. If they do not achieve a satisfactory outcome, it is not possible to take their business elsewhere. Often the paths for complaints to, or influence on, an administration's services or quality, go through the political level or media.

In conclusion, the main priority for the leaders in public organisations is not that of customer relations, as the political level is generally ranked higher than customers' demands. This is added to figure 3 in which there is also an important connection between leadership and the customer factors. This connection is weak in the public organisation, as are the factors of e-services, customer relations and customer focus. While the connection was found to be very strong in the bank study, it was hardly apparent in the present study of public organisations. The exception, the one public organisation without public funding, enhances this. This semi-private organisation has a relatively long experience of collaboration with "real" customers, also on the web; has undergone a successful change programme; and lastly, control over its existence and funding is held by the organisation itself – not merely by publicly elected bodies. When this is all taken into consideration, this may explain the better results in the management of their stovepipe problems.

The public organisations are following a similar path to that of the private sector, but there is a difference in time and agility due to weaker incentives for customer related work, and a further impediment to this is the ability to overcome a larger organisational inertia of culture and collaboration. Poor co-operation between independent administrative units poses risks to the success of reform initiatives, or at the very least, leads to sub-optimal results. Restructuring public organisations will have to overcome much institutional inertia and deeply ingrained habits [Lenk and Traunmüller, 2000]. Existing institutions of social and political life exert strong influences with regards to the shaping of behaviour and organisational cultures. But there are good reasons to believe that the public sector will be swept along with the changes in commercial business. The potential of the technology itself influences widely held ideals with regards to best practices.

E-government implies a fundamental redesign of the interactions between public administration and the citizens, and, at the same time, implies a reorganisation of the internal business processes within the public administration. External and internal changes are thus coupled [Lenk and Traunmüller, 2000]. Again, there are often complaints with regards to current administrative reform that the two components, organisation and technology, tend to follow at separate developmental rates. A lack of will to deal with organisational change, or indeed the capability to tackle it, is often seen as a reason for the non-appearance of an increase in productivity [Aichholzer and Schmutzer, 2000]. One explanation to the lack of will is the absence of external threats that diminishes the organisations' readiness for change. The readiness for

change is also recognised as a success factor by e.g. Pennington [2003], Chapman [2002], McAdam and Donaghy [1999] or Al-Mashari and Zairi [1999].

The similarities between the private and public organisations are found in IT-related issues such as modelling and project management. IT-departmental work presumably looks fairly similar across a range of businesses. Interestingly, both the public and the private organisations appear to be following similar paths with reference to enterprise architecture and the IT organisations' views of the business organisations are similar. The shift of control from IT organisations to business organisations is relatively new and there are also implications for architectural issues within the business side of the organisation. Working with enterprise architecture is an important "mechanism" for improvement of the co-operation between the business and IT organisations. The enterprise architecture creates a process for continuous adaptation between the business and IT organisations.

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