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## **IT benefits management in local government**

*A comparative case study*

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# IT BENEFITS MANAGEMENT IN LOCAL GOVERNMENT: A COMPARATIVE CASE STUDY

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## Abstract

*Information technology (IT) is increasingly presented as a driving force for service and efficiency improvement in local governments. However, achieving these goals in creating value from IT investments is a significant challenge for local government organizations. Practitioners and researchers have proposed numerous approaches to IT benefits management, but our knowledge of current practices and capabilities in local government IT management is still limited. Thus, in this paper we present an investigation of what characterizes IT benefits management in local government in order to understand and improve current practices. Through a comparative case study of two Danish municipalities, we have analyzed the different characteristics of benefits management. Based on this analysis we propose an initial framework for understanding IT benefits management in local government.*

*Keywords: IT benefits management, local government, comparative case study, IT investment.*

## 1 Introduction

In recent years, there has been an increase in attention to and expectations of information technology (IT) in the public sector. The EU and membership countries have formulated strategies underlining the benefits of IT and initiatives to reach these. Presenting increased service, potential for business, increased citizen participation in the democratic process, and increased efficiency as key reasons for investing in IT. Following the international financial crisis the political discourse and attention has focused even more on the financial benefits of IT. However, getting value out of IT is not trivial. A growing body of academic research and practitioner observations suggests that investments in IT alone are rarely successful. Instead, organizations need to make additional investments in process changes, human capital and training that will support the successful implementation and use of IT (Chircu et al., 2003).

The successful generation of business value from IT is a process requiring ‘appropriate’ adoption in alignment with organisational, individual and technological requirements (Barua et al., 1998). Creation of this value can be divided into two interrelated processes: discovering the potential value IT can create for an organisation and then realizing this value through IT implementation and adoption (Chircu et al., 2005). The underlying needs of these processes are in some degree covered through portfolio management, project management, and change management. However, since actually achieving value should be the primary focus for any IT effort, it would make sense to capture this in a separate process centred on organizing the realization of this value. Researchers and practitioners have conceptualized this focus as benefits management (Ward et al., 2006, Dhillon, 2000, Lin et al., 2003). The current focus on investments on IT in the public sector, achieving maximum value from these, and the tendency that public organisations view potential value of IT-investments differently (Chircu et al., 2005) underlines the importance of better understanding benefits management in public organisations.

Local governments are public organizations facing challenges in managing the realization of benefits from IT investments (Päivärinta et al., 2007). However, in order to support benefits management in local government we need more knowledge of what characterize the current practices. Since the current practices for benefits management shape the outset for adopting any of the numerous improvement approaches suggested in the IT benefits management literature (Ward et al., 2006, Remenyi et al., 1997, Mckay et al., 2003). We have investigated the characteristics of benefits management in local government through a multi case study of two Danish municipalities, focusing how these characteristics may differ. In this context, the research question of this paper is:

RQ: What characterizes IT benefits management in local government?

This paper is structured as follows. The next section reviews the benefits management literature and its use in local government. The following section summaries our interpretive comparative case study approach in two Danish municipalities. The findings from this study are then presented followed by a discussion of these findings and a conclusion.

## 2 Theoretical Background

In the effort to understand realisation of benefits from IT Peppard et al. have identified five principles that underpin the process (Peppard et al., 2007):

- **IT has no inherent value.** The value of IT is not in its possession and without an effective organizational use it is just a cost.
- **Benefits arise when IT enables people do things differently.** It is only when individuals or groups within the organization, or in external interfaces, perform their roles in more efficient or effective ways that benefits emerge.
- **Only business managers and users can release business benefits.** Since benefits emerge from changes and innovation in the interaction between people in the organization and external interfaces. It is business managers and users (and external actors) that must make these changes. This implies that IT and project staff cannot be made accountable for the realization of benefits from IT investments and increased involvement of business staff in IT projects is key.
- **All IT projects have outcomes but not all outcomes are benefits.** Many IT projects produce negative outcomes. The challenge for management is to ensure that negative outcomes are avoided and positive outcomes deliver explicit business benefits.
- **Benefits must be actively managed for.** Benefits do not automatically occur. In addition, there is often a time gap between implementation of a system and payoff in realized benefits. Therefore, managing for the benefits is not only important, but also an ongoing process after the completion of the technical implementation project.

In these five principles, it is suggested that the value of implementing IT in an organisation is in the interaction between IT and the organisation it resides in, and not an inherent value. Against this backdrop, efforts have been made to understanding the value that IT brings and how to increase that value.

In 1994, an empirical survey was conducted on current practices on the realisation of benefits in IT projects. In the following paper, the Cranfield Benefits Management model was presented (Ward et al., 1996). The model introduced the idea of a distinct process targeted towards managing the benefits realisation of IT projects in order to improve the result, and is one of the most widely used and cited models for enabling realisation of benefits (Braun et al., 2010). The Cranfield process model involves five basic activities: 1) identify and structure benefits, 2) plan benefits realization, 3) execute benefits plan, 4) review and evaluate results, and 5) investigate the potential for further benefits (Ward et al., 1996).

In the initial activity, objectives for the investment, all potential benefits and ownerships are established, and an outline business case is produced to decide whether to proceed with the IT investment. It is important that investment objectives relate to one or more drivers for organizational

change and understand how these help realize benefits, without resulting in organizational problems for stakeholders that could hinder the project. This is followed by constructing a more comprehensive benefits plan and business case. This includes identification of change areas and measurements of the current baseline in order to determine if benefits has been reached. Benefit and change ownerships must be established to address stakeholder issues, as well as a documentation of dependency networks clarifying the relationships. The execution of the plan involves monitoring and adjusting as events unfold and further insight is gained. A business project manager should take responsibility and act as custodian of the benefits plan on behalf of other business stakeholders. After project completion, the results are reviewed on the foundation of the benefits plan. The aim is to establish which benefits have been achieved and to which degree, and determine if further actions can give more benefits. Furthermore, to understand the reasons why some benefits were not achieved and how the organizations benefit management might be improved for future projects. Finally, a process of identifying additional improvements through business changes and further IT investments revealed in the implementation of the project takes place (Ward et al., 1996).

Other similar approaches have been proposed. Active Benefit Realization is an approach where principal stakeholders of the information system are identified and are continuously involved in realising benefits (Remenyi et al., 1997). This idea is repeated in the study of an IT governance model, where benefits management is a part of the daily process (Mckay et al., 2003). The core of these approaches is the need for alignment between business needs and IT capabilities/possibilities. If an organisation suffers poor benefits and lack of alignment between IT and business strategy, then it is an implication of poor benefits management (Ward et al., 2006).

Ward and Daniel (2006) raise two issues that affect benefit management in the public sector. The drivers for projects are often in the form a requirement to meet a specific target or a result of government policies, and projects often have a wide range of different stakeholder groups (Ward et al., 2006). The latter was supported by a Delphi study involving Norwegian municipalities (Päivärinta et al., 2007). In this study, preliminary work was done on the issues of adopting benefits management practices for IT investments in Norwegian municipalities. This was later followed up by an investigation on a number of public IT projects using a benefits management approach developed in an initiative under the Norwegian government (Flak et al., 2008b). The benefits management approach developed from scratch, due to lack of relevant existing practices, proved partly successful in facilitating concrete benefits. The studies in Norway addresses some of the challenges in introducing benefits management models and processes in public IT initiatives and the lack of empirical studies on the success of benefits management (Flak et al., 2008b, Päivärinta et al., 2008, Flak et al., 2008a). However, more studies are needed to further understand the inherent challenges of enabling benefits management processes in a public sector context, in line with the call for research that contributes to a deeper understanding of benefits management practices (Braun et al., 2009).

### **3 Research Approach**

The case study method is a well-established approach for conducting IS research (Benbasat et al., 1987, Lee, 1989, Walsham, 1995). We have designed this particular case study as an interpretive case study based on qualitative data and on interpretation. Interpretive research allow us to see benefits management in its organisational context as socially constructed and thus open to several interpretations by organisational actors but also to us as researchers (Walsham, 1995, Walsham, 2006, Klein et al., 1999). Further, in the research design we have chosen to select two cases to perform a multi case study (Yin, 2003). With a base in more than a single case and that increases the robustness of the findings (Yin, 2003), but it also allows a more detailed cross-case analysis (Eisenhardt, 1989) with the potential to highlight different interpretations and the various circumstances that the case organisations face. Thus, we conducted an interpretive multi case study involving interpretations of benefits management within and across local government organizations.

### 3.1 Cases

The case studies were performed on two different municipalities. Hereafter referred to as Municipality 1 (M1) and Municipality 2 (M2). Both are participating in a joint research project, which is aimed at improving management of IT projects in municipalities (Nielsen et al., 2010).

Municipality 1 has a population of around 200.000 inhabitants situated in 1.114 km<sup>2</sup>, which makes it one of the largest municipalities. Centered in a city, that was characterised by heavy industry, but in recent years has transitioned into a broader palette. The city is a typical university town, the capital of the region, with the highest population group being 20-24 year olds. The housing is roughly evenly divided between single family houses and apartment buildings. The municipality employs roughly 19.000 and has a tax income of 1.000.000.000 euros. It is divided into eight different municipal authorities and the administrations are based in different locations. There is a centralized IT administration and several decentralized IT departments.

Municipality 2 has a population of around 70.000 inhabitants situated in 25 km<sup>2</sup>, a suburb of the Danish capital with a reputation of being a rich neighbourhood. Multiple awards have been given to the municipality on IT initiatives and it is generally known for being on the cutting edge in e-government. The highest population group of the suburb is 40-49 year olds, with a large group of 10-19 year olds as well. The housing is roughly 2/3<sup>rd</sup>s apartment buildings and 1/3<sup>rd</sup> single family houses. Large houses are twice as common here compared to the country average. The municipality employs roughly 6.270 and has a tax income of 538.000.000 euros. The administration is comparatively smaller than M1 and centralized in one location. IT projects are managed by a centralized IT administration at this location.

### 3.2 Data Collection

Data were collected from these two cases by exploratory group interviews in field settings (Frey et al., 1991), where we as researchers stimulated a group discussion with IT benefits management as the topical question. These group interviews were conducted for the two cases in sessions in each case with the agenda of discussing the current practices in benefits management, identifying issues to be improved and suggesting how improvement could be conducted. These sessions had in each of the two cases participation of the IT manager, the chief financial officer, IT project managers, and in M2 also a senior manager; three researchers acted in the capacity of participant observers and played an active role in organising the sessions. In each municipality there were two sessions lasting between 2 and 3 hours. The first session in each case had the purpose of describing current practices and discussing issues to be improved. Between the first and the second session, the researchers analyzed the immediate data and compiled an analysis. The second meeting had in each case the purpose of presenting, discussing, and validating the researchers' analysis and further elaboration on how to improve the benefits management.

The sessions were audio recorded for later analysis and pictures of the white board were recorded for later analysis. The empirical data also include the researchers' analysis in the form of slides presentations, as these were the basis of the discussions in the second session.

The use of group interviews allowed us to explore the complexities of IT benefits management transcending individual decision makers, which is identified as a key issue for benefit management in the public sector (Ward et al., 2006, Päivärinta et al., 2007). Furthermore, the second sessions allowed us to exploit group interviews *“as a testing ground for hypotheses or analytic suggestions, and expand the depth and variation in response or description of relevant social events”* (Frey et al., 1991).

### 3.3 Data Analysis

The data analysis was conducted following the overall principles of interpretive analysis of case studies (Walsham, 2006). This allowed the researchers to be open to different interpretations of how

the participants in benefits management in the two cases made sense of it. The data analysis has also relied on the process of inducing theory from case studies (Eisenhardt, 1989). This has specifically led to a deliberate focus on both analysing the within-case data and searching for cross-case patterns (Eisenhardt, 1989, p. 539). The data were loaded into the tool NVivo for qualitative coding. Specifically, the analysis followed the procedure outlined here in 3 steps:

1. Starting with five seed categories stemming from a general view on the two cases from the analysis made between the two sessions, all relevant quotations in the data were coded in NVivo with a seed category. The seed categories were then revised based on the identified quotations. E.g., “benefits” is such a final category.
2. A second level of coding was introduced to provide concepts to describe the quotations and thus the category in more detail. E.g., “financial benefit” is a concept in the category “benefit”.
3. Compare and contrast how the five categories unfold for the two cases. The quotations for each case for each category were studied to form a framing covering the quotations. E.g., a framing is “benefits as budget cuts”.

## 4 Findings

The analysis has identified five characterising categories together with several concepts that describe what is important in each category in the two cases. A comparative overview can be seen in table 1. The table shows the categories and the concepts as well as for each case a framing summarising the practice of benefits management in that case.

Category	Concepts	Framing in Municipality 1	Framing in Municipality 2
Benefits	<ul style="list-style-type: none"> <li>• complex benefits</li> <li>• dependent benefits</li> <li>• financial benefits</li> <li>• fragmented benefits</li> <li>• improved service benefits</li> <li>• cross-department benefits</li> </ul>	Benefits as budget cuts	Benefits as distributed incentives
Activities	<ul style="list-style-type: none"> <li>• identifying benefits</li> <li>• measuring benefits</li> <li>• realizing benefits</li> <li>• communicating benefits</li> <li>• distributing benefits</li> <li>• organizing benefits management</li> </ul>	Budget control as a key activity	Collaboration across departments and IT as a key activity
Conditions	<ul style="list-style-type: none"> <li>• diverse organization</li> <li>• incentive</li> <li>• maturity</li> <li>• regulations</li> </ul>	Centralized business case as condition for benefits management	Win/win business case as negotiated condition for benefits management
Continuity	<ul style="list-style-type: none"> <li>• phases</li> <li>• organizational change management</li> </ul>	Organizational changes detached from IT projects	Transition period from IT project to changed operations
Roles	<ul style="list-style-type: none"> <li>• shared responsibility</li> <li>• steering group members</li> <li>• employee ambassadors</li> </ul>	Financial steering group	Employee ambassadors

*Table 1: The case analysis with categories, concepts, and framing for the two cases*

Each of the five categories are described and analysed in the following.

## 4.1 Benefits

The analysis of the two municipalities shows that it is important to know what kind of benefits that can be achieved through an IT project. If and how these benefits can be measured, and what consequences this might have for the management process. Benefits in the two municipalities can be understood at a more detailed level as: complex, dependent, financial, fragmented, improved service, and cross-department benefits. Complex benefits are not easily measured and they encompass elements such as political goals, organizational learning, and reputation. Dependent benefits are dependent on the realization of other benefits. Financial benefits are usually savings realised as budget cuts. Fragmented benefits are spread in such a way that they are hard to realize. Improved service benefits relates to increased and better services to the citizens. Cross-department benefits depend on several departments in order to be realizable.

Both municipalities operated to a large degree with benefits that holds a financial value, which was usually represented in saved salaries. However, the two municipalities differed in their predominant views and assumptions about benefits. Municipality 1 primarily viewed benefits as budget cuts, as illustrated by the following quote:

*“We assess the benefits are such and such. We take them home by reducing the budget”* (M1).

Thus, in this municipality there was little consideration of benefits not easily expressed in a budget. In Municipality 2 the benefits were primarily viewed as distributed incentives, as illustrated by the following quote:

*“The benefits lie partly in the municipal coffer and partly at the citizens”* (M2).

Thus, this municipality viewed benefits as motivational factors for employees, citizens, and the municipal budget in acknowledging the value of an IT investment. This view allowed a higher recognition of non-financial benefits.

## 4.2 Activities

The municipalities perform benefits management activities without adhering to a particular method. The activities found in the two municipalities were: identifying benefits, measuring benefits, realizing benefits, communicating benefits, distributing benefits, and organizing benefits management. Identifying benefits is the activity of finding and formulating the value of the IT project and the IT-driven change. Measuring benefits is the activity of assessing results of the IT investment by measuring the state of affairs before and after, and also as a more generic activity of collecting and utilizing the municipalities' management information from within the organization and from interactions with citizens. Realizing the benefits is the activity of actually gaining value from the IT investment. Communicating benefits relates to both support activity to assist realization of benefits through informing staff on what benefits the IT systems will bring, and to how to make this happen. Communicating benefits also relates to the framing within the municipality to assist cultural change and acceptance by communicating the benefits well in advance and throughout the IT project. Distributing benefits is primarily an activity about incentives that is performed either through balancing different departments' needs in joint IT investments, or through avoiding the cost savings stigmata by distributing some of the benefits to the participating departments. Organizing benefits management is the activity of how to frame the benefits management activities.

The two municipalities had different primary approaches to their activities. Municipality 1 used budget control as a key activity, as illustrated by the following quote:

*“The budget has been made... What we deliver is the possibility for the administrations and institutions and others to carry out the budget”* (M1).

Thus, the distribution of benefits was made beforehand, benefits were realized in advance (with little connection to the actual organisational changes) and measurements on results were not asked for. In

Municipality 2 the key activity was collaboration across functional departments and the IT department, as illustrated by the following quote:

*“We have made this escalation model... To generate further IT investments a part of the cost savings is moved to the [local] Digital Team ... It is a part of the cake that is available. The other part is a saving for the municipality” (M2).*

Thus, the management acknowledges that incentives and collaboration is important to nurture a culture of improvement through IT.

### **4.3 Conditions**

The analysis further shows that it is important to look at the conditions which benefits management will operate under and be influenced by. The conditions found in the municipalities were: diverse organization, incentive, maturity, and regulations. The diverse organization condition covers three issues: (1) the organization of different municipalities may differ greatly; (2) there are many departments and institutions within a municipality that may develop political controversies and conflicts in joint projects; and (3) the underlying organisational culture and approach to IT investments and projects may differ significantly between municipal departments. The incentive condition covers the motivation and possibilities to initiate and realize benefits on IT investments. Maturity in municipalities' benefits management relates to the readiness and capability to realize benefits in ongoing IT investments and projects. The maturity also covers project managers' and other organisational actors' skills and experience. Regulations are the legislative laws, by-laws and political agendas under which the municipalities operate IT projects and IT systems. This covers in particular the legislative restrictions governing which services that the municipalities are required to deliver to citizens.

Both municipalities operate overall within the same political and public sector environment and within the same regulatory conditions. However, the specific conditions that benefits management operate under differ to a large extent between the municipalities. In Municipality 1 there was a strong concern and focus on the external conditions which caused benefits management to be shaped around centralized business cases, as illustrated by the following quote:

*“... we add the mutual agreement [with the national government], and with that ... in the budget [that] conditions to the politicians, which entail such and such benefits on IT nationwide. Our share of that, we add that in [the budget]. And then it doesn't matter if it is realistic or not” (M1).*

Thus, the centralized business case for the municipality reflects a national business case covering all municipalities. In Municipality 2, on the other hand, the external factors were also acknowledged, as illustrated by the following quote:

*“The IT that comes from outside, is almost always a part of a mutual agreement [with the national government]. That is a financial agreement that determines that” (M2).*

However, these external agreements did not dominate the approach to benefits management, as the primary condition was to negotiate win/win business cases to promote digitalization and innovation, as illustrated by the following quote:

*“The trick is to establish a business case where it's a win/win for everybody... We have implemented a 50% to you and 50% to me in the overall financial decision process to get such a motivation” (M2).*

Thus, Municipality 2 operated with a higher integration of IT projects and organisational benefits and made it visible to the affected stakeholders within the municipality.

### **4.4 Continuity**

The IT investment and realization of benefits often span beyond the closure of the IT project. It is important in the municipalities to understand the continuity of the benefits management and how it is

addressed specifically. Two aspects of continuity were identified in the municipalities: Phases and organizational change management. An IT investment and project can be in different phases of realization of the benefits. In its most simple form the phases will be before, during, and after the IT project; but usually there are more phases defined more or less explicitly. The organizational change necessary to realize benefits and which are most often far beyond the mere implementation of the IT system can be managed in different ways over the course of the investment.

In Municipality 1 the IT investments has two phases and sometimes three phases. In the first phase prior to initiation of the IT project, the budget impact of the IT investment is assessed and negotiated. In the second phase the implementation of the IT system occurs. Then the initiative sometimes has a third phase where organisational improvements are spun off with the purpose of managing organizational change pushing towards benefits. This third phase, however, occur as detached from the originating IT investment and IT project, as illustrated by the following quote:

*“Sometimes it seems like there is no connection. A bunch of IT projects and other projects can run. And then at some point, seemingly independent from this, some organizational changes take place”* (M1).

Thus, even when organizational changes are identifiable as a beneficial consequence of an IT system the organizational changes are detached from the IT projects.

In Municipality 2 there are four phases: before the IT project, the project itself, organisational implementation, and the new operations phase. The main focus in this municipality is on the transition from the IT project to the changed operations constituting a new daily practice. The responsibility for organizational changes and realising benefits were deliberately moved from the IT project manager to the business manager. This is illustrated in the following quote:

*“I tried to draw a picture, where there is something called before, then there is the project, and then a grey zone I call implementation period, but where the project is succeeded by the manager [in the administrative department], and then we are in a new kind of operation out there”* (M2).

Thus, there is an explicit transition of responsibility for benefits management to cater for its continuity.

## **4.5 Roles**

In the analysis of the two municipalities three interesting aspects of organisational roles were found: steering group members, shared responsibility, and employee ambassadors. IT projects in the two municipalities were predominantly structured with a steering group consisting of representatives from the IT department and representatives from the affected administrative departments. Shared responsibility across different stakeholder groups for the realization of benefits and improving benefits management was found to be important. The same applies for key employees, who were noted to be of importance in both improvement of benefits realization, but also in improving benefits management.

The organisational roles of the steering group and the role of the individual members of the steering group varied considerably. In Municipality 1 the representatives of the affected administrative departments were financial managers and together they acted as a financial steering group, as seen in the following quote:

*"We run our project in a joint steering group, where every administration is represented by a financial manager... He then makes the effort that he thinks is needed to sell it to the affected group [department]"* (M1).

Thus, this setup gives the financial managers a key role in the project. They are part of the steering group, where they mediate in the distribution of benefits as budget cuts, and they also act as initiators of benefits realization.

In Municipality 2 there was a strong emphasis on key employees as ambassadors for the benefits of the IT investment, as illustrated by the following quote:

*“You actually have key employees that are great for selling the idea. They are very important. They are better ambassadors than others for that” (M2).*

Thus, there is a shared responsibility for benefits management and with a particular focus on communication and on framing the benefits.

## 5 Discussion

In the following, we discuss the findings from our comparative case study of two Danish municipalities in relation the research question: What characterizes IT benefits management in local government? In response to this research question, we propose a framework consisting of the five aspects of benefits management found in the comparative case study, cf. table 1. We shall prefer to call the categories from the empirical analysis for ‘aspects’ when we turn these into a framework. Each aspect is important in characterizing benefits management in the cases. For each aspect, we have elicited several concepts that we have used in describing how the municipalities have dealt with the overall aspect. The framework is thus conceptual and can be used to characterize actual benefits management, see Table 2.

- **Benefits** may be characterized with: complex, dependent, financial, fragmented, improved service, and cross-department.
- **Activities** may be characterized with: identifying, measuring, realizing, communicating, distributing, and managing.
- **Conditions** may be characterized with: diverse organization, incentive, maturity, and regulations.
- **Continuity** may be characterized with: phases, and change management.
- **Roles** may be characterized with shared responsibility, steering group members, and employee ambassadors.

*Table 2: The framework for benefits management consisting of aspects with characterizing concepts*

We have further utilised the comparative case material to juxtaposition the framing of the differences between the two cases for each of five aspects. Based on the comparative case study we shall see these juxtapositions as opposite framings that points to choices to be made. The aspects are not independent and these choices should be made to form a coherent decision. For example, in Municipality 1 the central role is a financial steering group, which goes well together with the condition that there should be a centralized business case; and that again fits well with budget control being a key activity. In Municipality 2, the benefits as distributed incentives goes well together with the win/win business case as a condition for the coming benefits management which again fits well with the key activity being collaboration across departments. We suggest that within the framework there will be patterns where a particular characteristic of an aspect fits well with a particular characteristic of another aspect and that these form a meaningful whole. Other combinations of characteristics may then give much less meaning or simply turn out to be inconsistent and then very difficult to implement.

At an overall level of analysis we have shown that benefits management in local government differ from the literature on IT benefits management in terms of which characteristics are important. At a more detailed level of analysis, the five aspects of benefits management will each be discussed in the following in relation to the existing literature.

In the *benefits* aspect, Municipality 1 had a predominant view of benefits as budget cuts while Municipality 2 predominantly viewed benefits as distributed incentives. These two views represent different approaches to the principle that benefits arise when IT enables people to do things differently (Peppard et al., 2007). Municipality 2 focused on motivating the organisational actors required to do

things differently by emphasizing how they could benefit. Municipality 1 realized benefits by reducing the budget based on initial assessments of the financial value from an IT investment, forcing middle managers to change how things are done. The budget cuts approach allowed Municipality 1 effectively to realize financial benefits to a central level, which was much more difficult for Municipality 2. However, Municipality 2 was able to realize more diverse benefits; benefits that were given little to no attention in Municipality 1. Considering benefits as organizational change (Ward et al., 2008) the budget cut framing may prove most effective to stop doing things while the distributed incentive framing may more effectively support doing new things and doing things better. In dealing with the public sector issue of meeting a specific target or a result of government policies (Ward et al., 2006), the budget cut framing implies limited involvement from the IT department in the professional practices of civil servants as opposed to the implications of the distributed incentive framing.

In the *activities* aspect, Municipality 1 had budget control as a key activity while Municipality 2 had collaboration across departments and IT. These two activities represent different approaches to the idea of a distinct process for managing the benefits realisation of IT projects (Ward et al., 1996). Municipality 2 focused on establishing collaboration activities across departments and IT in line with this (Ward et al., 1996) and other approaches for benefits management (Remenyi et al., 1997, McKay et al., 2003). However, Municipality 1 managed to realize significant financial benefits through budget control without any distinct process for benefits management. In Municipality 1 the managers affected by the IT investment would be required to carry out the benefits realization activities they saw fit in their department in order to adhere to their budget. Thus, Municipality 1 used very few resources on the process of benefits management, but may have left many benefits undiscovered or unrealized compared to Municipality 2.

In the *conditions* aspect, Municipality 1 had centralized business cases as condition for benefits management while Municipality 2 had win/win business cases as negotiated condition for benefits management. These two conditions represent different implications for the use of a business case in benefits management (Ward et al., 1996, Ward et al., 2008). The business cases in Municipality 2 allowed negotiation among stakeholders making it a changeable condition for benefits management. Municipality 1 adopted business cases developed at a national level as a stable non-negotiable condition for benefits management. Thus, Municipality 2 was more proactive in re-shaping the conditions of benefits management for new IT investments, while Municipality 1 more often accepted business case from a central government organization as a stable condition to be communicated within the municipality.

In the *continuity* aspect, Municipality 1 had organizational changes detached from their IT projects while Municipality 2 had a transition period from IT project to changed operations. These two approaches to continuity represent different views on the principle that benefits must be actively managed for (Peppard et al., 2007). Municipality 2 approached benefits management in accordance with this principle as an on-going process after the completion of the IT project. In Municipality 1 benefits were managed for in the initiation and during IT projects, but not following this, as the financial benefits often were realized in the budget at this point. Thus, Municipality 2 invested much more resources in continuous benefits management compared to Municipality 1.

In the *roles* aspect, Municipality 1 had financial steering group as a key role while Municipality 2 had employee ambassadors as a key role. These two different emphases of roles in benefits management represent different perspectives on the principle that only business managers and users can release business benefits (Peppard et al., 2007). Municipality 2 follows this principle by emphasizing employee ambassadors as playing a key role in releasing benefits. Municipality 1 however, focus on involving financial managers in the role of steering group participant for releasing benefits. Thus, Municipality 1 has a centralized emphasis on the roles of business managers while Municipality 2 has a decentralized emphasis on the roles of users. In dealing with the public sector issue of the wide range of different stakeholder groups (Ward et al., 2006, Päivärinta et al., 2007), Municipality 2 involved a variety of organizational stakeholders in the form of users from different departments affected by the

IT investment, while Municipality 1 reduced complexity by only involving influential organizational stakeholder in terms of financial managers in a steering group.

Based on this we suggest that the five categories, the concepts, and the framing in table 1 can be taken to be a framework. This framework is grounded in an empirical study that allows for comparison of cases and as such we claim its initial validity. We do not intend to generalise the framework far beyond the cases, but we will claim that (1) it already has some merit to understand and compare specific cases of benefits management as shown in the previous sections; (2) it is specific to benefits management in local governments as a special case of public organisations; (3) it is described in such a detail that it can be further tested and elaborated; and (4) it can be used by IT managers in local governments in understanding their own benefits management.

The implication for IT managers is that the framework can be used to make sense of existing benefits management practice. If some of the five aspects of benefits management are missing in the current practice it is an indication these can be considered for inclusion in practice; and the descriptive concepts and opposite framings will potentially be used in this consideration. If some of the five aspects are problematic and performed in less than desired manners, the framework may be used in considering how to improve. Again, the concepts and the opposite framings may be potentially useful in this. The opposite framings, in particular, may be useful in pointing at possible choices to be made by IT managers.

## 6 Conclusion

In this paper, we have investigated what characterizes IT benefits management in local government based on a comparative case study of two Danish municipalities. The investigation has resulted in an initial framework conceptualizing different aspects of IT benefits management in local government. These aspects are benefits, activities, conditions, continuity, and roles. This framework may help understand and compare specific cases of IT benefits management in local government by involving opposite framings of practice.

## 7 References

- Barua, A. and Whinston, A.B. (1998). Decision Support for Managing Organizational Design Dynamics. *Decision Support Systems*, 22(1), 45-58.
- Benbasat, I., Goldstein, D.K. and Mead, M. (1987). The Case Research Strategy in Studies of Information Systems. *MIS Quarterly*, 11(3), 369-386.
- Braun, J.,F. Ahlemann and G. Riempp (2009). Benefits Management - A Literature Review and Elements of a Research Agenda. In *Proceedings of the 9. Internationale Tagung Wirtschaftsinformatik*. p. 555, Vienna, Austria.
- Braun, J.,K. Mohan and F. Ahlemann (2010). How benefits from IS/IT investments are successfully realized: The role of business process knowhow and benefits management practices. In *International Conference on Information Systems*.
- Chircu, A. and D. Lee (2003). Understanding IT Investments in the Public Sector: The case of E-Government. In *Ninth Americas Conference on Information Systems*.
- Chircu, A.M. and Lee, D.H.D. (2005). E-Government: Key Success Factors for Value Discovery and Realisation. *Electronic Government*, 2(1), 11-25.
- Dhillon, G. (2000). Interpreting key issues in IS/IT benefits management. In *Proceedings of the 33rd Annual Hawaii International Conference on System Sciences*.
- Eisenhardt, K.M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, 14(4), 532-550.
- Flak, L. and Å. Grönlund (2008a). Managing Benefits in the Public Sector. Surveying Expectations and Outcomes in Norwegian Government Agencies. In *Electronic Government, Proceedings*. p. 98-110.

- Flak, L.S., T.R. Eikebrokk and W. Dertz (2008b). An exploratory Approach for Benefits Management in e-Government: Insights from 48 Norwegian Government Funded Projects. In Proceedings of the 41st Hawaii International Conference on System Sciences., Waikoloa, Big Island, Hawaii.
- Frey, J.H. and Fontana, A. (1991). The Group Interview in Social Research. *The Social Science Journal*, 28(2), 175-187.
- Klein, H.K. and Myers, M.D. (1999). A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems. *MIS Quarterly*, 23(1), 67-93.
- Lee, A.S. (1989). A Scientific Methodology for MIS Case Studies. *MIS Quarterly*, 13(1), 33-50.
- Lin, C. and Pervan, G. (2003). The Practice of IS/IT Benefits Management in Large Australian Organizations. *Information and Management*, 41(1), 13-24.
- Mckay, J., P. Marshall and L. Smith (2003). Steps Towards Effective IT Governance: Strategic IT Planning, Evaluation and Benefits Management. In 7th Pacific Asia Conference on Information Systems.
- Nielsen, P.A. and J.S. Persson (2010). IT Management in Local Government: Engaged Problem Formulation. In Proceedings of the Thirty First International Conference on Information Systems. p. 1-12, St. Louis, MO.
- Päivärinta, T. and W. Dertz (2008). Pre-determinants of Implementing IT Benefits Management in Norwegian Municipalities: Cultivate the Context. In *Electronic Government, Proceedings*. p. 111.
- Päivärinta, T., W. Dertz and L.S. Flak (2007). Issues of Adopting Benefits Management practices of IT Investments in Municipalities: A Delphi Study in Norway. In Proceedings of the 40th Hawaii International Conference on System Sciences . p. 103, Waikoloa, Hawaii.
- Peppard, J., Ward, J. and Daniel, E. (2007). Managing the Realization of Business Benefits from IT Investments. *MIS Quarterly Executive*, 6(1), 1-11.
- Remenyi, D., M. Sherwood-Smith and J.D. White (1997). *Achieving Maximum Value from Information Systems: A Process Approach*. Wiley, Chichester.
- Walsham, G. (2006). Doing Interpretive Research. *European Journal of Information Systems*, 15(3), 320-330.
- Walsham, G. (1995). Interpretive Case Studies in IS Research: Nature and Method. *European Journal of Information Systems*, 4(2), 74-81.
- Ward, J., Daniel, E. and Peppard, J. (2008). Building Better Business Cases for IT Investments. *MIS Quarterly Executive*, 7(1), 1-15.
- Ward, J., Taylor, P. and Bond, P. (1996). Evaluation and Realisation of IS/IT Benefits: An Empirical Study of Current Practice. *European Journal of Information Systems*, 4(4), 214-225.
- Ward, J. and E. Daniel (2006). *Benefits Management - Delivering Value from IS & IT Investments*. John Wiley and Sons Ltd., West Sussex, England.
- Yin, R.K. (2003). *Case study research: Design and methods*. Sage publications, Thousand Oaks, Ca.