

Alignment dynamics in e-Government: Behind the scenes of local governments

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Abstract: Local governments are increasingly swamped by the endless possibilities that arise from information and communication technologies. They are challenged to incorporate ICTs in their daily processes and strive to thus become more efficient and effective organizations. Yet, a lot of factors come into play when ICTs are introduced within local governments. Soon organizational dynamics are entangled with the new dynamics that stem from the newly introduced ICTs. In this paper we explore the dynamic process of aligning local governments with technology by using the 7Smodel as a framework to analyze how seven different elements, both hard and soft, mutually affect each other and make out the local dynamics. We state that these elements influence how local governments deal with change, and in this respect, how they deal with technology. We stress the interrelations between the seven factors and the organizational dynamics as a result of the interplay between these factors to point out the complexity of the alignment process in local governments. Better insights in the organizational factors that encircle the implementation of ICTs will lead to a more profound understanding of how the process of alignment comes into practice in local governments. By taking into account the complex process of alignment ICT-projects will be more successful.

Key words: e-Government, evaluation, local government, organizational change, alignment process

1. Introduction

The implementation of new ICTs by governments seems to happen in a slower pace than expected (Meijer 2010) and tends to grow organically. About two decades ago, local governments in Flanders (the northern part of Belgium, home to the Dutch speaking community) began to acquire their first computers and applications. At first, there was no real strategy behind this. They started using these new technologies without realizing what the impact would be on the organization. In most cases ICT implementations were initiated by a limited number of people who saw new possibilities arising from using these new ICTs. Staff members interested in ICT developed their skills and competences further by using new tools and supporting their colleagues.

At first the technology was at the center of the attention, but increasingly the organization and how it changes and deals with technology became the prime of interest. That is because adopting and using (new) ICTs challenges the current ways of working and introduces new possibilities for the organization. E-government proves to be not only about the execution of daily routines and tasks, but also about the management of the everyday practices. There is a growing need for support by experts, new competencies in staff members and a well-considered and clear vision and strategy on the role of ICT for the organization comes into sight. In addition, there seems to be a shift from a technological support view towards a more strategic role for ICTs within the organization (Henderson and Venkatraman 1993). Local governments are challenged by technology to build their internal organizations around these new technologies.

Findings show that local governments differ greatly in how they deal with new kind of ICT challenges (Meijer 2010, Boudry et al 2009). Some of them succeed in reaping the benefits of new ICTs, but other struggle to incorporate ICTs in a way that the organization as a whole can benefit from it. This paper focuses on how organizations deal with change or in other words, how they struggle in aligning their organization with ICT and thus explores the variety in how they deal with this changing environment.

2. Alignment dynamics

2.1. Alignment as a process

In this paper we build on the alignment perspective which points out the importance of attuning the organization and its ICTs and the precarious balance between both. Initially, this idea of alignment was developed for application within a business context, but alignment models are increasingly applied in the context of the adoption of ICTs by governments (e.g. Fedorowicz, Gelinias, Gogan, and Williams 2009, Meijer 2010). Like businesses, governments are also challenged to harmonize their organization's goals and activities and the information systems that support them (McKeen and Smith 2003, Chan and Reich 2007). Consequently, they experience a similar need for aligning their organizational and ICT dimensions.

Alignment within governmental organizations can be seen as a condition for achieving a better functioning and a more efficiently managed organization. It is a dynamic and ongoing process (Baets 1996, Rondinelli, Rosen and Drori 2001, Chan and Reich 2007) with different dimensions, such as strategic and structural dimensions, but also social and cultural elements (Chan and Reich 2007). Attempts have been made to identify factors that contribute to this alignment of organization and technology (e.g. Luftman 2003). But insights in the complexity of this alignment process and the elements that contribute or hinder this process tend to be rather limited. There is a need for insights in the complex and dynamic process of alignment and in different elements that contribute to this alignment process. Baets (1996) summarizes this by stating that *"it is not enough to simply understand the factors involved in alignment, one must understand the interrelationships among the factors"* (Chan and Reich 2007).

We elaborate on this idea of aligning organization and technology and aim for a better understanding of this process of alignment by building on the 7Smodel. This model is traditionally used for addressing how organizations deal with change and on how effective they are in this. The founding fathers of this model, Peters & Waterman (1980) distinguish seven factors that are interrelated and mutually reinforcing. These elements include both hard dimensions such as 'strategy', 'structure' and 'systems' but also soft dimensions such as 'style', 'staff', 'skills' and 'shared values'. By reviewing these seven elements we aim to contribute to the alignment literature by illustrating how alignment dynamics work and can be investigated in local governments.

2.2. Alignment strategies in local governments

Local governments differ notably in the way they make use of ICTs within their everyday functioning. Boudry et al (2009) demonstrate this by introducing a new type of classification that enables to evaluate the alignment status of local governments. The authors discriminate four ways in which local governments align both their organizational and their ICT-side. Two ways concern organizations that are aligned, the other two cover organizations that are not or disaligned.

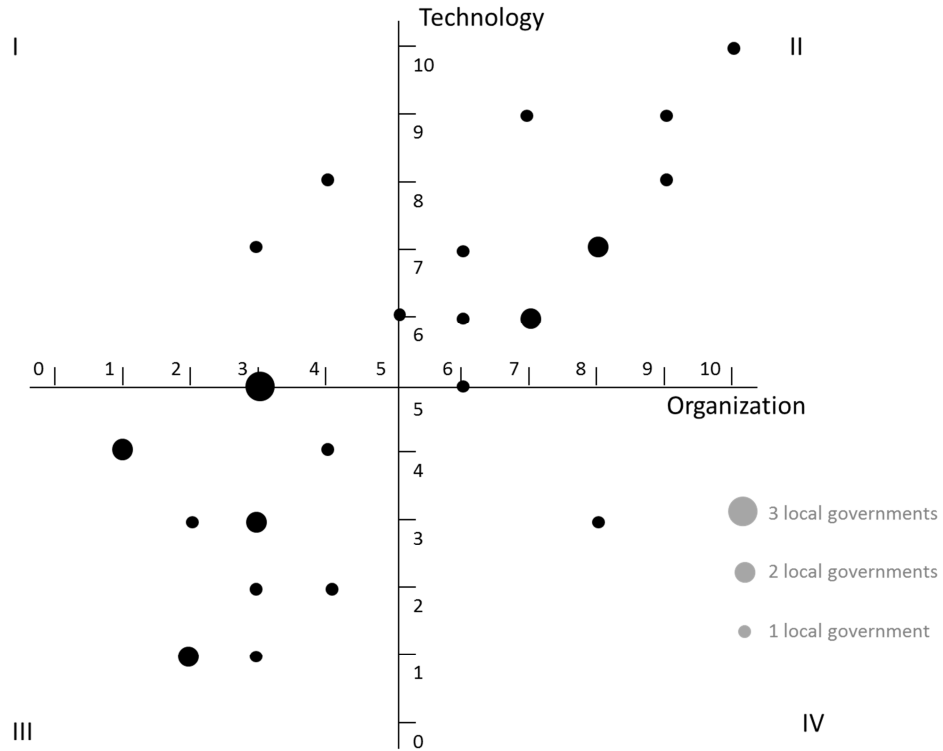


Figure 1: Alignment classification (Boudry et al 2009)

Aligned organizations (quadrant II and III) can be characterized by either a strong or a weak alignment. 'Strong aligned organizations' (quadrant II) succeed in a positive collaboration between the organizational and ICT-side. They reinforce and challenge each other in becoming a better organization. In 'weak aligned organizations' (quadrant III) both the organization and the technology side lack the driving power to initiate any substantial changes. To a certain extent, they reinforce each other in a negative way and leave each other uninspired. In 'disaligned organizations' (quadrant I and IV) the organization and technology sides do not sufficiently join forces. The reasons for this mismatch can be twofold. On the one hand, there are progressive organizations that do not get the support they need from their very technical-oriented ICT department (quadrant IV). On the other hand, the opposite occurs when rather conservative organizations are too much steered by a strong ICT department, which leads to an unbalanced growth of their organization (quadrant I). In short, technology and the organization do not necessarily evolve at the same pace, but technology can outrun the organization and vice versa. These findings should be seen as a snapshot of a process that illustrates that organization and technology can move in a different pace resulting in a time lag between business and IT planning processes also described by Van Der Zee and De Jong (1999).

We expect that a reinterpretation of the findings in these local governments will help to investigate the results in a more systematic way, in order to unravel the dynamic interrelationships of different organizational elements according to the different alignment statuses. Since there are only 3 organizations situated in quadrants I and IV, we see them as exceptions, therefore in this paper we will only focus on the organizations that are located in the quadrants II and III. Also the 5 organizations that lie on one of the axes will be left out of the analysis because we choose to focus on the two groups of organizations that can be defined as (strong or weak) aligned organizations. So, we will base our analysis

on 21 of the total of 29 local governments investigated, consisting of 10 strong aligned organizations and 11 weak aligned organizations.

3. Methodological approach

We used a mainly qualitative approach for gathering the data in order to get as much as information on the dynamic relationship between an organization and ICTs, in an attempt to grasp the complexity in how local government deal with ICTs. The data at hand are collected by means of an ICT alignment audit in which a self-selecting sample of 29 Flemish local governments was used. In each local government the audit commenced with at least one introductory interview with in the town manager and in most cases the communications officer and/or the IT-professional. Next, a focus group discussion took place with people from different departments and positions and a non-limited discussion about leadership, management, strategy and policy, daily tasks, use of data, database management and the role of the IT-professionals within the organization. The qualitative data from the interviews as well as the focus groups were complemented with a document analysis for each individual local government on documents such as the organization chart and policy and ICT strategy documents.

For this study, the individual reports of the local government were analyzed by scoring each organization on the factors of the 7Smodel. As mentioned before, local governments attributed to quadrants I and IV and those situated on one of both axes were excluded from this additional analysis. The remaining 21 organizations were attributed a score of 0 to 2 on each of the 7S factors. We did so for both an organizational as well as a technology perspective. So, each local government was attributed a total of 14 scores. A score of 0 on a factor was given to the organizations where we found a poor execution within the local government cases investigated. A score of 1 on a factor was given to the organizations where we found an average execution within the local government cases investigated. A score of 2 on a factor was given to the organizations where we found an excellent execution within the group of the local government cases investigated. For example; City X can be characterized as a dynamic organization with a well thought-out strategy. They developed a series of key projects that reflect the main organizational strategic lines resulting from their interpretation of the Municipal Decree (= Score 2 on 'Organization-Strategy'). The management team used to focus too much on a practical agenda, but is growing in its 'steering role'. Members of the management team have a lot of goods ideas but have problems communicating with the basis of their organization (= Score 1 on 'Organization-Style'). Staff members lack clear results of what the management team is doing. They are confronted with a high workload and focus only on their daily tasks. They are not inclined to think any further than what is in their job description (= Score 0 on 'Organization-Staff'). When it comes to ICT there is no ICT-strategy or plan (= Score 0 on 'Technology - Strategy'). The management team is not interested in ICT and leaves it to the ICT-department (= Score 0 on 'Technology-Style'). No one is in charge, the ICT-department is guided by the need for technical support of the staff members (= Score 0 on 'Technology-Staff').

This way, each local government was attributed 14 scores. Next, we calculated the mean scores of each factor of the 7Smodel for both the quadrant II as quadrant III organizations. These means were rescored on a total of 10 (instead of 2) for an easier interpretation. So we ended up with 7 mean scores for the organizational dimension and 7 mean scores for the technology dimension. This way, we were able to compare the mean scores of the strong aligned organizations on the one hand with the weak aligned organizations on the other hand.

4. Alignment in practice

In this part of the paper, we elaborate on the local dynamics in both the strong or weak aligned organizations. Based on the summarizing figures of the mean scores of the organization and the

technology dimensions we are able to explore the 7 elements and the dynamics between them for the two types of organizations.

4.1 Alignment from an organizational perspective

Looking at the radar below, we see that strong aligned organizations systematically score better than the weak aligned organizations. The most prominent contrast is reflected in the 'style' dimension and shows that strong aligned organizations score a lot better than the weak aligned organizations when considering their leaders and their leadership style. The 'systems' dimension reveals the lowest score for the weak aligned organizations and reflects the lack of attention for processes in weak aligned organizations. It is important to point out that these mean scores only give an indication of the difference between both types of organizations. They are the summary of the individual cases and stories of these organizations. So next, we discuss the 3 hard S's; strategy, structure and systems and the 4 soft S's; style, staff, skills & shared values for both types of organizations.

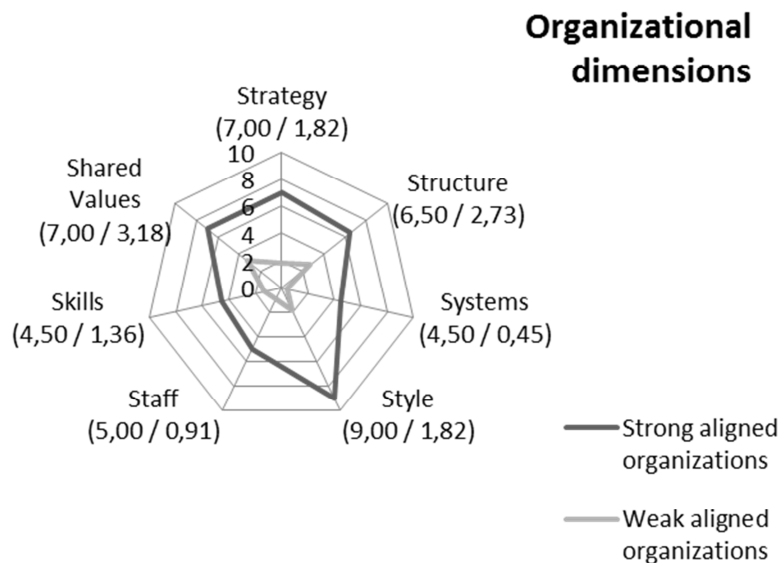


Figure 2: Mean scores of the 7S elements from an organizational perspective for both strong and weak aligned organizations

4.1.1. Strategy, structure and systems from an organizational perspective

Considering the structure of local governments in Flanders, they have a scope for policymaking and translating their policy to their organizational structure. We find that the strong aligned organizations have a well considered and in most cases written out vision and strategy that is supported throughout the organization. They have an ambitious policy plan that is generally developed after careful consideration of the input of both political as administrative leaders as well as based on the input of the executive staff. There is a broader strategy that is clear for the people involved. These ambitious goals are reflected in a well-considered organizational structure. They do not have strong hierarchical structures but in most cases they have recently been in the process of rethinking their organizational charts in order to group policy domains that are related. Since the 1st of January 2008 the creation of a management team is

mandatory for all local governments in Flanders¹. In the strong aligned organizations we notice a considerable number of higher managers that steer the administration, and that are supported by the middle management. They make a thought-out distinction between line and staff services. Their line services focus on the provision of services for citizens and the staff services support other departments in their daily activities by providing the logistic framework. Both line and staff services are - at least partially - organized around the notion of processes, which are descriptions of the everyday operations and services. Strong aligned organizations realize the importance of thinking and organizing in terms of processes, are active in revising them and see it as a means to strive for a more effective and efficient organization.

In contrast, weak aligned organizations are noticeably less ambitious when considering their strategy, structure and systems. They struggle in formulating a strategy and their expectations for the future. In most cases their strategic documents are developed by a limited number of people (influenced by the pressure of electoral ambitions), but this does not affect the daily functioning of the administrative organization. Day-to-day practices focus on the legislative role of the local government and the citizen-related services. In addition to the execution of these mandatory tasks there is little desire for formulating supplementary objectives. The organizational chart shows a rigid and mainly vertical structure with a limited number of managerial functions. In practice, department managers - and in some cases even the town managers - struggle with their managerial roles and sometimes even fall back on mainly executive tasks. They find it hard to think in terms of the organization as a whole and works towards a better and more efficient organization. The description and revision of processes is a real sticking point for weak aligned organizations. Most of them only have a limited number of process descriptions that have little effect on daily services, or have not started working on it yet.

4.1.2. Style, staff, skills & shared values from an organizational perspective

In addition to these rather formal and 'hard' elements, we also need to consider more 'soft' elements, such as style, staff, skills and shared values. The 'style' dimension stresses the role of managers and their style of leadership. This is reflected by the role of the town manager. The role of a town manager in a Flemish local government plays, as the head of the administration, a key role between the politics on one side and the administration on the other. In eight out of the ten strongly aligned organizations we perceive the town manager as a strong leader who can be described as an organization coach who has a vision for the organization. It is a manager who is open for change with good insights in the organizational strengths and weaknesses and who is able to question the function and goals of the organization as a local government. We notice that the management style of the town manager reflects on how the middle management is managing their departments, services and staff members. This management style stimulates a culture of openness and change, which can be considered as a basis for the shared values within an organization. This stimulates the staff in thinking out-of-the-box, or at least, to think further than their daily tasks and routines and to see convergences with what colleagues or people in other departments do. Both formal and informal consultations between staff members are based on trust and mutual respect. We see productive teamwork arising that breaks through boundaries between different departments. In terms of skills, staff member are no longer narrow-minded specialists but think in terms of services for citizens and how they can make the underlying processes more efficient and effective.

¹ According to article 98 of the Municipal Decree states that *the management team supports the coordination of the different services in the preparation, implementation and evaluation of policy. The management team also monitors the uniform operation, the quality of the organization and the operation of the services, as well as internal communication* (Boudry et al 2009).

In the weak aligned organizations we also assessed the important role of the town manager as a leading actor. For example in the two local governments where there is an ad interim town manager. These organizations are characterized by a standstill where little to no new initiatives are initiated. This lack of leadership spreads over the rest of the organization. In the other organizations Boudry et al (2009) distinguish between two types of weak town managers. The first type does not take control over their organization but tend to fall back on executive tasks. They are not behind the wheel of their organization. The second type are leaders who are too directive; they give orders that stem from a strict legislative view of the organization. They keep a too firm grip on their organization and block bottom-up initiatives. This weak management style of the town manager spreads over to the middle management and the staff members. Most people within the organization hold to their own job and tasks and focus more on action rather than thinking. Joint initiatives between departments are rare and people are not concerned about their position within the organization as a whole. These organizations are very bureaucratic with invisible fences between departments aiming for consolidating rather than improving. The formal, one-way communication leaves little room for bottom-up ideas. The organizational culture is marked by a lack of trust and low flexibility. More ambitious people tend to leave their job in these kinds of organizations relatively quick.

4.2. Alignment from a technology perspective

When looking at the local governments from a technology perspective, the second radar also shows systematically better scores for the strong aligned organizations than for the weak aligned organizations. The dimensions 'strategy', 'structure', 'staff' and 'style' show a similar contrast between both types of organizations. When considering the hard dimensions, we find that the weak aligned organizations have no ICT policy, have a minimal ICT staff and show no attention to their ICT processes. What attracts our attention the most, is that there is quite a low contrast between the mean scores on the 'skills' dimension. So, strong aligned organizations still have a considerable number of staff members that do not dispose of the necessary skills to use ICTs. Next, we discuss the 7 dimensions from a technology perspective.

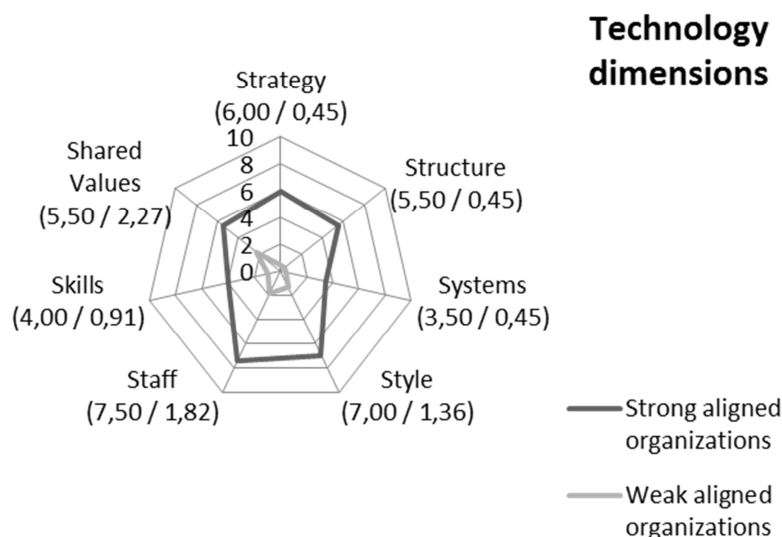


Figure 3: Mean scores of the 7S elements from a technology perspective for both strong and weak aligned organizations

4.2.1. Strategy, structure and systems from a technology perspective

The (absence of an) ICT-strategy gives a first idea of how an organization looks at ICT. Do they see it as something technological or as means for supporting and improving the organization as a whole? In all of the researched organizations the ICT-department is assigned with a supportive role. Even though, they differ in how they translate this into a particular strategy and organizational structure. We notice that the strong aligned organizations have a better idea of what this supporting role entails. They see ICT not as merely technical but as supporting for the organization as a whole. They think in terms of quality and efficiency and think about how they can deploy ICTs in striving for a better functioning organization. This attention for ICT is in most cases translated into an ICT-strategy that is written down in a separate ICT policy plan or is included in the general policy plan. This strategy affects the ICT-processes within the organization and very often this is not restricted to merely technological processes but it supports important organization wide processes. Next to strategy and systems, also the embedding of the ICT-department reflects how the organization looks at technology. In most strong aligned organizations the ICT-department is under authority of the town manager or is closely linked with domains such as internal affairs, communication, information, quality functions. This way, ICT is frequently discussed in the management team.

Weak aligned organizations have no or a very technical ICT-strategy. When ICT is mentioned in the organizations' policy plan, it reveals a very technical view that focuses on the functioning and maintenance of the hard- and software that is available and on the technical support of the staff members. The ICT-professional provides single solutions for individual requests. Generally, needs from staff members or departments that run parallel are not linked. As a consequence there do not result in a joint solution. ICT-processes are therefore limited to technical and supporting processes. The role of ICT in the organizational processes stems from the software applications the organization has acquired, but not from a consideration of the role ICT could play in vital organizational processes. If we consider the organizational chart, not all weak aligned organizations have an ICT-department (see below). If there is an ICT-department, its position within the organizational structure reflects a technical and functional interpretation. The classification under technical departments stresses the focus on automation and support. Subsequently, if ICT is discussed on the management or intermediate level, it is treated as something technical.

The ICT-market for local governments in Flanders is relatively small. Until recently there were only four major players but since a few years other ICT-suppliers started discovering the local governments as a new market for their products. There are two ways in how local governments deal with the ICT-market. There are local governments that have an active attitude towards the offerings on the ICT-market and consider different software solutions from different suppliers. They make a well-considered choice for the package that serves them with the best solution for their needs. In contrast, other governments show a much more passive attitude. They prefer buying software packages from one ICT-supplier, even though this supplier does not always offers the best solution for them. They are afraid that a new software package from a new supplier could conflict with their existing packages. They have too little knowledge for dealing with compatibility problems while using software from different suppliers. This way, they are very dependent on what their suppliers offers them but also of the choices that were made in the past. Five out of the ten strong aligned organizations reflect an active attitude towards the ICT-market. Eight out of the eleven weak aligned organizations have a passive attitude towards the ICT-market and choose to work together with one ICT-supplier for buying soft-and hardware. The others are still searching how to align the offerings of the suppliers with their organizational needs.

4.2.2. *Style, staff, skills & shared values from a technology perspective*

The 'soft' elements reflect how ICTs are handled in reality. When we consider the ICT-staff, we find that the strong aligned organizations have ICT-departments consisting of a number of ICT-staff members ranging from 1 to 5, with an average of 2,8. Six of them dispose of an ICT-professional at level A². In contrast, four of the weak aligned organizations do not have a separate ICT-department nor an ICT-staff and level B is the maximum level in the weak aligned organizations. The average number of ICT-professionals is 0,6 with a maximum of 2. The four organizations without an ICT-professional there is at least one staff member that has a lot of interest in ICT and takes care of some basic technical interventions.

Not only the ICT-professionals leave their mark on how the organizations deals with ICTs. In agreement with the important role of the town manager on the organizational level, we also see a significant influence of the town manager on the vision on the role on technology within the organization. Boudry et al (2009) found that a town manager does not need to have a technical background to guide the technological growth of the organization. It is important for them to see new opportunities arise from ICTs and to be open for them. This came specifically to the fore in organizations where a new town manager was recently appointed, for example when the former town manager retired. There we saw a striking and positive change in how the organization looks at the opportunities that ICT holds for it. Where before there was an almost standstill in adopting new ICTs, suddenly the organization finds itself in a world full of new ICT challenges.

Next to staff and style, we also need to consider skills and shared values as interesting factors when we consider the use of ICTs by organizations. All researched organizations find significant differences in the ICT-skills of their staff members. Every local government seems to have staff members that have limited ICT-skills when using for example a word processing program or a spreadsheet. But they also have staff members who think along and show a proactive use of ICT in their job. When considering the 'shared values' or the organizational culture, we find that strong aligned organizations show a culture that is more open for technological changes than weak aligned organizations.

5. Conclusion

ICT-projects in local governments have currently limited success rates partly because of the lack of taking into account inter-organizational factors that encompass these projects. With this paper we want to stress the importance of investigating the internal dynamics of organizations dealing with ICTs. We applied the idea of alignment to local governments and explored the 7S model as a lens to examine case studies. By unraveling a range of factors that contribute to how organizations deal with ICT-driven change, we aim for a better understanding of the dynamic and ongoing process of aligning local governments with technology. This analysis of previous research findings is aimed as a first test to distinguish between different elements that help to explain how organizations deal with ICTs. So there is a need for more empirical research in a more structured and systematic way to identify and objectify these 'hard' and 'soft' elements that influences an organization's alignment level. We believe that the alignment level of local governments will also affect the level of succes of ICT-projects and thus has a considerable influence on how and to what extend ICTs are used within the organizations. Better insights in the complexity of this alignment process will thus lead to a more profound understanding of how this process comes into practice. At the local level, these new insights can contribute to a better understanding of internal

² Staff members working in Flemish local governments are employed in different levels, ranging from A to E, according to their educational level. Level A corresponds to a master's degree, level B to a bachelor's degree and so on.

processes that contribute to or hinder the implementation of new ICTs. This can lead to more awareness for a solid organizational basis of ICT-projects or a better performing strategic plan for managing ICTs and ICT-projects. At an aggregated level, the review of a series of organizations can form a good basis to develop a typology of how local governments deal with ICT-driven change. This will also be beneficial for ICT-suppliers or the higher government for supporting ICT-projects for local governments. In short, we stated that local governments differ notably in the way they make use of ICTs within they everyday functioning. The process of alignment is a complex and dynamic process that influences how local governments deal with ICT. This needs to be further examined in order to increase the understanding of how alignment comes into practice.

Acknowledgments

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