The Revolution That Wasn’t: Investigating Barriers to Platform-based E-Service Delivery Partnerships

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Abstract
In response to the increasing political and popular demand on e-government to deliver, governments have begun to seek out new, alternative forms of operation. One such development in the domain of e-government is the emergence of private-public partnerships (PPP). However, research on PPPs in the service layer of e-government is virtually silent. In this paper we argue that one possible approach to help close this gap is by investigating key partnership issues from a platform perspective. Building on a case study, and using this novel perspective, we identify three key barriers for developing platform-based partnerships for e-service delivery in local government: the bureaucratic barrier, the interface barrier and the business barrier. Based on experiences from this study, we also conclude that the platform approach have proven useful as a means to close the highlighted gap in research.

1. Introduction

For more than a decade local governments have struggled with the questions of how to tune their organizations towards their citizen’s needs, and to attain an effective and efficient delivery of e-services [18][6][2][11]. Long gone are the grand visions of old in which the Internet would step in to replace all other mediums of contact, and where citizens would enjoy increased service levels while at the same time costs would be cut for the public administration [18][6][3]. Rather, local governments are today faced with the realization that the rate of failure in e-government projects is high [4], that e-services at large have not delivered as hoped [18][6], and that the one-stop shop e-government model remains but a distant ideal [26]. Even so the demands on public administrations to perform are ever increasing, with citizens on the one hand expecting private-sector service quality in their interactions with the government, and policy makers on the other facing hard economic decisions in the wake of the current economic crisis. Clearly, putting the e in front of service is not enough [19][17].

Against this backdrop governments have begun to seek out new, alternative forms of operation. One such development is the emergence of private-public partnerships (PPP). Although PPPs are not new to government per se, it is only in the last few years that interest has picked up in the domain of e-government. Other than bringing in much needed capital, PPPs can serve as a means to reduce risks for the government, and allow local governments to use skills external to the organization to develop services more appealing to the citizens. Consequently, PPPs could also help governments to cope with the fact that the shift toward e-services have led to an increased reliance on “private companies […] providing technical infrastructure, software applications, skilled personnel [etc.])” [4: 4].

Thus far, PPPs have mainly been employed in the infrastructure and software layer of e-government. Consequently, while research is rich in studies of PPPs in these two layers of e-government, extant research has paid scant attention to the third layer of e-government: the service layer (for examples of PPP studies, see [21]). This gap in the literature is even more evident in the narrower scope of local government. Furthermore, as is the case with e-government research in general [4], research seems to be focused on performance rather than matters of architecture.

In this paper we argue that a possible approach to close this gap is to address key issues of PPPs from a platform perspective, drawing on the fast growing body of research on platforms. This approach allows us to view PPPs as arrangements between a set of actors tied to a platform, being part of a shared ecosystem. Specifically we posit that this approach helps us to contribute to a richer understanding of the dynamics and complexities of platform-based partnerships, ultimately leading to a better understanding of sustainable incentive and partnership models.
Drawing from a case study of a business development project in a Swedish local government we ask: what are the key barriers for establishing platform-based partnerships aimed at delivering e-services in the context of local government?

The remainder of this paper is organized as follows. Next we will give an account of private-public partnerships, and describe core concepts of platforms. Then, we present our research approach and research setting. This is followed by a presentation of empirical data from a case study of a Swedish municipality. We then conclude with a discussion of our findings, and its implications for platform-based e-service delivery partnerships and research thereof.

2. Related research

2.1. Private-public partnerships

PPPs have traditionally been employed for the provision of infrastructures and utilities such as roads, telecommunications, water treatment, waste management, schools, criminal facilities etc. [20]. In recent years, however, we have seen a considerable interest, both in research and practice, in the application of PPPs on e-government [21]. However, and arguably due to the complex nature of traditional PPP arrangements [20], most efforts have so far targeted developments in the infrastructure and software layer of government, with few examples of its application for the provisioning of e-services in local governments [20].

Traditional PPP models range from simple service contracts to complex concession arrangements where the private partner Builds-Owns-and-Transfers the asset back to the public, with models varying in respect to private sector involvement and risk transfer. Many of these models reflect its traditional use, predominantly infrastructure investments and other large-scale projects. This focus is arguably due to the inherent complexity in the contract arrangements, raising demands for environments that are stable over time; “it is generally much harder to monitor contractual performance by the private agent whenever fast-pace technological progress or constantly changing market conditions dramatically alter parameters and quality indicators throughout the implementation of the PPP contract.” [20: 1]

As noted, PPP is a contractual arrangement between a private entity and a government body in which the private partner agree to deliver a particular service and to assume all or some of the associated risk [21][20]. In doing so, the government is relieved of some of the financial and administrative burden associated with providing the service, but “retains an important role in regulating and monitoring the performance of the private partner.” [21: 3] As such, PPPs can be seen as a form of contract state (see [5]). However, unlike more traditional implementations of the contract state, PPPs are not necessarily aimed at substituting the public administration with a private actor. Rather, PPPs allow for fruitful cooperation between private and public, in which the involved actors complement each other, together adding value to the service in question. Acknowledging the argument put forth by Cordella to view bureaucracy as a creator of public value [5], this distinction is of high significance.

The goal of PPPs is to obtain more value-for-money (VFM) than traditional options would deliver [20]. The European Commission identifies four key roles that the private sector can play in accomplishing this: to provide additional capital; to provide alternative management and implementation skills; to provide added value to the consumer and the public at large; and, to provide better identification of needs and optimal use of resources [7]. Whereas ex ante assessments of VFM is complex, Renda and Schrefler argue that “a PPP can be said to generate value improvements whenever it produces/achieves the following advantages: reduced life-cycle costs; more efficient allocation of risk; faster implementation; improved service quality; and additional revenue.” [20: ii] The key, then, is to find ways to create appropriate incentives for the non-governmental partner to deliver the desired outputs, e.g. better e-services.

2.2. Platforms and Ecosystems

Platform research is an interdisciplinary field concerned with the study of platforms and their encompassing ecosystems. Ecosystems can be defined as the “collection of the platform and the modules [or complements] specific to it” [22: 676]. Platforms, in turn, serve as a foundation upon which others can build complementary assets [9]. As such, the platform can be understood as the core of the ecosystem, bringing actors together in a symbiotic relationship with the platform. This can be exemplified by the relationships that can be observed in the iOS App Store, where all parties stand to gain from an increased activity [22][9].

Based on successes such as iOS and others before it, platforms are emerging as a dominant model for the development of software and software-based services [22]. The reason for success lies largely in its architecture. The architecture can be understood as “a conceptual blueprint that describes how the ecosystem is partitioned into a relatively stable core and a complementary set of modules that are encouraged to vary, and the design rules binding on both” [22: 677].
This duality of having a stable, re-usable, core, and heterogeneous, variation-rich, periphery is a fundamental feature of platforms [1], and according to theory makes platforms particularly useful when “the underlying system is complex but needs to adapt to changing tastes and changes in technology” [1: 35].

Its strength lies in its ability to leverage on “a diverse developer community—skills and an appreciation of user needs that platform owners might not possess—to creatively develop new capabilities unforeseeable by the platform’s original designers.” [22: 675]. As such, “platforms tend to facilitate and increase the degree of innovation of complementary products and services.” [9: 55]

Properly executed, the platform arrangement increases the value of the platform for users (e.g. through new and better services), complementors (e.g. through access to an increasing user-base) and platform owners alike (e.g. through the competitive barriers that this creates) [22][9]. As result, we are seeing a shift toward competition based on platform-centric ecosystems and successful co-evolution of the ecosystem at large [22][9][13]

With this as a backdrop, a central challenge for the vitality and viability of platforms, and platform-based ecosystems is governance. As noted by e.g. Tiwana et al. [22] and Eaton et al. [8] the connection between innovation and control is not clear-cut. Following this argument, governance is a matter of striking a balance; of finding the elusive “just-right” level of control taking into consideration the integrity of the platform, while relinquishing the right level of control to encourage, and aid complementary innovation.

3. Research setting and approach

The development project refers to the business development project this case study has followed. We will use the term e-service delivery to describe the process of both development and provision of services. Local context refer to the scene on which delivery take place: a medium-sized municipality in the northern parts of Sweden. Third-part developers will be referred to as complementors, and the arena in which they and the other actors come together will be referred to as the platform-based ecosystem.

Next, we give an account of the aim and setting of the case study. Following this, an overview of issues pertaining to e-service delivery in the local government is given. Then, we present the setting in which our research took place. And last, we explain the ways in which we have collected and analyzed data.

3.1. Study aim and approach

Our qualitative study, aimed at gaining insight and understanding of the key barriers for establishing platform-based partnerships aimed at delivering e-services in the local context, was carried out in three different organizations: two key ICT-enterprises in the region (Struct and Aurora), and the local government. The selected informants and their respective roles can be found in table 1 below.

<table>
<thead>
<tr>
<th>Org.</th>
<th>Role of informant</th>
<th>Date</th>
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<tbody>
<tr>
<td>Local Gov.</td>
<td>Head of Business Development</td>
<td>2011-03-15</td>
</tr>
<tr>
<td></td>
<td>Head of Citizen Service</td>
<td>2011-03-15</td>
</tr>
<tr>
<td></td>
<td>Chief Information Officer</td>
<td>2011-03-16</td>
</tr>
<tr>
<td></td>
<td>Head of Procurement</td>
<td>2011-03-30</td>
</tr>
<tr>
<td>Struct</td>
<td>Director of Department</td>
<td>2011-03-16</td>
</tr>
<tr>
<td>Aurora</td>
<td>Head of Customer Management</td>
<td>2011-03-15</td>
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</tbody>
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These organizations and informants were selected for several reasons. First, our understanding of the local context is rich. Since 2006 a total of over 70 interviews involving heads of the municipality offices, members of the development project, ICT-companies etc. have been conducted, alongside participant observations, document reviews and two citizen surveys. This has given us an appreciation of the local context dynamics, and allowed us to purposefully sample [27] key players that we felt could further our understanding of the key barriers at play.

Second, the organizations represent both the software/service side and the government side, with actors on the latter ranging from business development, to ICT and Citizen Service. This, we argue, enables us to account for the multifaceted reality of government, politics and bureaucracy.

Third, as the result of uncertainties among informants regarding procurement law an interview explicitly addressing this matter was conducted with the Head of Procurement.

3.2. E-service delivery in the local government

In this paper we will make a key distinction between deeply integrated e-services, and front-end e-services. As the categorization implies the first set of services are e-services that are integrated into back-office systems and the underlying business logic. Front-end e-services are simpler, non-integrated services residing on the front-end, providing no integration with underlying systems. Whereas both types of services may provide value for the citizen in
terms of its use qualities, the latter does not lead to significant administrative gains for the organization. In fact, such services may even increase the administrative burden on the organization. As such, governments tend to the first category, this municipality being no exception.

A second important aspect of e-service delivery in local government is the role of the public administration. As noted by [5] the bureaucracy plays a key role in the production of public value. Governments are with very few exceptions co-creators of value in service delivery, and generally external entities cannot singlehandedly provide e-services due to the need of manual processing, which takes place within the bureaucratic organization. Only in rare occasions can services be fully automated and even then bureaucratic logic, and administrative processes reside within governmental control.

3.3. Research setting

Three organizations were selected, two of which work as providers of software platforms and software-based services: Struct and Aurora. Fictitious names are used to preserve confidentiality. Both organizations are established in the local context.

Struct is the regional office of a vast multinational IT-company. While the main company is heavily geared towards consulting (e.g. in the telecom industry), Struct, however, is specialized in development of business systems in the public sector (e.g. municipalities, childcare, schools, elderly care, family care). In this market Struct is a major player, boasting a market share of approximately 50% in all related markets, nationally. In recent years, Struct have begun to expand from just delivering platforms, to also providing software-based services on these platforms. However, the development of platforms still remains its core operation.

Similar to Struct, Aurora is also something of an odd bird. A regional office, owned by a leading actor on the Nordic market for business systems and economy services, they are niched heavily toward e-government. Aurora operate in a narrower scope than Struct, and also perform third-party development on installed platforms, the latter however currently more of an exception rather than rule. Compared to Struct, Aurora operates to a larger degree in the service layer.

The municipality in question is located in northern Sweden. It is medium-sized, serving 70000 citizens as well as a number of companies in the region. Services range from childcare and serving the elderly, to city planning and garbage disposal. Some services are provided on a voluntary basis (e.g. operating sports centers) but most services are mandated by law. Also, with few exceptions services are tax-financed and charging of fees prohibited.

The municipality is composed of 10 offices, supported by hundreds of administrative business systems. It employs 8000 people, distributed over 400 work locations. Among them are 360 different managers and chief officers. A key asset for the organization is a one-stop shop citizen service unit, providing a uniform front-end to the public.

Business development takes place both locally and centrally in the organization. However, as result of the business development project there has been a shift towards increased centralization of matters related to organizational transformation and citizen-centricity. These matters are currently managed by a steering group consisting of members from the Municipal Office, the Office of Citizen Service, and representatives from the IT and economics department. This group is responsible for issues of fragmentation, achieving higher efficiency, and leading the organization in its citizen-centric aspiration.

3.4 Data collection and analysis

The results in this paper are drawn from observations, dating back to 2006, of the planning and implementation of a development project in a Swedish local government. We have used an interpretive approach to conduct the field study [24][25]. The in-depth case study method was used to collect and analyze the data. Triangulation of data sources was achieved through semi-structured interviews, participant observations and through reviewing various types of documents such as project plans, process maps and policy documents [27]. In total we have conducted over 70 interviews involving heads of the municipality’s office, officers, members of the development project, and politicians. The heads have been interviewed in two separate rounds. We have also interviewed representatives and managers from the ICT-sector.

In response to the specifics of the research question posed in this paper we employed semi-structured interviews as our primary data collection technique, conducting 6 interviews in total (see table 1). All interviews took place at the informants’ workplace. The interviews were conducted by the author and two fellow researchers and lasted for approximately one hour. Interviews were recorded and later transcribed. In line with the recommendation of Miles and Huberman [14] results were presented to the informants. This took place in June 2011.

Acknowledging the multifaceted nature of the subject we sought to select informants that could provide for rich, complementing accounts. In the
interviews we asked the informants to characterize how
e-services are currently being delivered, give an
account of trends in development, and to present their
view on the problems and prospects of more structured
forms of partnerships. To achieve this we asked
questions related to the following themes: (1) How are
you addressing e-service delivery (2) Are there any
significant trends in how e-services are delivered (3)
What are the main risks involved in e-service delivery
(4) What challenges are posed in establishing
partnerships (5) How are risks affected by new
contractual arrangements (6) What future
development do you see in terms of partnerships.

The data analysis involved reading the transcribed
data, delineating patterns. These patterns were then
further analyzed and abstracted to form thematic
categories. Finally, we analyzed the data in each
category to discover inter-organizational
commonalities and conflicts, especially over the
private-public divide.

4. Results

Through the answering of our questions it soon
became apparent that the informants found
partnerships to be quite problematic. Due to e.g.
uncertainties regarding procurement law and mistrust
the informants oft-times converged on barriers rather
than solutions per se. We found this highly interesting
and as result the following six sections have been
designed to better reflect these responses, rather than
following the thematized outline given above.

4.1 New trends, new problems?

Looking back, e-service delivery has dominantly
been associated with pre-established private-public
arrangements—the common case being a software
platform provider extending its scope of business from
software platforms to platforms and platform-based
services. Only in rare occasions have any development
taken place within the public organization.

This path has its roots in the need for deep
integration, and vendors’ tight control of Application
Programming Interfaces (APIs). However, as noted by
informants on ‘both sides’ sides there is a recent
development in which new actors enter the market,
oftentimes with the use of front-end e-services.

Parallel to this development, there is a strong shift,
at least in discourse, in e-government from an internal
to an external focus. In the words of Aurora:
“Customers are saying that they need business systems
for their citizens, focus on citizens has become much
more expressed. Outside-in has become more
important than Inside-out. I think it’s the time that we
are living in. There is political pressure from above,
from national governments and administrative
authorities”. A trend also highlighted by the Head of
Citizen Service (HCS): “I see a shift in the focus of
ICT-enterprises from product to service. From
administration to citizen service.” It is now common
that traditional business systems come pre-packaged
with deeply integrated e-services. According to HBD:
“…this year we have two large systems that we
bought, they came with e-services already”.

These shifts are not entirely unproblematic.
Although the local government welcomes the fact that
there are now more actors, at least in the service layer,
there are concerns regarding the emerging actors
ability to provide services that reach beyond the mere
front-system. “It is very important with deep
integration… What you want, both as a municipality
and as a citizen, is the connection to the system… so
that I get all the data, pre-completed… that is where
the administrative gain is too.” (HBD)

4.2 A battle for control?

Thus, a key problem from the governments
perspective lie in the current governance of platforms,
and limited access to APIs. “The problem right now is
that [the platform owners] don’t want to open their
systems. As long as they don’t do that services are hard
to push… They have to open their systems! [---] Some
build great services and platforms… but they think the
whole world consists of their products… and they
don’t let anyone else in” (HBD). The matter of
integration is also addressed by the HCS, albeit in
different terms: “For us, e-services were harder to
deliver than we imagined. They are not used enough, it
became more expensive than we thought, and
integration causes a lot of trouble. This makes it hard
to get an e-service going. When we first set out we
foresaw an e-service factory. We have three services
now, and that is not much…” The Chief Information
Officer (CIO) is also concerned: “There are few
suppliers with open APIs. They want to keep their
systems closed, deliver their own e-services”, and “It is
hard to get someone from the outside to develop an e-
service… In practice, it is only the platform owners
that are able to do it”.

This view is in many ways in conflict with the
accounts given platform providers, most explicitly by
Aurora but also by Struct. When asked how they
currently approach e-service delivery Aurora states:
“We are supplying platforms where services are
connected. We want open APIs. APIs to business
systems.” - “We work a lot with open APIs, we have
opened up against open office for example … We
provide options. It is open. Otherwise customers
become locked-up in horizontal pipes.” Later on it was also stated that: “Recently we have gotten a lot of deals because we provide our customers with open APIs”.

Struct are more cautious. They argue that they are dependent on revenue streams to keep investing in R&D, to keep developing their platforms. However, when asked about trends regarding open systems, open source etc. they responded: “When it comes to open source I think the niche is too small. The community is not big enough… However, something of more relevance, what we are working with, is open APIs. A proprietary core is one thing, but to make it possible and easier to integrate, complement etc. That’s something we have identified…” When asked about the current situation regarding open APIs they responded: “Our APIs can be accessed within certain limits. This is deliberate. We want some form of agreement or knowledge of what is going on. The APIs today are not constructed rigidly enough for us to ensure integrity in the underlying system. Reading is one thing, but oftentimes with e-services you want to write as well [---] We have to write better APIs”. When discussing the nature of these deals it was said that: “We try to score deals with actors that we see as potential key players in the market.”

4.3 No sign of change?

The informants from the municipality acknowledge that they are aware of talk such as the above. However, there is mistrust in that it goes beyond mere talk. The CIO states: “I see no signs of change. There is a lot of talk about openness, in practice nothing happens.” “We need to demand change when we procure new systems [---] They are not willing to take the risk. What we need is a united front… We have built unnecessarily complex systems… We have not done our lesson as contractors. We need to get better. Make better demands”. Similar, albeit less harsh concerns were raised by the HBD: “I am not sure that they want to open their systems [---] We had an event… invited all of our large suppliers… everyone was talking about integration and openness, but I don’t know if its more than just talk, I have to admit I am a bit skeptic.” Worth mentioning is that this event was also commented by the HCS, not showing signs of skepticism but rather enthusiasm: “We had a good dialogue. What used to be impossible is now possible.” The HCS does however share the common concern and does not like the current lock-ins. In addition the HCS state: “The traditional IT-companies are not attractive from a customer-perspective, they have the wrong focus. They view us as the end-customer [not the citizen]”

4.4 Towards shared risk?

When discussing risks associated with e-service delivery, one risk in particular was highlighted: that of demand. This was acknowledged on both sides of the organizational divide. A clear problem for both buyer and seller is the lacking ability to accurately forecast if, and to what extent, an e-service will be used. As stated by the HCS this is a risk that the government “would like to transfer”. As acknowledged by the Head of Procurement this would allow the government to take a larger gamble with e-services, as the cost of failure would not be as large. With regard to this, we asked the informants about their view on incentive-based systems, systems that would effectively allow transferring of the risk of demand. The informants on the public side stated that they had no real experience of such arrangements in this context, nor had anyone seen a change in that direction. More interesting were the comments by Aurora. They argued that the shift, if anything, was in the opposite directions: “Well the price model is… we are moving more and more towards fixed pricing; a fixed cost at delivery, and then a fixed monthly fee. We want to keep it simple for the customers, reduce uncertainty. When we have proposed variable pricing models the customer is often afraid that it will become too expensive.”

When discussing risk, and risk-taking in general another conflict was observed. This conflict was especially clear in the accounts of the CIO versus those of Aurora and Struct. The CIO makes the case that: “Suppliers take less risk today. They charge every minute of their time. They want to put all of the risk on us.” Aurora and Struct however argue that they take larger risks today than they did before, and that the current trends tilt the balance even more.

4.5 To be or not to be partners?

Addressing partnerships it was clear that there often times is a need to define what the partnership really is, what it means for the parties involved. As mentioned by Struct: “There is a lot of talk on partnerships. We have seen cases where large municipalities procure… partnerships. That is how they phrase it. What is important here is to gain a mutual understanding of what partnership means… it means something more than the traditional, licensing etc.”. From the interviews it is clear that the term is predominantly used in its widest sense.

When asked about what benefits partnerships could bring responses varied. The HCS saw that partnerships foster better solutions: “We can work out a solution together, rather than the current situation where we at the municipal hall ex ante construct a
requirement specification. They [the ICT-companies] are more updated on technology, and might know more than us about the particular application area.” Furthermore the HCS saw that it could strengthen the local business: “Work arrangements naturally end up being local. You need to work closely, and work frequently together… you can’t fly up people all the time”. As mentioned there was also interest in shifting demand responsibility over to the service provider. The CIO saw potential in the idea, but did not see how it could be implemented. The HP acknowledged that the concept was interesting, but lacked sufficient insight as to how it could be applied in the specific domain.

On the IT side Aurora highlighted how tightened partnerships offered an exciting opportunity, primarily in the shift towards services. “You add value to organization and what we offer the customers. You are not just selling products; you become more of a partner. It is more fun that way. Plus, like we discussed earlier, it is a way for Sweden to maintain its competitive edge, to refine our services”. They also pointed on how they could help the customers develop and implement solutions, in turn speeding up the process. How they could become a competence-hub for development. Struct on the other hand pointed toward benefits of working closer to the customer, and how this increase rate of success and facilitate collaborative learning.

However, Struct also pointed out the need to strike a balance: “There is a risk of getting to close… it would make it hard for us to deliver standard solutions [---] If you go all in with one customer it is hard to maintain any global core, any standard. What you could maintain as standard solutions are perhaps infrastructure components, but not business logic”. Related concerns are also raised by the HCS: “You have to be careful not to get married with a supplier. The risks are obvious”. Many other challenges were also reported. The most frequently stated challenge referred to procurement, and procurement law. This was acknowledged both by informants in the municipal organization and on the IT-side. The CIO even went as far as to state that: “The procurement process is so complex that no one wants to go through it all. Instead, you just keep the old systems running. [---] Procurement law effectively inhibits partnerships. The law needs to change as to better allow for partnerships to emerge. The HCS pointed towards the conflicting nature between dynamically evolving partnerships and ex-ante contractual arrangements. In a similar vein the CIO stated: “Partnerships need to be procured – you can end up with a partner you don’t want!” Additionally, the HP pointed towards the inherent complexity of the contractual arrangements as a potential issue.

### 4.6 A different tomorrow?

When asked explicitly about what future developments they foresee some interesting things were noted. Both Aurora and Struct stated that they have noticed a trend, especially among small municipalities, to form clusters. Struct states: “We see it more and more. I think that is where we are heading. It is the only way for smaller municipalities to keep up”. Similarly, Aurora calls this “a necessity for small municipalities”. This implies a homogenization of business logic in municipalities, of increased standardization of both systems and organizations. The CIO also makes comments that point in this direction, stating that municipalities need to start to procure together, and that systems need to be more oriented on high level processes; that systems need to become less complex and customized to the municipal specific work setting and routine.

### 5. Discussion

As noted by Contini and Lanzara the shift towards e-services have led governments to become increasingly reliant on knowledge external to the organization. This is especially the case for smaller organizations that cannot afford to maintain a large IT-department in house. To this end, various types of partnership models offer exciting prospects for more efficient and effective forms of e-service delivery. The informants in our study seem to share this view.

However, as was evident in this study such arrangements are anything but problem-free. The same rapidly changing environment that has made governments so dependent on the private sector, seemingly render most traditional PPP models of little use [20]. The lack of a stable environment paired with the contractual complexity of PPP arrangements have made it hard to discern how, and even if, partnerships can be successfully formalized under current procurement law. As PPPs have their strength in the way in which they can leverage external knowledge and resources to create better value for money than traditional procurement options, this raises serious questions regarding its applicability in this context. This suspicion is indeed strengthened by our results: widespread mistrust, battles for control, and apparent risk-aversion are hardly optimal conditions for PPPs.

In comparing the fundaments of platforms with PPPs one quickly discovers that the two share many traits of interest for the government. For example, both allow for the leveraging of knowledge and resources external to the organization; are concerned with finding appropriate incentive structures, or symbiotic relationships; and rely on the premise of efficiency
through distribution of work and responsibility. Additionally, platforms by nature tend to facilitate and increase innovation of complementary products and services [9], and are—much unlike PPPs—particularly useful when “the underlying system is complex but needs to adapt to changing tastes and changes in technology” [1: 35].

Given the trend towards more open platforms, the platform perspective is seemingly an appropriate lens. In fact, in line with Gawer’s evolutionary theory of platforms [9] the first steps towards a platform-based partnership can be said to have already taken place. Through, our study we have found that providers of software platforms are finding it increasingly hard to maintain control. Clearly though, many of the challenges toward this end still remain.

By viewing partnerships as arrangements between actors of tied to a platform, forming an ecosystem, we argue that we can gain a richer understanding of the dynamics and complexities that underlie the problematic situation outlined above. In the application of platform research on e-government, we gain access to an existing body of knowledge on why, and what makes platforms ‘tick’, and insight into barriers for its success as a model of operation. Particularly helpful is the way in which platform research informs our understanding of the processes in which platforms, and platform-based ecosystems, co-evolve, and how this is related to issues of governance and control [22][8].

Armed with this lens, we set out to identify key barriers for establishing platform-based partnerships aimed at developing e-services in local government. To this end we have analyzed the ways in which e-services are being delivered and the trends that currently shape how this will be made in the near future. In answering the research question, three key barriers have been found: the bureaucratic barrier, the interface barrier and the business barrier. The following text will present these barriers, expand on the way they are related, and give examples of how they come into play.

5.1. The bureaucratic barrier

While acknowledging the important role that bureaucracy play as a value creator in the delivery of e-services [5], the current organizational mode serve as an efficient barrier towards establishing a platform-based partnerships, or symbiotic ecosystems.

First, the current focus on existing work settings and routines rather than high-level processes obstruct the development of standardized cores that can become stable foundations on which complementary assets can grow. As noted by Struct this created serious issues, as platform-providers need to balance standard and customized solutions to be able to offer competitive products; with too many customizations, there is no core. This was acknowledged in turn by the CIO, who saw a need for municipalities to procure together, and that systems in turn need to become less oriented towards the specific organization and more oriented towards high-level processes. Simply put, governments need to cut unnecessary red tape and streamline their processes, allowing for homogenization of high-order business logic to take place.

This need is also evident from concerns raised both here and in other studies regarding the traditional process of procurement. Whereas procurement laws serve a noble cause, to enable more efficient partnership-forms laws may need to be revised and reconsidered as they are often found to do more harm than good. Rather than preventing foul play, in this particular area they rather seem to be working as an effective inhibitor of innovation and competition [23].

If organizations became more homogenous on a high-level, and establishment of novel forms of partnerships were made easier through cutting of red tape, solid cores would arguably be allow to set, making the platforms more capable of fostering innovation of products and services [22][1][9].

5.2. The interface barrier

The very core of the platform architecture is “the modularization that partitions the system into (1) a set of components whose design is stable and (2) a complementary set of components which are allowed—indeed encouraged—to vary.” [1: 41]. As such, APIs play a central role in whether or not platform-based partnerships can emerge.

In the case of e-government, and e-service delivery, however, sufficient access to APIs is rare. Although our study shows that there is a trend towards the opening of platforms and laxing of control, the closedness that characterizes most government platforms today oft-times prevents the emergence of ecosystems. This was a recurring theme in our interviews; multiple informants raised concerns about how the closed state of platforms hinders the creation of new services. Given the emergence of new entrants on the market specializing in e-services, this was found particularly frustrating as they, due to lack of access, were restricted to providing front-end e-services, which provide no significant gain for the administration.

However, even if access were to be granted, many systems are outdated. As result, and as noted by Struct, the integrity of the underlying system may be threatened—potentially creating vast problems if critical data suddenly were to be lost. Therefore it is imperative that platform owners not only relinquish some of its control and grant complementors access,
but also that substantial efforts are made to ensure that interfaces are rigid, secure and keep stable over time [22][1][9]. This would also help to alleviate some of the mistrust that we have observed in our study.

5.3. The business barrier

PPP or platform, the key factor for success lies in finding ways to create appropriate incentives for all partners involved to deliver the desired outputs. It needs, however, be recognized that governments are different. They do not play by the same rules as private entities, nor can they rely on the same incentive structures [16][15].

First, governments rarely have the option to charge users of services. In practice this restriction also spills over on providers of e-services, be they platform owners or complementors. Second, due to the significant role the bureaucracy plays in service delivery any aspiring service deliverer have to go through the government. In a sense, governments thus act as gatekeepers. Third, for these reasons platform owners have restricted ability to acquire services from complementors on their own without incurring risk.

As such—despite the ways in which platform ecosystems have been shown to provide increased value for users, complementors and owners alike [22][1][9]—there is clearly a business barrier at play. How are the private entities to cash in on their investments? What incentives do they have? What business models support these? For platform-based ecosystems to emerge these questions need to be addressed in full. We believe that the work of Moore (e.g. [16][15]), and his theory on public value can serve as a good starting point for this endeavor.

Furthermore, as observed in this study the matter is not as simple as merely having the government act as proxy for the citizen, i.e. for governments to pay the fee that the citizen presumably would have paid. Instead of shifting towards incentive-based solutions, which could also reduce demand risk for the government, the opposite move was observed. We argue that this is due to an unclear understanding of the ways in which e-services create value for governments, and more specifically how this value can be quantified. Without such quantification the risk is apparent that the current fear of variable costs systems will remain. Second, we also believe that this situation is magnified by the lack of deeply integrated service offerings. As these show a greater ability to reduce costs for the government, rather than increasing it, a win-win situation would more easily emerge. Nonetheless, the questions posed regarding these matter need to be addressed. Here too we believe that Moore (e.g. [16][15]) can, and will, play a significant role.

5.4. The need for co-evolution

Given what we have observed, it comes as no surprise that earlier research on PPPs have highlighted the need for governments to take a more active role in pushing for the opening of platforms in the procurement process [23][12]. This need was also expressed by some our informants.

However, based on this investigation we argue that the situation is more complex than that. The ways in which these barriers relate to each other make such isolated efforts unlikely to succeed.

For example, even if complementors were granted free access to platforms they too would soon become burdened by the winding red tape, and the heterogeneous state of government organizations. More specifically, this would negatively affect the reusability of a complement, and thus raise questions with regards to whether one can find appropriate incentive structures and business models that appeal to all members of the (desired) ecosystem.

At the same time, government organizations may find themselves in a situation where it is hard to motivate a far-reaching ‘homogenization’ and ‘de-bureaucratization’ effort, not knowing if it would ever pay off given the high costs of doing so.

Informed by platform research, we argue that for these barriers to be broken down there is a need for a co-evolutionary process. By attending to such ongoing co-evolution, the platform approach allows for the examination of socio-technical emergence. The platform approach thus directs researchers’ attention to knowledgeable human action and its recurrent engagement with a given technology in ways that reach far beyond the mere study of contractual arrangements.

6. Concluding remarks

We began this paper by positing that the emerging body of research on platforms could provide useful insights and help close the gap on PPP studies in the e-service layer. Employing a platform lens we have then identified, described, and analyzed three key barriers for the emergence of platform-based partnerships for e-service delivery in the local government; namely, the bureaucratic barrier, the interface barrier and the business barrier. Furthermore, due to the interrelated nature of these barriers we have argued that a co-evolutionary process is needed if these barriers are to be overcome.

In doing so, we have not only provided insight into barriers for platform-based partnerships and the ways in which these are interrelated. We have also provided insight into how, and why, the platform lens can aid research on partnerships in the context of e-services.
However, this study is limited in several ways. First, the scope of this study is limited. The results in this paper are based on a single case study, involving only three actors—none of which can be said to represent a pure complementor. Second, due to limited time and space relevant critique (e.g. [5][10]) have been either downplayed or otherwise disregarded.

As such, to better our understanding of platform-based partnerships further research necessarily must take place. In particular, we welcome research on the co-evolutionary process of barrier breaking, as we believe that this could help shed light on fundamental issues of relevance for the matters here discussed.

Finally, this investigation began with the basic premise that the growing body of research on platforms could aid in closing the current gap in research on partnerships in the service layer of e-government. We conclude that this premise holds.

7. References