

Business models and information architecture transformation

Innovate business models related to information Architectures within two case studies in the Netherlands

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Research drivers

- Governments agencies are in various stages of developments
- Shift to transformation of current business
 - services provisioning (types, scope, delivery channels,)
 - back office (“Isolated islands of technology’, integration of information sources, ...)
- Agencies jump on the bandwagon
 - Website comparison website (<http://www.overheidheeftantwoord.nl/>)
 - Copying each other features, layout,... - one size fits all
 - No or limited link to value creation activities and business models,
 - Information architecture should support the ambition
- Not clear what value-added aspects should be included and what a business model brings to the governments
- Furthermore the infrastructure should facilitate the business models

Research approach

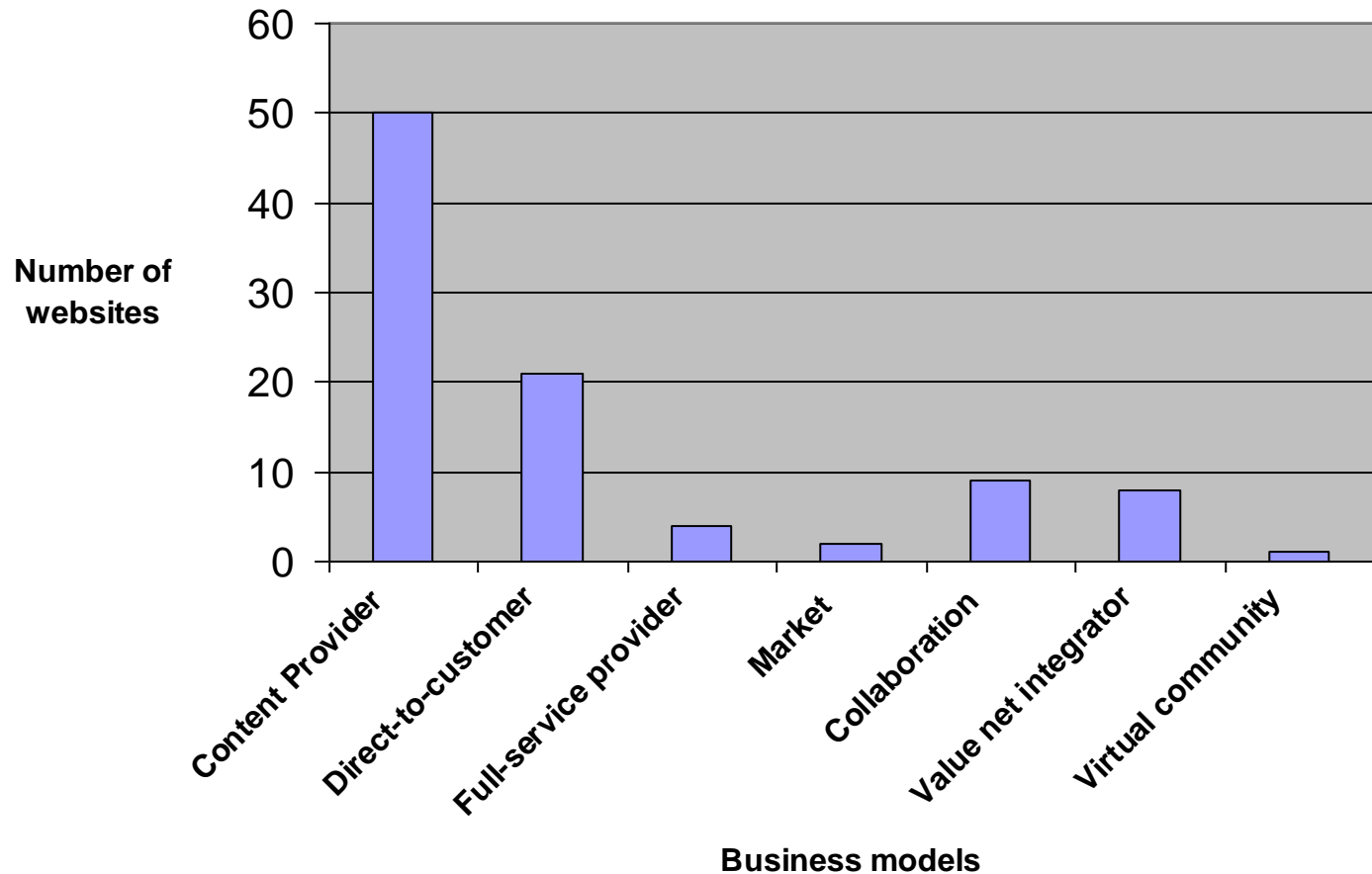
- The *goal* of this research is to analyze the transformation of municipal business models in the Netherlands
 - What are the implications on the infrastructure?
 - What are differences and similarities among case studies?
- Case study selection based on
 - Considered as innovative in the Netherlands
 - Both in top-10 of best e-government sites
 - Took a different approach (and not focused on copying features)
- Two case studies analyzed using interviews and action research

E-Government Business models

- Concept of business models is intuitive appealing (Timmers, Weill & Vitale, Hedman & Kalling, Keen, ..)
- No consensus about a definition exists
- Many research and taxonomies available for e-commerce
 - Often trying to develop a exhaustive set of models
 - Some of these are too detailed and heavily focused on business functions
 - *atomic* business models: represent virtually any business models by combining the atomic business model
- No research addressing e-government business models
- Business models aims at linking strategy to business processes, applications and supporting technology
- Business model innovation (Henderson & Clarke)
 - Modular innovation
 - Architectural innovation

business model	Description, characteristics and typical functions
1. Content provider	<p><i>Description:</i> This model concerns the provision of static and dynamic content including product information and news. This content is coming from a single organization and can be customized to match customers' needs. Often this is organization- or internal-centric instead of customer-oriented and the first (and sometimes the last) attempt to have an online presence.</p> <p><i>Characteristics:</i> Providing information of the own organization, products and services focusing upon the core-business of the organization.</p> <p><i>Typical functions:</i> Menu structure, search options, hyperlinks to related sites, news, and sometimes the use of profiles and subscription options.</p>
2. Direct-to-customer	<p><i>Description:</i> This model concerns direct service provisions to customers and businesses including tailor-made pages and subscription options. This goes beyond the content provider model as not only information is made available, but also transaction functionality is provided. This model focuses upon the traditional functions, services and products of the organization. Sometimes some new services enabled by the Internet are provided, such as tracking and tracing, an online agenda and functionality for making appointments.</p> <p><i>Characteristics:</i> The focus is on creating transactions and selling of services provided by the own organization. The users help themselves by focusing on self-service options.</p> <p><i>Typical functions:</i> Service catalogues, self-service, shopping cart, appointment, tracking and tracing and financial settlement.</p>
3. Value-net-integrators	<p><i>Description:</i> This model coordinates the collection, processing and distribution of information from several organizations. This is a networked type of business model often focusing upon a particular customer segment. In contrast to the full service provider business model, a value-net-integrator coordinates the services provision of other organizations and does not provide any services directly.</p> <p><i>Characteristics:</i> Various organizations collaborate in a network to provide a one-stop shop to a certain customer segment. Each organization keeps its own identity and service requests are routed to the responsible organizations, which take care of the settlement.</p> <p><i>Typical functions:</i> subscription, alerting, life-events, business-events, integrated forms for requesting products from multiple organizations.</p>
4. Full-service provider	<p><i>Description:</i> This model facilitates customer interaction through direct information and service provisioning. This involves the collaboration among a number of organizations to provide a one-stop shop. The customers do not directly deal with individual organizations and the identities of the organizations are often hidden and play no major role.</p> <p><i>Characteristics:</i> Several organizations cooperate to create a one-stop shop by bundling information and services provided by these organizations. The separate organizations are not directly visible.</p> <p><i>Typical functions:</i> service catalogues, life-events, business-events, subscription and alerting options, digital safe, shopping cart, tracking and tracing.</p>
5. Infrastructure service provider	<p><i>Description:</i> This model provides infrastructure services to support the creation of websites. Often the infrastructure provider is founded when many organizations discover that they are developing similar set of functionalities and decide to concentrate the development and service provisioning in one organization. In this way functionalities can be developed once and provided to many users harnessing the benefits of the economies of scale.</p> <p><i>Characteristics:</i> Concentrating and sharing of services in a (semi-autonomous) organization and providing these services to many public organizations who act as users.</p> <p><i>Typical functions:</i> Range from basic functions like authentication, identification, payment, secure communications to the sourcing of a complete range of transaction support.</p>
6. Market	<p><i>Description:</i> This model brings together supply and demand using market mechanisms. From the providers and requester point of view a market is created by an intermediary. The intermediary is often a governmental organization who benefit from matching demand and supply.</p> <p><i>Characteristics:</i> Intermediating between many providing and requesting organizations.</p> <p><i>Typical functions:</i> Searching for supply and demand, showing the best matches, recommending supply or demand, keeping information of suppliers and demanders private.</p>
7. Collaboration	<p><i>Description:</i> This model facilitates constituents participating in activities including policy-making projects and decision-making. Results and alternative policies can be discussed and evaluated. Tools, like simulation, could be used to lower the threshold of participation for non-experts.</p> <p><i>Characteristics:</i> Enabling electronic participation and discussion among citizens, business and public administration.</p> <p><i>Typical functions:</i> chat and discussion platforms, whiteboard, e-voting, sharing documents, wiki's, simulations to compare and evaluate alternatives.</p>
8. Virtual communities	<p><i>Description:</i> This model concerns the creation of a community or a group of recurring customers. It aims to provide content that attracts citizens to return periodically to the website.</p> <p><i>Characteristics:</i> A community of interested centered around a certain topic and able to retain users.</p>

Type of business models found*



*Janssen, Marijn, Kuk, George & Wagenaar, René W. (2008). A Survey of Web-based Business Models for e-Government in the Netherlands. *Government Information Quarterly*, Vol. 25, No. 2, pp 202-220.

Entiteiten



Wet Op Kansspelen aanvraag



Drank en Horecawetvergunning aanvraag



Exploitatievergunning aanvraag



KvK inschrijven en vergunning aanvraag



Incomplete aanvraag



Verdagen termijn



Herrinnering



Afschrift WOK, DHW of EXP



Evenementen aanvraag en afschrift

Front-office



senior accountmanager



junior accountmanager

Back-office



primaire afhandelaar



secundaire afhandelaar



Vakteam MilieuToezicht



Vakteam BouwWoningToezicht

Horeca ondernemer



Horeca aanvraag



Evenementen aanvraag

Views

A = Aanvrager

D = Data en informatiesystemen

K = KvK

L = Legenda

S = SCB

T = TOR

O = Overzicht animatie

P = Performance karakteristieken



Horeca



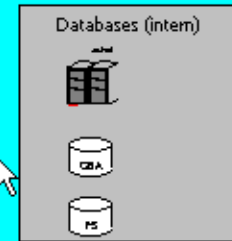
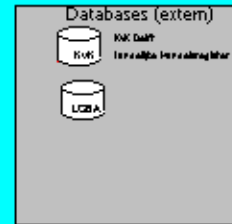
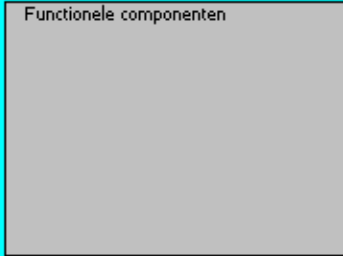
Evenementen



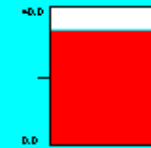
andere activiteiten

Informatiesystemen

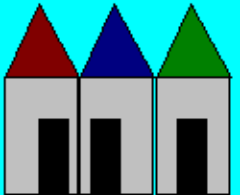
KvK



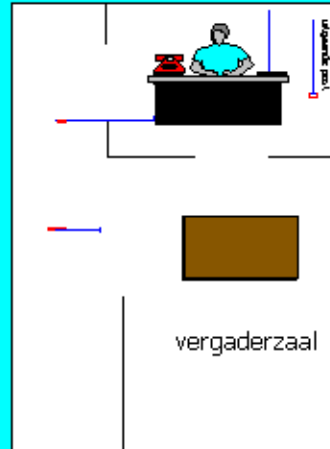
Werklast



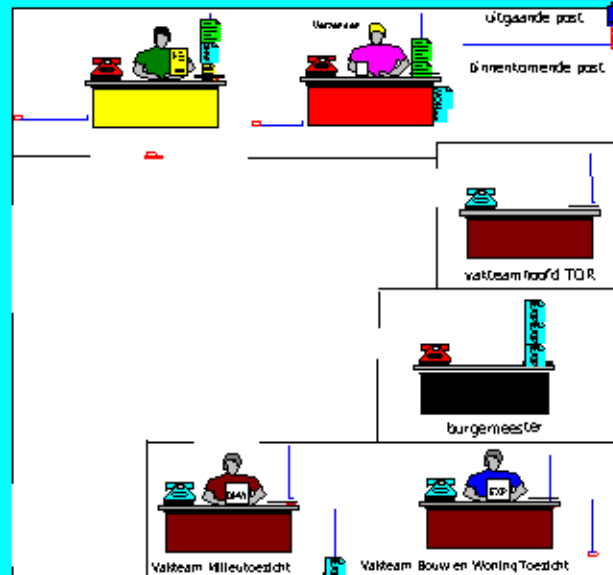
Doorlooptijd



FO-Front office



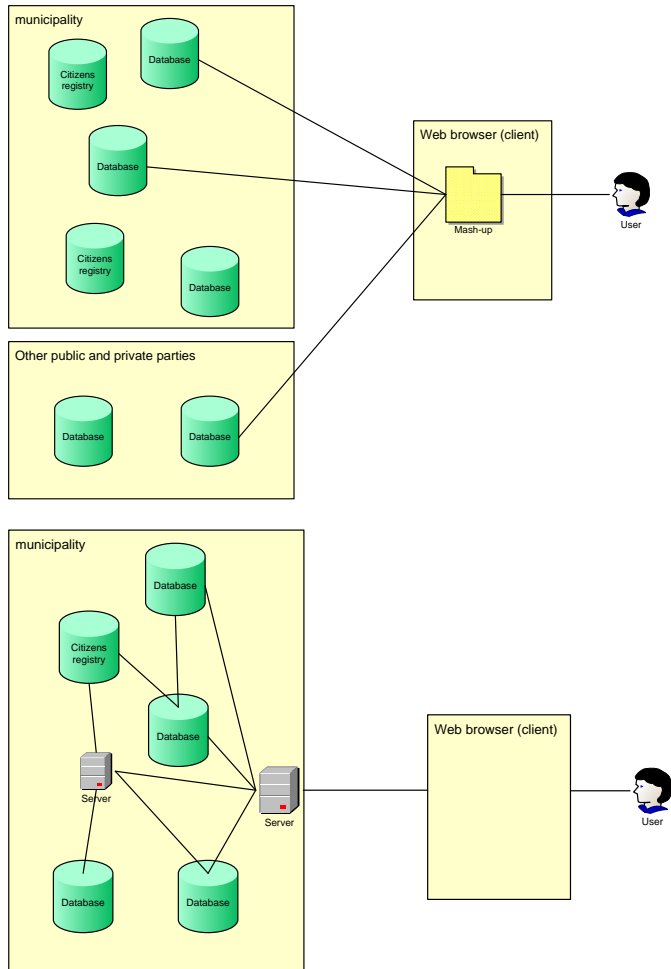
BO-Back office



Externe Partijen



Two opposing approaches



- Case study 1
 - Medium-sized municipality
 - Client-oriented organization
 - Limited resources, system innovation
 - Technology: widgets, mash-up

- Case study 2
 - Large municipality
 - No organization change
 - Information broker and orchestrator, architecture innovation
 - Integration of systems

Transformation strategies

Level of customer orientation



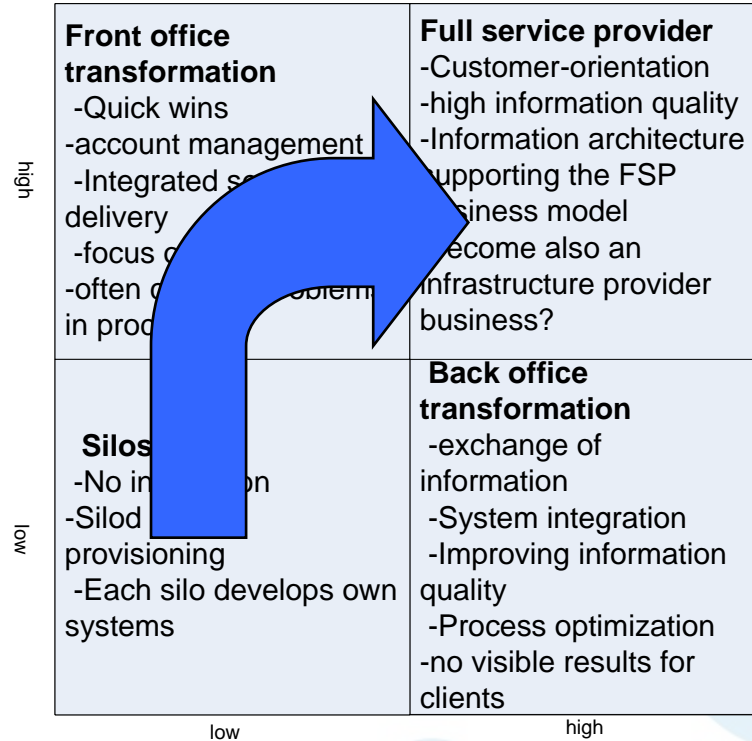
high	<p>Front office transformation</p> <ul style="list-style-type: none"> -Quick wins -account management -Integrated service delivery -focus on learning -often causing problems in processing 	<p>Full service provider</p> <ul style="list-style-type: none"> -Customer-orientation -high information quality -Information architecture supporting the FSP business model -become also an infrastructure provider business?
low	<p>Silos</p> <ul style="list-style-type: none"> -No integration -Silod service provisioning -Each silo develops own systems 	<p>Back office transformation</p> <ul style="list-style-type: none"> -exchange of information -System integration -Improving information quality -Process optimization -no visible results for clients
	low	high

Costs



Transformation strategies

Level of customer orientation



Costs

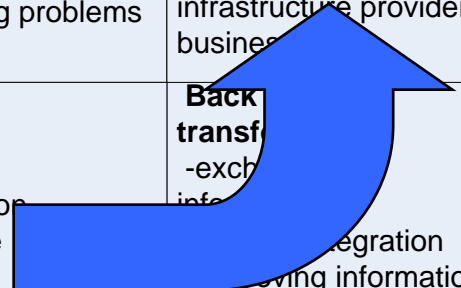


Transformation strategies

Level of customer orientation



high	<p>Front office transformation</p> <ul style="list-style-type: none"> -Quick wins -account management -Integrated service delivery -focus on learning -often causing problems in processing 	<p>Full service provider</p> <ul style="list-style-type: none"> -Customer-orientation -high information quality -Information architecture supporting the FSP business model -become also an infrastructure provider business
low	<p>Silos</p> <ul style="list-style-type: none"> -No integration -Silod service provisioning -Each silo develops own systems 	<p>Back transformation</p> <ul style="list-style-type: none"> -exch -integration -providing information quality -Process optimization -no visible results for clients
	low	high



Costs



General transformational elements

- Organization / business processes
 - Clear process owners and responsibility
 - Change of business process (BPR, business process reengineering)
 - Sharing of information among processes
- Infrastructure / technology
 - Use of web services to access information and functionality
 - RSS feed for updating information
 - Integration based on Service-oriented Architecture

Conclusions and practical recommendations

- There seems to be no 'best' type of business model, information architecture or transformation path
- Two types of transformation path found
 - Front first (customer orientation) or back office (infrastructure investment) approach found in the case studies
- Full service providers business model might look the same, but can be different based on aspects like purpose, value-creating activities, resources, involvement of private actors
- Information architecture can focus on modular or architecture innovations
- Determine the appropriate business model and value creating activities
- Determine system or architecture innovation
- Transform the organization and infrastructure
- Develop roadmap for information architecture development

Questions?

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