# Innovating the delivery of individual services within Flemish cities

# Inventory of ICT–driven heterogeneity

> Working paper

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### Nederlandse managementsamenvatting

*In deze paper beschrijven en analyseren we de bevindingen van een verkennend onderzoek over de veranderde individuele dienstverlening in twee Vlaamse centrumsteden. Met het concept 'individuele dienstverlening' (zie Hoogwout, 2010) verwijzen we naar de rol van de stedelijke overheid als dienstenaanbieder (zie bijvoorbeeld: Hiemstra, 2003): "Onder [individuele] dienstverlening vallen contacten waarbij de gemeente informatie verstrekt over bijvoorbeeld openingstijden, een subsidieregeling, de belastingaanslag, afvalinzameling of te volgen procedures bij een vergunningaanvraag; een klacht of melding afhandelt over bijvoorbeeld de openbare ruimte of het gemeentelijk optreden; een transactie uitvoert zoals het verstrekken van een hulpmiddel aan gehandicapten of het verstrekken van een uittreksel uit het bevolkingsregister.".*

*Het doel van dit paper is meervoudig: het exploratief beschrijven van veranderingen op het vlak van de individuele dienstverlening; een eerste identificatie van verschillen met betrekking tot 'de context van verandering', 'het object van verandering', 'het veranderingsproces' en 'de evaluatie van de verandering' voor beide steden; en het identificeren van verklarende factoren. De analyse is gebaseerd op een interview met een leidinggevende ambtenaar in beide steden en een documentenanalyse.*

*In centrumstad 'A' treffen we een omvattend veranderingsproces aan: de organisatiestructuur en de ICT-huishouding van de stad zijn simultaan object van verandering in een organisatiebreed veranderingsproces. De front en back office van de stad werden fysiek en technologisch gesplitst, een organisatiebreed multikanaal dienstverleningsconcept is ontwikkeld en wordt stelselmatig geïmplementeerd. De integratie van de individuele dienstverlening vindt plaats door de implementatie van onder meer een klantencontactcenter en een persoonlijke internetpagina. De ICT-gerelateerde veranderingen hebben betrekking op de implementatie van een 'mid office'. Dat is een geheel van softwarecomponenten die de communicatie tussen verschillende systemen moet faciliteren, statusinformatie moet genereren en een procesgestuurde afhandeling van individuele diensten moet mogelijk maken. Centrumstad 'B' kenmerkt zich door een reeks van geïsoleerde veranderingsprojecten op het vlak van de individuele dienstverlening; bijvoorbeeld: de implementatie van een*

*nieuwe website met aandacht voor een nieuwe productclustering en een procesgestuurde afhandeling van inkomende meldingen van burgers. Het ICT-departementshoofd plant de implementatie van een 'mid office'.*

*De context van het veranderingsproces in stad 'A' kenmerkt zich door een dominant 'managementteammodel', een 'rationeel planningsmodel' en een sterke positie van het managementteam. Centrumstad 'B' kenmerkt zich door een dominant 'schepenmodel' en 'een controlegerichte cultuur'. De positie van het managementteam is in 'stad B' nog niet verankerd binnen de organisatie. De politiek leidinggevenden mengen zich in operationele aangelegenheden. Deze stad worstelt met het opzetten van organisatiebrede veranderingstrajecten op het vlak van de individuele dienstverlening.*

*De beoogde veranderingen in centrumstad 'A' zijn radicaal maar worden stapsgewijs geïmplementeerd. Het veranderingsproces positioneert zich tussen een top-down en bottom-up aanpak. De betrokkenheid van de politiek en ambtelijk leidinggevenden is groot: ze zijn vertegenwoordigd in de projectstructuur. Externe actoren zoals consultants, dienstenleveranciers en burgers zijn betrokken partij. Weerstand binnen de organisatie wordt geneutraliseerd door intensieve communicatie vanwege de organisatietop en door de betrokkenheid van de uitvoerende medewerkers bij het veranderingsproces. De veranderingen in centrumstad 'B' hebben een incrementeel verloop. Er is geen organisatiebrede visie voor de individuele dienstverlening. Niet alle diensten zijn betrokken in de veranderingsprojecten. Het veranderingsproces verloopt op initiatief van de verschillende diensten in samenwerking met de ICT-dienst of op het initiatief van de ICT-dienst. De ambtelijke en politieke top faciliteren het ICT-departementshoofd met een 'ad hoc' veranderingsmandaat.*

*In stad 'A' beoordeelt de organisatietop het veranderingsproces, in termen van de beoogde doelstellingen, positief. Een aantal belangrijke veranderingen zijn effectief doorgevoerd, een basis voor een geheroriënteerde ICT-architectuur is gerealiseerd. Er is daarbij enerzijds sprake van gewenste effecten; bijvoorbeeld: efficiëntiewinst; en neveneffecten: een toegenomen gevoel van controle bij enkele uitvoerende medewerkers. In centrumstad 'B' beoordeelt de geïnterviewde medewerker de gerealiseerde projecten positief maar de aandacht voor de reorganisatie*

*van de individuele dienstverlening en het opzetten van veranderingstrajecten wordt als onvoldoende beoordeeld.*

*In het tweede deel van het paper analyseren we onze exploratieve bevindingen op basis van een 'neo-institutionele onderzoekslens' om interne en externe institutionele factoren te identificeren die de relevante implementatiecontext vormen voor de veranderingen op het vlak van de individuele dienstverlening.*

*De analyse levert volgende relevante externe institutionele factoren op: 'formele regels opgelegd door hogere overheden', 'het functioneren van de markt van ICT-dienstenleveranciers', 'interbestuurlijke e-government-projecten' en 'de mate van ondersteuning vanwege hogere overheden'.*

*Interne institutionele factoren hebben betrekking op: 'de aandacht van het politieke en ambtelijke leiderschap voor de organisatie van de individuele dienstverlening', 'het dominante managementmodel', 'de aanwezigheid van subculturen binnen de organisatie', 'de organisatiestructuur of het organogram', 'de mate waarin de organisatie strategische planning heeft omarmt', 'de mate waarin de organisatie vertrouwd is met het opzetten van projectmanagement', 'de organisatorische capaciteit' en de bestaande 'ICT-architectuur van de stad' (bijvoorbeeld: databeheer, toepassingen).*

*Het samenspel tussen deze institutionele factoren vormt onze focus in het verdere onderzoek.*

*Abstract*

*Flemish cities are setting up large scale reform trajectories to make their transactional service delivery more customer orientated, customer friendly and integrated. The implementation of new ICTs plays a key role in these innovation processes; there seems to be a great, technological deterministic, belief in the possibilities offered by for example mid office technologies.*

*In this paper, we explore and compare such innovation trajectories within two Flemish cities. We describe the context, the object, the process and the evaluation of change. Based on this inductive analysis, we reflect upon the dependent and independent variables that structure the processes of change. We make use of a 'neo-institutional theoretical lens' to identify relevant internal and external institutional factors that shape the implementation context for the organizational changes.*

*The analysis generates interesting findings. Whereas the external environment to a large degree functions as a stable variable, the heterogeneity between both cities is much more determined by the organizational 'path', i.e. the management model, capacities, subcultures, existing ICT-infrastructure, etc. Further research is needed as important questions remain unanswered. For example: does the mixed set of organizational, technological and cultural changes also actually produces the outcomes that were formulated in terms of both increased effectiveness and efficiency?*

# 1.  Introduction

All Flemish cities express the ambition to innovate the delivery of individual services[1] by implementing more customer orientated, customer friendly, integrated and efficient service delivery models. Their policy plans present projects to dismantle the silo-based functioning of departments (Bellamy, 2009) and the supply orientated nature of their service delivery that has resulted in a labyrinth of front office desks and information domains (Bekkers, 2001; Hartog, 2007).

In all those plans and projects, the role of new Information and Communication Technologies (ICT) is emphasized and realizing integrated service delivery is perceived as a case of radical change of ICT-infrastructure, organizational structure and culture. Especially the concept of the 'mid office' is considered to function as a technological mean to connect the front and back office systems (Rotthier, 2012). Flemish cities consider the 'mid office' systems as a problem solver.

We set up a research project that investigates the implementation of the proclaimed innovations: what is the relationship between the use of ICTs and innovations related to the delivery of individual services? To prepare the research design, we started an exploratory, descriptive, inductive and qualitative analysis in the 13 Flemish cities aimed at an inventory of ongoing and ICT-based innovations related to the individual service delivery. In this paper, we report about our explorative findings by presenting a comparison of two cities. For both cities, we describe, based on the checklist of Pettigrew, Ferlie & McKee (1992), the actual or planned innovations.

Despite the shared belief in Flemish cities in the need for an ICT-driven revised organization of the delivery of individual services and the fact that Flemish cities can be considered as stable and homogeneous cases on a large number of variables, we observe differences between Flemish cities with regard to the degree and the nature of innovation related to the

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[1]     Individual services differ from collective services as they are meant to serve one unit, i.e. one company or citizen instead of a collectivity of businesses and citizens. The administration that delivers the service has to be aware of who the individual receiver is and who receives and accepts the service. Examples of individual services are grants, permits, official documents,… (Hoogwout, 2010)

delivery of individual services. Two cities[2] are selected as two different cases[3]: 'city A' is widely considered as a very innovative city, while 'city B' generally is a more traditional managed city. For both cities, we organized an interview with a civil servant involved in the redesign of the individual service delivery and a policy document analysis.

The heterogeneity between cities that are quite similar from an institutional viewpoint but different in their ICT–practices, is the object of the inductive analysis reported in this paper. By identifying similarities and differences, we want to take stock of a first set of variables that explain the differences related to the above mentioned object of innovation. The framework that is under construction serves as an underlying analytical perspective to identify explanatory variables that influence the heterogeneity.

## 2. ICT–driven reforms of service delivery

### > 2.1. E-government and public individual service delivery: from front to back office

In this paper the focus is on how Flemish cities are using ICT as a means of innovating the delivery of individual services. These services can be defined as (Hiemstra, 2003): "(a) the interactions whereby the city provides information about, for example, the opening time, grants, taxes, the collection of debris, the procedures for obtaining a certain permit; (b) the registration and processing of a complaint or report about, for example, the public domain or the behaviour of civil servants towards citizens; (c) the execution of a transaction, for example, the delivery of borrowing materials for people with disabilities or an extract from the citizens register.".

ICT‐driven change of the individual service is studied in the 'e-government research community'. In the current imaging of the electronic government, the 'website' still dominates. The evaluation of e-government is reduced to the realized front office activities, whereby the website is considered as the

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[2]     The Belgian region of Flanders consists of 308 municipalities of which 13 municipalities are granted the title of a city.
[3]     For reasons of confidentiality, we label the cities as 'city A' and 'city B'.

manifestation of the front office desk where the electronic delivery of services takes place (Bekkers, 2008). The front office can be defined as "the interface between the organization and the customer or user. The front office contains the part of the process that 'processes' customers and is the part that the customers directly 'experience'" (Johnston & Clark, 2001). E-government research has therefore focused on output indicators such as the evaluation of the number of digitized front office services. Peters, Janssen & Van Engers (2004) state that "Our analyzes shows a messy picture on the measurement of e-government. Many measurement instruments take a too simplistic view and focus on measuring what is easy to measure.".

The focus in the cities on digitizing public front offices puts pressure on the functioning of government agencies' back offices "that receive and process the information which the user of a service enters in order to produce and deliver the desired service. This may be done completely manually, fully automatically, or by any combination of both." (Milward et al., 2004). From a combined intra-organizational and inter-organizational perspective, whereby several departments in the city are relatively autonomous entities in the city administration, this is characterized by the evolution towards integration and coordination of organizational providers into [integrating] service delivery networks (Provan & Milward, 2001). Such reforms are characterized by the ambition to connect the quasi-autonomous information chains within or between single public organizations in order to transform, optimize and integrate front office interactions between citizens and companies (based on: Bekkers, 2005; Rhodes, 1997). Service provision in networks is likely to fail if the back office information systems of the public agencies are not properly integrated (Janssen, 2010). Hence, a typical characteristic of this type of networking is the use of (joined-up created) information and communication technologies (ICT).

## > 2.2.   A descriptive exploration of two Flemish cities

In this section we start with a description of the ongoing innovations related to the delivery of individual services in two Flemish cities. The exploratory analysis and this section is based on the checklist of Pettigrew et al. (ibid.).

The checklist serves as a conceptual framework to study organizational changes. It helps us to classify variables in the processes of ICT-driven changes of individual service delivery. It is composed of four dimensions of change: the context, the content, the process and the evaluation of organizational change. The different dimensions interact with each other as depicted in figure 1.
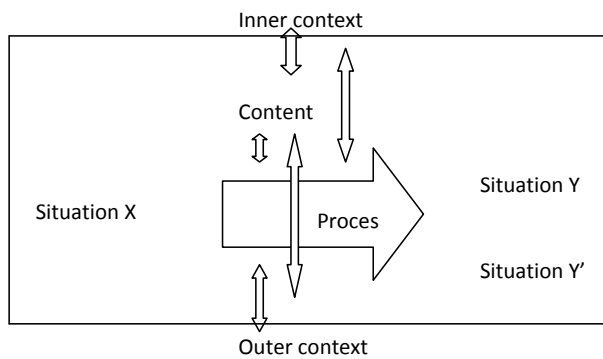


**Figure 1: a conceptual model for change (Pettigrew et al., ibid.)**

The first dimension is the context of change and refers to the inner and outer context. The inner context is related to the degree of openness of an organization to allow changes. The outer context refers to the historical, social, economic, cultural and political environment surrounding organizations. We analysed the general context by questioning the cities' civil servants about the motives and the external pressures that lead to (planned) innovations of the individual service delivery and the history of the city administration, which helps us to understand the path dependency of these large scale reform trajectories.

The second dimension is the content of change and refers to the type of change, the objectives of change and the target group. We took stock of the content of ICT-inspired changes of the individual service delivery. We therefore analysed the (a) object of change, (b) the type of change in terms of its incremental-radical character, (c) the unit of change (department, the organization as a whole, etc.), (d) the objectives of the change and (e)

the degree to which the change is object of a strict implementation plan / time table.

The third dimension related to the processes of change. The process can be split up in several phases: the planning and preparation of organizational change, the start of the change process, the implementation phase and the evaluation phase (see infra). Within each of this phases, we examined the change management by analysing the following variables: who are the involved actors in the process of change? Who steers and who is affected by the change? How are the actors involved in the change process? How is the communication about the change organised? Does the changes lead to resistance? Why is there resistance? How does the organization cope with this resistance?

The fourth dimension is related to the evaluation of change. This dimension relates to assessing the degree to which the formulated objectives and effects are realised (Y) and the existence of side effects (Y').

## > 2.2.1. 'city A'

### > 2.2.1.1. The context of change

In 'city A', the longstanding, stable political climate and the collaborative relationships between the major, the aldermen and the administrative leadership enabled a rational policy model. The management team, including the city secretary, the adjunct secretary, the financial manager and the heads of the city departments, is accepted by the political leaders as the management part of the implementation of the strategic plan. The organization embraced the 'management team model' that is based on a demarcation of the roles of politicians and managers but also on a close relationship in the daily management between both: this implies that politicians and public officials negotiate the strategic objectives of the organization. This specific 'city A culture' facilitates, as we would expect, the opportunity to leave the track of a departmentalized organization and to formulate and implement organization-wide innovations.

The organizational leadership has professionalised and increased its expertise: business process analysts have joined the organization, the organization has a long history of building up expertise in project based working and both the political and administrative leadership are equipped with management experiences in the private sector.

All this leads to an organization that has already proven its capacity to set up radical change trajectories that are based on clear policy plans, fine-tuned project structures, and top-down-implementations. This profile comes near to what could be labelled as the 'rational policy model'.

The need for innovating the organizational concept of the delivery of individual services gained momentum during the design of the policy agreement after the municipal elections of 2006: this policy agreement was the impulse for a new strategic plan. The city administration has expanded incrementally and became characterized by a large number of pillarized physical front office desks with separated and isolated back offices, each responsible for a limited number of services and with a supply orientated delivery of services.

The pressure to change the organization arose mainly from within the organization. Both the administrative and political executives of the city became convinced of the need for a change program related to the delivery of individual services. Few really external pressures that urged for a radical change were mentioned: there were a few complaints of citizens about a deficient delivery of services but the citizens' satisfaction about the city's delivery of services, measured by the Flemish city monitor, was the highest of all Flemish cities. A kind of mimetic played a role: there has been a clear influence of innovation trajectories and especially those in Dutch cities. Also coercive isomorphism plays a role: some elements related to the change of individual service delivery, such as a complaint and management system, are legally obliged by the Flemish oversight authority.

> *2.2.1.2. The content of change*

An organization wide change program was announced in the 'policy program 2008-2012'. The policy program paid attention to the organization of the

'service delivery' and formulated the strategic and operational objectives of the program. The objective of the program is twofold: increasing the internal efficiency and increasing the quality of service delivery by implementing a more customer-orientated and integrated delivery of services. The program implies a complete transformation of how services are delivered by the city. The baseline for the new service delivery concept is "The city answers!": each question, complaint, demand,… of a citizen towards the city's administration has to be answered fast and by using the same standards of quality, independently of the civil servant, the service delivery channel or the organizational unit that interacts with the citizen. The program has multiple components.

A new organizational structure physically and technologically splits up the front and back offices by the establishment of a department for service delivery, that is composed of two entities: a section responsible for the delivery of individual services, that integrates all parts of organizational units that are involved in service delivery and a section responsible for the development of individual services.

The splitting up of the front and back office, should lead to increased efficiency. The front office personnel has to take care of all the direct interactions with the citizens and has to be staffed with generalists that have a broad knowledge of the cities products and can deal with a broad range of citizens' reports, demands for services and complaints. Back office personnel has to focus only on the processing of the complex services, complaints and reports made by citizens and consists of specialists that each have their specific body of knowledge and that focus on their own tasks. Their interactions with citizens should be limited.

The front office of the city is being replaced by a new multichannel service delivery concept consisting of physical, digital and telephonic service delivery. The multichannel service delivery concept has to succeed in a more integrated delivery of services.

Concerning the physical front office, the city is implementing and building a new physical 'desk square' in its administrative center in which the former and large number of existing physical front desks are concentrated and integrated into one physical 'information and welcome desk', a 'fast front

desk' for the less complex products of all the city's departments and more specialized 'theme desks' for the delivery of the more complex services.

For the digital front office, three objectives were formulated and are (being) implemented at the moment. First, the city developed a new website on which information about the city's products is concentrated from the perspective of the citizens. Second, the intake of all the city's products is being digitized. Third, the city has implemented a personal internet page that is work in progress and ultimately has to succeed in a full digital integration of the online service delivery for each citizen. More digitized interactions have to increase efficiency as less personnel is needed to staff the front office.

The third channel is the implementation of a telephonic client contact center that is responsible for the integrated intake of services, complaints and reports of citizens made by telephone, letters and/or e-mail. The client contact center serves as an integrated information front desk for answering questions with regard to the city's services and the status of ongoing procedures for permits, grants and other services.

Although not mentioned by the respondent, a fourth channel can be identified that relates to 'third parties'. Although this channel is a clear exception, we notice that for a number of services, the intake of the service is being replaced outside of the city's front office. Citizens of the 'city A' must for example no longer visit the city's front office to declare the birth of children. This declaration can be made directly by the parents in the hospitals that operate in 'city A'.

The functioning of the back offices is object of change too: the concept of the program foresees a digitized and automated process steered organization and delivery of services. The program is not only aimed at digitizing the intake of services, complaints or reports. Also the processing of services is being digitized. By digitizing the service delivery processes, the city wants to reduce its manual work, increasing the re-use of digitized data related to for instance citizens and companies' identification data, reducing the lack of errors, etc. The ultimate objective is to succeed in a complete digital steered delivery of services that allows a minimum of human interference, in favor of a proactive and efficient delivery of services that reduces the demand of data towards citizens and leads to a

more coordinated delivery of services. By establishing digitized process workflows, the city wants to increase the coordination between different back office entities involved in the processing of an incoming reports, complaints or a demand for a service.

The ICT-infrastructure needs to be aligned with the objectives of the program. The city decided to replace its existing ICT-infrastructure that was characterized by separate isolated applications that did not communicate with each other, working with and using different databases. Here the concept of the 'mid office' has been introduced as a crucial tool to realize those ambitions. The mid office system has several functions. First, the systems offers an information broker to establish a digitized transfer of process, metadata, status information between the front and back office systems by means of 'plugging in' all these systems' applications to the mid office. As such, the mid office forms a technologic layer between the front and back office systems. Second, the mid office enables the central management of metadata such as citizens' and companies' identification data. Third, the mid office provides the organization with a set of software applications, for example: a dossier management system, a document management system, a digital archive to store dossiers electronically, that has to allow the digitized processing of services. (see infra).

The program is a long term program that follows the cycle of strategic management. In the annual policy note, the operational objectives related to the program are described. The program started in 2006 with the measurement and the monitoring of the number of visitors at the physical front office desks, the number of website visitors, etc. Thereafter, the city made an inventory of the city products and the service delivery processes were being described. The next step was the appointment of the city's products to different service delivery clusters and the formal organization structure was adapted. Those measures were part of the preparation phase of the program and allowed the start of the implementation of the multichannel service delivery concept and the digitalization of the service delivery processes. These changes are implemented gradually at the moment (see infra).

The cultural changes are more difficult to identify but the willingness to change the organization culture is clearly present, at the political and the management level. This willingness is for instance reflected by the political

executives that emphasize the need to operate from the perspective of the customer and by internal staffing reforms to equip the multichannel front office concept with customer friendly civil servants.


> ### 2.2.1.3. The process of change

Many actors are involved in the implementation of the new service delivery concept. The administrative and political executives of the city prepared and formulated the new vision and strategically steer the program. At the operational level, an internal 'project bureau' steers the reform, consisting of several heads of departments, the communication officer and the adjunct secretary. Next to the project bureau, there are a number of working groups based on executive employees that prepare and follow up the operational projects of the program. Finally, there is the 'ICT consultative platform' composed of business process specialists, civil servants of the ICT-department and the section responsible for the development of individual services. The platform is responsible for the ICT-related aspect of the program: the purchase of new ICT-applications, negotiations with ICT-service suppliers, the implementation of new mid office components, preserving the ICT-vision of the program,…

During the formulation of the new service delivery concept, the affected target group, i.e. citizens and companies were asked to give their considerations about the new service delivery concept during a series of focus groups and interviews. At the moment, the city plans new feedback moments and wants to start also with client satisfaction monitoring.

An external consultant firm is involved in the change process but is not the dominant party. The city managers want to enforce the internal knowhow and expertise of the organization by making use of the services of this external consultant but by no means they want the external consultants to steer or taking over the change process. An important example of this attitude is the design of the technological innovations. The mid office is not a readymade set of ICT-applications. The city ordered the ICT-service supplier to deliver a tailor made mid office system based on 'flexible components' that allow the city to digitize their service delivery processes through the use of a web form designer and a process designer. The will to

increase the internal expertise of the city is otherwise also demonstrated by the appointment of three full time business process analysts in the city administration that have to facilitate the digitalization of individual service delivery processes and were trained by the consultant.

From the beginning of the change process, the administrative and political executives have thoroughly informed all personnel about the plans and the state of affairs of the program. Communication, deliberations and negotiations between the administrative/political leaders and the executive employees are considered as key factors for success. The reform takes a position between a bottom-up and top-down approach. For example: for the development of the inventory of all the city's services, the departments were asked to describe all their products. This resulted in an inventory of about 400 city's services and led to a bottom-up established proposal of six demand orientated clusters of service delivery: 'Living and welfare', 'Housing and spatial planning', 'Entrepreneurship and work', 'Leisure time', 'Living environment', 'Education and upbringing' that structure the physical and digital front office model. Based on these proposals, the project bureau and the management team formulated a second proposal that was again negotiated with the departments and led to a definite clustering of the city services.

Such interactions should avoid resistance but, naturally, some forms of quite moderate resistance did eventually emerge from time to time. For example, some employees perceive the mid office applications as Big Brother systems. Also the definite classification of the city's services into new clusters led to resistance: some city departments were unwilling to give up their ownership to deliver certain services. In some cases of more strong resistance, the organizational leaders used their hierarchical power but avoided a strictly hierarchical top-down approach to counter opposition. The organizational top did for example not force any members of staff to work within the client contact center but offered its personnel the free choice to nominate themselves to join the new section responsible for the delivery of individual services. This will also be the case for the new physical front office desks: the different front office desks can freely decide about the profiles they need and the type of capacities and the type of personnel they want for the front desks and they have the autonomy to organize the functioning of the front desks in their own way. After the

selection of personnel for the front office channels, a series of training are and will be organized.

> *2.2.1.4.  Evaluation of the change process*

The change process is ongoing. At this moment, the client contact center is implemented but is not ready to function as a first line front office for the intake of all the city services: its scope is being gradually expanded. The new physical desk square is being constructed at the moment. Concerning the digital front office channel, the city succeeded in increasing the number of services of which the intake can be executed online.

The combined top-down and bottom-up approach as sketched above is also used to implement the multichannel service delivery concept. By means of intermediate results, the administrative and the political top of the organization hope to stimulate the city's department to fully align to the service delivery concept. As the respondent state: "*The client contact center opened in 2011 and about 38 percent of all incoming demands are being processed by the center. The departments start to perceive these efficiency gains and now formulate new proposals to further expand the scope of the client contact center.*".

The radical character of the change program has now become more incremental. The full implementation of the integrated multichannel service delivery concept depends on the further alignment of the ICT-infrastructure with the program concept. The mid office software has been bought in 2010. The implementation started in 2011. A successful connection of the front office systems to the mid office leads to a first number of completely digitized services, i.e. the intake, processing and the delivery of these services. It concerns those service delivery processes that can be delivered without the interference of specialized back office applications, for example: the processing of a complaint. For those services, citizens can already consult the status of their complaint or report on their personalized internet page. Other processes that are not processed by means of specific back office applications are now being further identified, analyzed, optimized and digitized into the mid office components by means of the front form and process designer. The digitalization of the processes of

service delivery evolves gradually and is challenging. Each process demands the analysis, optimizing and digitizing of the processes: "*A process steered delivery of services is very difficult. It is a case of trial and error. It means programming fields again and again. There is great need for expertise in this domain.*"

The implementation of the multichannel service delivery is not realized yet. The connection of the back office systems by the mid office is now at stake in the change process. The city follows at the moment a double strategy.

First. Existing and well-functioning back office applications remain in use but have to be connected to the mid office system in order to succeed in communicating their status information about ongoing processes. Connecting the back office applications to the mid office broker implies the willingness of ICT service providers (see infra) to open up these applications and this often imply high sunk costs. For example, the department of Housing and Spatial Planning uses a Geographic Information (back office) System (GIS) in which a number of processes are integrated. In order to obtain status information about the ongoing processes within this application, a connection was made that costs 75,000 euros.

Second. New back office applications will be bought to replace back office applications that cannot connect to the mid office and that are used for a limited number of processes. For example, the city has a number of fragmented and closed back office applications whereby each of these applications are used for only a limited number of service delivery processes: the exploitation of cultural facilities, the selling of intakes, the management of ticket reservations, ...  The city wants to replace these separate applications by one new back office application that manages all these processes and that is able to connect to the mid office.

Although the program concept is not fully implemented, two effects are already mentioned. First, the city is confronted with a sharp increase of complaints and reports from the citizens as the intake of complaints and reports can now be easily executed via the city's digital front office. A second effect relates to increased efficiency. Although the city has not increased its number of civil servants for the realization of the concept, the city is able to take care of the increased demands for services without extra personnel. For example, the respondent refers to the functioning of the

client contact center that succeeds in taking care of demands, questions and reports from citizens in the first line without forwarding those demands, etc. to the relevant back offices. This seems to have an effect on the efficiency of both the front and the back office. Also, one unintended effect can be identified as some civil servants experience increased control through the use of some of the mid office applications.

## > 2.2.2.  'city B'

### > 2.2.2.1.  The context of change

In 'city B', the city management model reflects the 'aldermen management model': the aldermen and especially the major are the leaders of the city administration: they steer the organization, even at the operational level, by bilateral contacts with the heads of departments. They do not fully recognize the formal role of the management team, i.e. the city secretary, the adjunct secretary and a number of cluster coordinators, to steer the development of the city administration.

The interviewed civil servant refer to a city administration that is relentless for change. The bureaucratic character of the organization seems to dominate the routines and the culture, in terms of its emphasize on control and on the primacy of the politics. This is also the case for innovations related to the delivery of individual services. Changes have till now remained scarce and limited in scope. The need however for a revised, i.e. a more customer oriented and integrated delivery of services is acknowledged by an increasing number of administrative and political executives and operational employees. This resulted in a number of planned projects related to the redesign of the delivery of individual services. These initiatives emerge bottom-up as well as top-down. Especially, the head of the ICT-department seems the innovator within the organization. He is inspired by initiatives from other Flemish and Dutch cities.

We face a rather clear example of an incremental change process that is reflected by the art of 'muddling through'. At the moment, there is no organization-wide accepted vision about how to reorganize the delivery of individual services and the top of the organization is quite passive on this point. A number of isolated projects are set up by bottom-up or top-down initiative.

A first top-down project relates to the ambition of building a new administrative center in the city center. Today, 'city B' counts over more than 40 different units located at about 50 different locations in the city. Following the head of the ICT-department, the new administrative building offers the opportunity for reorganizing the physical front office desks of the city in the new building but precise plans for such a reorganization face significant delays. Necessary perceived structural changes, such as clustering different organizational sections into service delivery clusters, that allow physical integration of front office desks have not yet started and face resistance.

A second project relates to the implementation of a digital complaint and report management system that has been set up to take care of incoming mails, physical post and telephone calls related to reports and complaints from citizens. This has led to a more centralized 'reporting point' responsible for the intake of incoming mails, etc. Other departmental 'reporting points' remain in use. Today, citizens or companies can contact the 'road phone' in case of problems with public roads, etc.; the 'environment phone' in case of problems related to, for example, illegal dumping of waste and the new general 'reporting point' for all other types of reports, complaints and demands. Although the three 'reporting points' work together, i.e. through the use of one software application that supports all 'reporting points' and in which the intake, processing and the completion are coordinated, the head of the ICT-department considers the project not as a complete success: "*There is no central reporting point. I would have centralized more. Now, there are still three reporting points and citizens.*".

A third project relates to the online service delivery. At the moment, the implementation of a new website is at stake. The existing website reflects a

supply orientated service delivery. The goal is to restructure the information about the city services from the perspective of the citizen. In order to realize the new website, the city's departments were asked to make an inventory of the services and products they deliver. This resulted in a first partial online product catalogue that is available on the website and the intranet. The head of the ICT-department has also two other ambitions: more digitized intakes of services by the citizens and the development of a personal internet page that contains personalized information and enables each citizen to follow-up his/her pending demands, requests and complaints. Those objectives however are far from realized. The respondent refers to a small number of pillarized online front office modules that are implemented and that allow the digital intake of certain services but that are only connected to their corresponding back office application.

The disadvantage of the largest part of the existing online front office remains its lack of a digital connection with the back office systems: while citizens can execute the intake of several of the city's services online, the lack of a digitized connection between front and back office implies manual work for the back office employees: they have to print out the forms from the front office system and retype the data into their back office systems. For some services, citizens have to print the forms and send them manually to the city administration. The respondent states: *"The most difficult point is the back office with its diversified set of applications that need to be opened."*.

A number of ICT-related innovations should allow a change of individual service delivery. The head of the ICT-department formulated the objective to implement a mid office system that consists of three major components: a Customer Relationship Management (CRM) system, an identity and access management (IAM) system and a service bus. The project emerged bottom-up and is a coproduction between a limited number of departments and the ICT-department but is still in an early stage.

The CRM-system is needed in order to realize a more central metadata management: whereas each of the city departments now uses its own databases with their own frames for identification data or metadata about citizens, companies, etc.; the CRM-system has to centralize these metadata and has to increase the authenticity and the correctness of the metadata by connecting the central governments authentic information sources, for

example: the Crossroads Bank for Companies to the CRM-system of the city. The CRM-system must enable an organization-wide metadata-management: the different departments will be assigned, depending on their tasks, function, their services, with a certain 'role' that allows them to consult certain data, adapt existing data and register new information in the CRM-system in order to obtain a centralized overview of ongoing interactions with citizens.

In the long term, the CRM-system should also imply a step forward to a more personalized service delivery for the city customers: different customers, such as companies, suppliers, citizens will also be appointed different roles by the CRM-system. Combined with the implementation of an IAM system, citizens will be able to log in on their personalized internet page on the city's website. The IAM-system will detect which citizen logs in on the website and then scan the CRM-system for his status (e.g.: a supplier, a member of a the library) that determines the services the citizen is entitled to use.

In order to realize the personalized web page (and other front office systems), the mid office will have to succeed in connecting the back office application to the front office systems. Although the city is planning to implement a service bus, the services bus will have a 'limited' scope. It has to enable the transfer of metadata between the online front office, the IAM system, the CRM-system, the central governments authentic sources and the back office systems of the city. It is a technological asset to transfer metadata from one system or application to another. The service bus will be limited to data-driven transfer and to data-matching: this means that the service bus 'only' supports the organization-wide management of metadata by transferring the changed metadata in central governments' authentic service to the CRM-system, and the back office applications databases using these metadata. The service bus will not transfer status information or income service request messages.

> *2.2.2.3.   The process of change*

Innovations or plans related to the delivery of individual services are increasing but are mainly related to ICT-changes without organizational

structural changes. Fully implemented projects have remained scarce and an organization-wide vision on service delivery lacks. The respondent states: *"It mutters, not because we do not want to but because we don't know how to start these changes."*. The city has no organization wide vision or strategy about how to reorganize the delivery of individual services. There is no clear time table for changing the delivery of individual services. Although the council of the major and the aldermen has asked the management team and the administrative executives of the city to formulate a plan for the reorganization of the individual service delivery, such a plan has not been formulated.

The political and administrative leaders do not steer the change projects related to the individual service delivery. The respondent claims that the politicians are not interested in these projects as their visibility towards citizens is low. The management team is being referred to as unable to steer the organization: it lacks informal authority: *"We have a 'dominant' major who does not acknowledges the role of the management team to steer the internal organization. There are a lot of bilateral relationships between the administrative units and the major."*

The initiatives that have been launched or that are planned have been set up by the separate departments of the city. Especially, the ICT-department takes the lead in formulating and implementation these projects.

Target groups are sometimes involved in these projects. This is the case for the implementation of the website. A survey was put online in order to scan the needs and perceptions of the citizens about the functionalities of the new website.

There are at the moment no external consultants involved in a reform for the individual service delivery. The city council of the major and the aldermen hesitates to attract such external consultancy firms.

The head of the ICT-department considers himself as the 'champion' in the organization for setting up the ongoing projects. He scans the organization for possible opportunities, starts deliberations with departments in order to obtain support and negotiates with the management team, the aldermen and the major to obtain a formal mandate. Two types of projects can be identified.

Some projects start on the initiative of the head of the department of ICT that convinces the management team and the political executives for a need for change. This was for example the case for the project related to the implementation of a 'central reporting point'. The Flemish government, that is the oversight authority for Flemish cities and municipalities, obliged the cities and municipalities to set up such a system. The cities and municipalities were free to decide about the operational characteristics of the system. In 'city B', the council of the major and the aldermen and the management team first wanted to register the incoming complaints and reports into an excel sheet. The head of ICT succeeded in convincing them to broaden up the project by implementing the 'reporting point' and its supportive software system.

The project encountered severe resistance of the involved organizational units. They were unwilling to give up their autonomy about their working processes. The head of the ICT-department succeeded in neutralizing this resistance by means of an intensive deliberation with the involved departments and by convincing them of the need for change. He showed the surplus of the system in terms of a reduction of the time needed to process incoming reports and complaints. He organized and gave training about the complaint and report management system. If departments remained unwilling to cooperate, he forced cooperation by using the formal mandate of the management team and the council of the major and the aldermen.

In other projects, the interactions between the head of the ICT-department and other department leaders were crucial for implementing projects. This is for example the case for the planned project related to the mid office. Some departments wanted to start sending 'news letters' to citizens. The head of the ICT-department considered this as an opportunity to change the management of metadata. He states: *"We want to support the city's departments in their attempts for setting up change trajectories but we also want to go further than their needs. We considered the sending of newsletters as an opportunity for implementing a structured data-model."*. In order to succeed in this attempt, the head of the ICT-department contacted four departments that he considered as willing to change their data management radically and asked and obtained a mandate from the management team. The project of the mid office is not an organization wide project. The head of the ICT-department wants to start with these

departments and, when successfully, he wants to broaden the scope of the project to other departments.

> *2.2.2.4.  Evaluation of the change process*

The degree of organization wide innovations is low in the 'city B'. Each department is still responsible for delivering its own services. For example, different 'reporting points' have remained in place. An organization-wide concept for the delivery of individual services has not been formulated.

This however does not mean a complete stand still. Projects steered by the head of the ICT-department lead to incremental changes. A 'central reporting' point has been implemented and both the front and back office processes for the intake, processing and settlement of the reports are successfully coordinated between the different reporting points. Also, the website has been renewed with an online information catalogue.

Some planned innovations hold the potential for a radical change, for example: the new administrative building but face problems or delays. Also important is the planned project related to the mid office. This project has the potential to lay the foundation for a revised ICT-infrastructure of the city and a change of how both the front and back offices of the city function and are connected to each other.

# 3.   A comparison of both cases: lessons learned

> **3.1.   Comparison**

Table 1 compares our descriptive finding for both cities.

## Table 1: comparison of both cities

| | 'city A' | 'city B' |
|---|---|---|
| **Context of change**<br><br>- *general characteristics* | Dominance of the management team model. Constructive relationships between the political and administrative leaders. The organization is steered from an organization-wide perspective. Dominance of the rational model of strategic planning. Strong position of the management team. The city has proven its ability to set up radical change trajectories | Dominance of the aldermen model, dominance of the major. The political leaders steer the internal organization via one-to-one linkages with the administrative units. Weak position of the management team. Dominance of the bureaucratic model: focus on control and the primacy of politics. The city struggles to set up top-down coordination and organization-wide change trajectories |
| - *internal drive*<br>- *external pressures / influences* | Mainly internal drivers Perceived pressure from citizens Dutch cities that have innovated their individual service delivery Some pressure of the Flemish oversight authority to implement a complaint and report management system. | Mainly internal drivers Dutch and Flemish cities that have innovated their individual service delivery Some pressure of the Flemish oversight authority to implement a complaint and report management system. |
| **Content of change**<br>- *what is object of change?* | - organization structure: splitting up of front and back office<br>- organization structure: broader clusters of services<br>- front office: a new integrated multichannel front office model: integration of physical front desks, integration of online service delivery | - front office: product information on website, 'central reporting point' Towards integration of physical and online service delivery?<br>- back office: digitalization of few processes related to the processing of incoming reports, complaints |

| | | |
|---|---|---|
| ICT-innovations | into a personalized internet page, a client contact center<br>- back office: digitalization of all service delivery processes, new applications<br>mid office:<br>- messaging status information, process data, metadata between the new front office with the back offices<br>- enabling organization-wide coordinated and integrated service delivery for the three service delivery channels<br>- digitalization of service delivery processes via a set of applications<br>- organization wide data management<br>- new back office applications | mid office:<br>- enabling an organization wide metadata management<br>- enabling centralized access for citizens to their personalized internet page (in the long term)<br>- data-driven transfer between a number of front and back office systems |
| strategic objectives | organization-wide vision<br>integration of front office<br>increasing efficiency in the back office | unclear: no organization-wide vision<br>operational objectives: restructuring information on the website, integration of 'reporting point' |
| - radical / incremental<br>- unit of change<br>- implementation plan | from a radical towards an incremental change<br>the organization as a whole<br>program based: interlinked projects with strategic and operational objectives | incremental change<br><br>organizational units<br><br>project based: separate projects |
| **Process of change**<br>- change approach<br>- who steers?<br>- political involvement | top-down / Bottom-up<br>the administrative and political top<br>high | bottom-up<br>the head of the ICT-department<br>low: facilitating with a formal mandate |

| | high | low: a lack of authority |
|---|---|---|
| *- involvement of the MAT* | | |
| *- involvement of executive employees / departments* | high: a fine tuned project structure | high but not all sections are involved |
| *- involvement of external parties* | yes: consultants and ICT service developers | no: consultants / Yes: ICT service developers |
| *- involvement of citizens* | yes | no |
| *- resistance* | yes | yes |
| *- how is dealt with resistance* | communication, deliberation, negotiation, training and formal authority | communication, deliberation, negotiation, training and formal authority |
| *- communication* | intensive top-down communication | Intensive communication by the ICT-department |
| **Evaluation of change** <br> - Are the formulated objectives achieved? | - important components of the program have been successfully implemented, some are being implemented at the moment <br> - a foundation for radical change is established <br> - effects: increased efficiency and complaints and reports made by citizens | - a number of projects are successfully implemented <br> - some projects are being implemented at the moment |

Our descriptive and very explorative comparison of two Flemish cities gives us an empirical view on ICT-driven changes of the individual service delivery in two Flemish cities. It is our objective to use this exploration as a first step towards an inventory of explanatory variables that could possibly help us to explain the similarities and differences between both cities.

## > 3.2. The dependent variables: lessons learned

We choose to define 'change' in this paper as "*an observed difference over time in an organizational entity on selected dimensions*" (Van de Ven &

Poole, 2005) whereby change is represented as a dependent variable that is explained with a set of independent variables. By using this perspective, the dependent variables are related to characteristics of the individual service delivery of Flemish cities that have or will change(d) over time. These changes can be represented as the transition from situation X towards situation Y or Y'. Y refers to the degree to which the desired change has been realized whereas Y' refers to the actual new situation that can be similar or different from Y.  (see Pettigrew et al., ibid.)

An analysis of  the desired changes in both cities gives us a first view on the dependent variables.

The first variable can be labeled as 'an effective delivery of individual services'. Both cities perceive the initial delivery of individual services as ineffective. Effectiveness is being achieved when the desired effects are realized. The cities perceive the desired effects as the establishment of a demand orientated and a customer friendly delivery of services that generate effects such as a decrease of administrative burden, etc. The constituent is seen as a consumer. The respondent of 'city A' mentions: "*We developed a new vision in which a client orientated delivery of services takes a central position.*". In 'city B', we found several quotes: "*We have to think otherwise, we have to think in terms of customers.*", "*The new administrative center should carry within it client friendliness.*",  "*The focus of the website is on client friendliness.*". This first dependent variable relates to several outputs (defined as the operational objectives) and outcomes (defined as the specific objectives) (see table 2).

**Table 2: dependent variable 'effectiveness'**

| Dependent variable: An effective delivery of individual services | Realizing an effective delivery of services by realizing the following outputs: | Realizing an effective delivery of services by realizing the following effects / outcomes: |
|---|---|---|
| | Concentration of physical front office desks | - Increasing customer satisfaction |
| | Integration of services in to a reduced/one physical, digital and telephonic front office desks | - Reducing |

| | An increased number of online services and transactions | administrative burden |
|---|---|---|
| | An increased number of services delivered by third parties that find themselves more closer to citizens | - Increasing transparency of the services |
| | An increased number of proactive delivery of services | - Freedom of choice related to the channel of service delivery |
| | A Decreased demand for data towards citizens | |
| | Restructured information about services from the perspective of citizens | - Increasing the correctness of the delivered services (e.g. documents) |
| | An increased coordinated delivery of services by increasing back office cooperation | |
| | An increased re-use of authentic information | |
| | Citizens can consult the status of pending transactions by means of a mid office | |
| | … | |

Second, the changes reflect a willingness to deliver individual services more efficient. Here, the constituent is seen as a tax-payer and the government that benefits from increased efficiency. Outcomes of increased efficiency refer to cost reduction, resource rationalization, greater productivity, etc. (Millard, 2008). The ongoing changes in both 'city B' and 'city A' reflect a willingness for a more efficient delivery of individual services. The second dependent variable can be formulated as 'an efficient delivery of individual services'. Table 3 summarizes examples related to outputs and outcomes that are connected to this dependent variable in both 'city B' and 'city A'.

**Table 3: dependent variable 'efficiency'**

| | Realizing an efficient delivery of services by realizing the following outputs: | Realizing an efficient delivery of services by realizing the following effects/outcomes: |
|---|---|---|
| **Dependent variable:** An efficient delivery of individual services | Increasing the digital intake of individual services made by citizens | - Reducing costs |
| | Integrating front office entities into one front office section | - An equal number of employees that deliver and process more services |
| | Reducing the number of interactions between back office personnel and citizens | |
| | Reducing the interference of humans in the | - Decreasing manual |

| | processing of services by digitizing service delivery process | work |
| | Organization wide management of metadata | - Reducing the number of mistakes made during the processing and delivery of services |
| | Analyzing and optimizing business processes | |
| | Establishing a data, process and ICT infrastructure that allows to share data between front and back office systems | |

In both cities the innovation processes has not come to an end. In fact, both cities find themselves in a too early stage to assess the degree to which the innovations led to all of the formulated and desired outcomes. In 'city A', the program is not fully implemented and in 'city B', a number of projects are still in an early stage of preparation. A number of 'intermediate' achievements can however be identified for both cities whereby 'city A' can be considered as the most innovative. The achievements can be considered as intermediate outputs that contribute to the realization of the overall objectives to increase the effectiveness and efficiency of the individual service delivery.

Table 4 summarizes the intermediate achievements for both cities.

**Table 4: comparison of planned and achieved outputs**

| 'city A' | 'city B' |
|---|---|
| - Integration of all front office sections into one organizational section | / |
| - Broader clusters of services | - |
| - An organization wide client contact center | - A central reporting point next to two other reporting points |
| - Implementation of an integrated and concentrated number of physical front desks (being implemented at the moment) | / |
| - Digitalization of the intake of individual services on the website | - multiple pillarized digital front office modules / downloadable forms |
| - A personal internet page with status information about a number of services | - Planned/desired in the long term |

| | |
|---|---|
| - Digitalization of a number of service delivery processes | - Digitalization of processes related to the reporting system |
| - A new website with information about the city's products | - Information about the city's product on the website |
| A mid office system that makes it possible to:<br>- message status information, process data, metadata<br>- organize an organization wide coordinated and integrated service delivery<br>- digitize service delivery processes<br>- implement an organization wide data management | Plans to implement a mid office system for:<br>- enabling an organization wide metadata management<br>- enabling centralized access for citizens to their personalized internet page<br>- data-driven transfer between front and back office systems |

## > 3.3. The independent variables: lessons learned

Our descriptive very inductive comparison of two Flemish cities allows a first inventory of explanatory variables that could possibly help us to explain the similarities and differences between both cities as described above. In order to obtain insights in these processes, we use elements of neo-institutional theory to conduct our search for explanatory variables.

Elements of institutional theory are derived from sociological and historical institutionalism. Krasner (1988) refers to the concept of *path dependency* as a mechanism that contributes to the sustainability of institutions. Within an organization, certain ways of working, thinking and acting have been established and institutionalized. These institutionalized practices will influence the way in which reforms are being set up: the history of the organization moulds the ongoing changes. The neo-institutional approach learns us that organizations are not a black box, that organizations have a history, an organization structure and culture. Certain ways of working, thinking and acting have 'institutionalized' within the organization: they have obtained a certain form and continuity (Vallet & De Rynck, ibid.). The neo-institutional theory is able to explain why innovations (partly) fail or succeed: reforms or innovations might be interpreted, by the members of the organization, as a threat towards their institutional identity (Boin, 1996; van Vliet, 2008) which leads to resistance.

A second element, borrowed from neo-institutional theory, is Dimagio & Powell's (1983) notion of institutional isomorphism that refers to an

organizational strive for legitimation by taking over elements from their external environment. Dimagio & Powell (ibid.) identify three mechanisms: normative isomorphism or the adoption of "*innovations because the scientific or professional society of which the organization is a member advocates the innovation*"; mimetic isomorphism or the copying of innovations from other organizations and coercive isomorphism or the use of formal and informal power to adopt an innovation (Korteland & Bekkers, 2007).

Our search for explanatory variables is based on the following questions:

- Which external variables influence the effectiveness and the efficiency of the individual service delivery of Flemish cities?

- Which internal institutional variables influence the effectiveness and the efficiency of the individual service delivery of Flemish cities?

### > 3.3.1. *Empirical findings: external institutional factors*

The external environment influences the efficiency and effectiveness of the individual service delivery in a number of ways.

First, we notice a number of variables that influence both 'city A' and 'city B' to start innovating their delivery of individual services. Interesting is that citizens put low pressure on Flemish cities in order to force them to innovate the individual service delivery. Both the cities of 'city A' and 'city B' reported few complaints from citizens. We notice however other external pressures that influence the adoption of innovations. The external pressures reflect processes of isomorphism, that is a *constraining process, that forces one unit in a population to resemble other units that face the same set of environmental conditions* (Dimagio & Powel, ibid.). We observe coercive isomorphism; for example: the development of the 'complaint management system' in all Flemish cities was forced by the supervisory regional Flemish government. Mimetic isomorphism is present in both cities as the innovators of both cities were inspired by similar innovations within other cities, also in the Netherlands. Second, external institutions influence the ability of

Flemish cities to produce outputs that have to increase the efficiency and effectiveness of the individual service delivery.

External institutions relate to formal rules (legislation, laws, …) that constrain certain aspects of the service delivery models that are being implemented; the digitalization of individual services and service delivery processes. Regional Flemish legislation for example affects the ability/feasibility of Flemish cities to digitize the intake and processing of service delivery processes. In the case of 'city B', the respondent for example referred to the fact that a number of forms cannot be digitalized and electronically transmitted because the forms need to be manually signed by the citizen. Legislation of the Flemish oversight authority and the federal government can be considered as a broad variable that constrains/facilitates innovations of the individual service delivery. A clear example is the Flemish municipal decree. This decree forces Flemish cities to formally implement a 'management-team model' that has to abolish the 'alderman model' (see supra) and its routines, the development of a strategic plan for the legislature, a yearly policy plan, etc. 'City A' and 'city B' show that such factors might have an influence on realizing the outputs (see infra).

Another external institutional factor refers to the market of ICT service suppliers that specifically target Flemish cities. This market is characterized by only four suppliers that dominate the market. The ICT service suppliers try to maintain their market share by developing applications with a unique set of 'closed' data standards that only connect to other applications of the same supplier. It has settled up the Flemish cities and municipalities with an 'ICT path dependency': the existing ICT-infrastructure determines the future decisions with regard to ICT-applications. This path dependency influences the ability of cities to succeed in realizing their service delivery concepts. Existing ICT systems need to be replaced or expensive connections between existing applications and the mid office become necessary. Both cities perceive the necessity to undo this path dependency in order to succeed in innovating their service delivery.

At a more general level, the technical solutions offered by all the ICT service suppliers towards Flemish cities can be considered as another institution. Both cities are dependent on the ICT-innovations of external ICT service suppliers. Perceived necessary ICT-changes that have to increase the

efficiency and effectiveness of the delivery of individual services, for example: the mid office, are therefore to a certain degree constrained by the possibilities of the ICT systems offered by the market. The constraining character of this institution is not absolute: 'city A' demanded for a mid office system that allows a flexible digitalization of service delivery processes.

A third external institutional factor relates to the lack of support of the regional Flemish oversight authority for setting up innovation trajectories related to the individual service delivery. First, there is a lack of regulation of the private market of ICT service suppliers for public agencies. One city agrees that the Flemish government should regulate the standards that are used by private service suppliers in order to avoid 'ICT-path dependencies'. Second, one city refer to the lack of common data-, process- and ICT-architecture model for all Flemish cities and municipalities. Today, each city and municipality has to develop its own model that demands considerable investments in expertise. One city state that the regional Flemish oversight authority should develop the model: a reference is made to all the cities and municipalities that are unable to develop such a model and the Dutch 'Process- and Information Architecture for Dutch Municipalities' developed by the Dutch central government is considered as exemplary.

The external institutional is that the innovations in Flemish cities are embedded in an inter-governmental environment that is implementing e-government projects that facilitate Flemish cities with resources to innovate their delivery of services. Both the regional Flemish and the federal government have, for example, developed a series of authentic information sources with authentic information about citizens, companies and addresses. These authentic sources have to facilitate the development of an organization-wide metadata management in both 'city A' and 'city B'.

The analysis shows that the innovation processes taking place in 'city B' and 'city A' are embedded in an external institutional environment which constrains and facilitates the adoption, the process and the success/failure of innovations. The external environment can only partially explain the heterogeneity within Flemish cities. In order to understand this heterogeneity, we must focus on the interwoven character of these processes of isomorphism and  external institutions with the internal

institutions of Flemish cities constraining/embedding the innovations related to the delivery of individual services.

## > 3.3.2.   *Empirical findings: internal institutional factors*

Some clear differences can be identified between the cities of 'city B' and 'city A' with regard to the realized outputs that are perceived as increasing the efficiency and effectiveness of the individual service delivery. A number of internal institutions seem to explain or, at least, affect these differences.

A first internal and cultural factor is related to the degree to which both the political and administrative top of the organization consider internal innovations of the individual services as important and desirable. In the case of 'city A', both parties formally and informally acknowledge the need for a more efficient and integrated delivery of individual services.

In 'city B', neither the council of the major and the aldermen, nor the management team are actively involved in setting up innovation trajectories. In 'city A', both the political and administrative leadership of the organization formulated the framework of a radical and broad change program whereas in 'city B', the management team did not succeed in preparing a plan that could serve as a basis for an organization-wide vision. The civil servant of 'city B' for example stated: "*The focus is not on the organization. I notice that when I propose a project within an internal focus, politicians say: that is a lot of money for the organization. They prefer to invest in visible infrastructural projects.*" It is clear that the support of the top influences the degree of adoption by the organization in 'city A' while in 'city B' the ICT–professional has to build up his own platform for adoption using their informal interactions with other departments.

The second internal factor is a combination of structure and culture. Differences between both cases are related to the dominant management model that structures the internal relations and that frames the political and administrative culture. Up to a decade ago the dominant management model was the 'alderman model' (see supra). In the last decade, the 'management team model' (see supra) has come to the forefront. Whereas 'city B' is dominated clearly by the traditions of the 'aldermen model', 'city

A' has embraced the 'management team model', long before the municipal decree imposed formally this model to all the cities. The effect seems to be that the management team model, in combination with the first internal variable facilitates a broader, organization-wide change of the individual service delivery, such as the program. In the 'city B' aldermen model, the ICT-professionals (if they believe innovation is necessary) have to search strategically their way through the organization to build up support for some ad hoc innovation projects with some of the colleagues who could be convinced or who have some interests in supporting small types of innovation.

The third internal factor is the existence of organizational subcultures. Consistent with Van Vliet (ibid.) this means that both cities, at the level of the organization as a whole, have to a certain degree a low degree of institutionalization. The different organizational sections have institutionalized to a certain degree their own institutionalized procedures, rules and behavior with regard to how services are delivered and processed. In both cities, innovating the individual service delivery 'threatens' the institutional identity of the departments, service delivery process are for example analyzed and optimized, the processing of certain services is replaced to other departments, etc. Differences between both cities can be identified. Whereas in 'city A', we notice quite moderate resistance, resistance seems more strongly present in the case of 'city B'. The existence of departmental subcultures seems more present in 'city B' than in 'city A' where a strong strategic management has dominated the departments.

In the case of 'city A', the implementation of the new service delivery concept has been proceeded by major changes of the organizational structure. Those major changes need a strong political and managerial support. If they are real preconditions and necessary prerequisites for a more efficient and effective innovation of service delivery, then 'city A' is clearly on his way. In 'city A' the back and front offices of the city have been split up and the front offices are integrated into one organizational unit within one and the same department. Moreover, a thorough inventory of the products and services led to a logical clustering of those services and products into a limited number of organizational clusters. In 'city B', change of the organizational structure has not taken place although the respondent claims that this is needed: *"Organization structure, in terms of the*

*organogram, and changes related to the individual service delivery are interwoven. In 'city B', the organogram has been expanding in an uncontrolled manner: the number of organizational sections has increased to over more than 40 different units. I think we should analyze this puzzle and try to discover whether services are in the right place within the organization or need to be relocated.*"

Two internal institutional variables are related to the context of strategic planning and the degree to which the organization is familiar with large scale project and program structures. These factors influence the innovation process and by doing so the degree to which objectives are realized. In the case of 'city A', the organization is familiar with strategic management. The program is based on a clear vision and baseline and is defined in terms of operational and strategic objectives that are implemented linearly, following a straightforward implementation plan and timetable. The city was able to set up a defined project structure that follows up and steers the innovation processes.

In 'city B', projects are defined but an overall vision and strategic objectives is lacking. The process of innovation seems more the result of incremental change that is put into practice by means of temporal project structures. The respondent of 'city B' states: "*At a certain moment, you need a strategic plan. That will be most difficult.*". The respondent refers to a lack of competencies for setting up radical change trajectories. Administrative leaders of the organization that are supposed to steer at a strategic level are involved in operational matters: "*Aldermen interact directly with the heads of departments or smaller organizational units and these persons have to solve things. Operational tasks are executed by people that are supposed to act and think strategically.*" Although a number of 'cluster coordinators' are being appointed for a number of broad clusters of services related to 'Personnel', 'Finance', 'Spatial Planning', etc.; these cluster coordinators all face a lack of a clear formal mandate to strategically steer these clusters and the organization in coproduction with each other and the city's secretary. Moreover their position is not formally taken up in the hierarchy of the city. That is the case in 'city A' departments have a formal mandate to strategically steer change within the broad clusters of services.

A lack of capacity is another institutional factor that influences the realization of outputs that increase the efficiency and effectiveness of the delivery of individual services. The analysis indicates important differences between both cities. 'city B' has a lack of organizational resources; a shortage of critical mass to set up and to implement innovations. The respondent mentioned for example mentioned the lack of a section responsible for 'organizational development'. In 'city A', increasing the capacity is a permanent objective: process analysts have joined the section for 'the development of service delivery', external consultants are hired to enforce the internal expertise about setting up large scale reforms of the individual service delivery and the political executives are willing to invest in the delivery of individual services.

Our explorative results indicate that creating a more efficient and effective individual service delivery goes hand in hand with major changes to the ICT-infrastructure of cities. The existing ICT-infrastructure can be considered as an internal institution. Technological changes in both cities lead to ICT-related institutional stress as a radical shift from the departmentalized information silo's towards the organization-wide ICT-, process- and data-infrastructure is perceived as necessary. In 'city A' and 'city B', the concept of the mid office has come to the fore as a new technological mean for cities to technologically allow a more efficient and effective individual service delivery.

It is interesting to see how the mid office concept as a perceived technological solution differs among both cities. The lack of a general model for all cities, acknowledged or legally determined by the Flemish oversight authority, positively influences the development of different mid office models.

In 'city A', the mid office has to transfer status information, messages as well as (meta)data while the perceived mid office solution of 'city B' will only transfer metadata. In 'city A', the mid office functions as a technological layer between the front and back offices and has the potential to connect all relevant back and front office to each other. In 'city B', not all front officeand back office systems will be connected to the service bus: the project remains, in its initial phase, restricted to a limited number of departments. In 'city A', the mid office consists of a number of applications

that make it possible to digitize (inter-departmental) service delivery processes. The mid office of 'city B' does include a CRM-system.

The role of ICTs in the innovation trajectories differs in both cities. In both cities, internal institutional variables influence the role of ICT in the processes of innovation.

In 'city B', the changes related to the delivery of individual services are more ICT-driven. The organizations seems 'not ready' for radical structural changes related to scaling up clusters of service delivery, integration of physical front office entities, an organization-wide client contact center. The mid office must therefore lay the technological basis for a more effective digital service delivery, but is today especially aimed at realizing a more efficient delivery of services, i.e. an organization wide data management. A lack of political interest for the individual service delivery and steering capacity of the management team, inspires other members of the organization to take the lead. In the case of 'city B', this is the head of the ICT-department. Constrained by a lack of capacity, in terms of organizational expertise, subcultural departmental resistance, a lack of strategic planning and an organization that is not familiar by thinking in terms of processes, he has developed a strategy that allows him to set up the ICT-projects that he is able to manage and reflect the checks and balances present in the organization. The mid office concept formulated by the head of the ICT-department follows this logic: it is not aimed at digitalization of back office processes as processes are not yet analyzed, it does not lead to the implementation of organization wide dossier management systems as this implies a lot of implementation capacity. Instead the mid office remains limited to quiet invisible innovations related to the transfer of metadata between a number of departments. All this leads to a partial breakthrough of the existing silo based path dependency: a number of systems, for example: the reporting system as well as other existing applications remain isolated information domains.

In the case of 'city A', the technological 'part' of the ongoing changes has been perceived as the 'technological translation' of the formulated service delivery concept. In 'city A', we face a constant alignment of the existing ICT-infrastructure to newly introduced organizational changes. The ICT-changes follow the rationale of the overall innovation process. At a strategic level, the administrative and political executives are involved in decision

making related to the technological innovations of the change process. At an operational level, a working groups coordinates the purchase of new back office applications. The flexible character of the mid office components and the internal expertise of the organization allow the city to align the mid office with the organizational changes. In 'city A', the cities seems to succeed in dismantling the ICT-path dependency of separate information domains.

# 4.   Conclusion

We described ongoing innovations within two Flemish cities related to ICT-driven change of the individual service delivery. The data show that innovations of the individual service delivery differ between Flemish cities in terms of the context, the content, the process and the evaluation of change. The differences between both cases inspired us (a) to reflect on the dependent variables of the identified innovations and (b) to conduct a first exploration of variables that influenced the success of both cities to realize the formulated ambitions.

We concluded that there are two major dependent variables: 'the efficiency' and the 'effectiveness' of individual service delivery. It is important to acknowledge the double objective of innovations related to the individual service delivery as the realization of both the dependent variables might conflict with each other. For example: the freedom of a citizen to choose the service delivery channel he or she prefers might conflict with the strive for increasing the efficiency as the intake of services by the physical front desks is for example more expensive, in terms of the need for front office personnel, than the digital intake of services.

The exploration gives insights in how both external and institutional variables influence the strive of Flemish cities for a more efficient and effective delivery of services. We notice that some processes of isomorphism take place whereas the innovation processes seem also inspired by actions that are determined by rational calculation. Both a logic of consequence and appropriateness seem relevant.

The relationship between both internal and external institutions leads to interesting findings. Whereas the external environment to a large degree functions as a stable variable, the heterogeneity is much more determined by the organizational 'path', i.e. the management model, capacities, subcultures, existing ICT-infrastructure, etc. Despite the path dependency, a varying degree of institutional change seems to take actually place, in terms of organizational and technological changes as perceived outputs for increased efficiency and effectiveness.

Further research is needed as important questions remain unanswered. For example: does the mixed set of organizational, technological and cultural changes also actually produces the outcomes that were formulated in terms of both increased effectiveness and efficiency? Are the objectives related to effectiveness and efficiency complementary? The explorative analysis faces us with the complexity of this type of change that is characterized by the simultaneous change of multiple ICT reforms mixed and interwoven with broader organizational reforms within one public organization. This complexity makes it difficult to determine clear relationships between the dependent and independent variables. We need a model that acknowledges this complexity.

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