

cbo Projects

eGovernment: Learning from Denmark and Estonia

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Summary

In the summer of 2014, CBO Projects published its first Insight Paper on eGovernment. This explored the potential of digitising public services, and outlined a practical approach for establishing an eGovernment programme that would deliver tangible benefits.

In this complementary Insight Paper, we reflect on the learning from CBO Projects' fact-finding trips to Denmark and Estonia. We identify the key factors that enabled those countries' governments to make eGovernment a consistently used, fundamental element of the cost-effective provision of public services.

In this paper, we focus on three factors that we believe drive Denmark and Estonia's success:

- eGovernment's relationship with citizens
- eGovernment's relationship with the private sector
- eGovernment's supporting legislation.

In each instance, we seek to identify key learning points that could be applicable to the implementation of eGovernment within the Channel Islands.

The Relationship with the Public

If the digitisation of public services is to provide sustained benefits then the public have to willingly and consistently adopt new technologies and ways of receiving and accessing public services. In Denmark and Estonia, we identified that the public used digitised services due to a potent combination of practical benefits and an emotional willingness to accept the new offering.

Building the emotional case for eGovernment

In both Denmark and Estonia, digitised public services were introduced in a manner that intelligently and deliberately reflected the state's relationship with the public.

In Denmark, public services are of a generally high quality, and are used and trusted by the large majority of society. Danish public services also have a long history of storing and collecting significant information about individuals, dating back at least to the introduction of the Personal Registration Number in 1967.

As a result of this, the Danish government introduced eGovernment initiatives to a public that was generally trusting and accepting of the public sector having a wide-ranging role, and also holding large amounts of personal data. Consequently, the Danish government were able to promote and prioritise initiatives (such as the creation of a pan-public sector electronic ID system, 'NEMid') that built on this context. This allowed the Danes to realise significant benefits from eGovernment initiatives that have been notably contentious and challenging to implement elsewhere. The UK government, which does not benefit from a similar public trust of the state holding personal data, has by contrast repeatedly struggled to build acceptance of projects such as the introduction of electronic ID cards, or electronic NHS records.

As for Estonia, since regaining independence in 1991, the government has sought to redesign the nation's entire information infrastructure with goals of openness, privacy, and security. This 'green field' implementation of new technology presented the government with the

opportunity to create greater engagement with its citizens.

Estonia has come along way since 1991, with the frequent delivery of eGovernment services, which deliver benefits for the citizen, for example:

- e-Tax in 2000, m-parking in 2003
- ID Bus Tickets in 2005
- i-Voting in 2007, e-Police in 2008
- e-Health in 2010
- Online Border-Crossing Queue System in 2013

From these two very different contexts, one can see that the design and prioritisation of eGovernment projects needs to be aware of, and shaped by, the wider relationship between the state and the public.

Building the practical case for eGovernment

In the Danish government's Agency for Digitisation, staff say "usability is king". They are aware that, however open the public are to eGovernment technologies in principle, they will not use them if they are not convenient and easy to use.

As a result, the Danish government tries to make the use of eGovernment technologies more attractive than their non-digital predecessors. One way in which they do this is to maximise the range of situations in which a technology can be used. In this way, the NEMid electronic ID system can be used to validate all transactions with the public sector, and also be used for electronic banking. Similarly, the forthcoming 'digital mailbox' system will provide secure storage for all correspondence and documentation sent between the individual and every public organisation – making it significantly more user-friendly than paper-based alternatives.

The Estonian Government knew that delivering benefits to the citizen would drive adoption of public services via the digital channel. When looking at each component or deliverable of their eGovernment strategy two key questions were asked:

- 1 Will this benefit the citizen?
- 2 Will this improve services across internal government departments?

When Estonia introduced the e-ID they immediately tied it into a service that citizens could use. As of 2014 more than 93% of the 1.3 million citizens of Estonia have the e-ID card, and part of its introduction included the ability for citizens to purchase bus tickets simply using their electronic ID card.

When you look at other areas of the e-Services in Estonia the adoption rate is impressively high, and this was a result of the Government focussing on the benefits to the Citizen.

- 100% of schools and government organisations are ICT equipped
- 97% of businesses use computers

- 76% of families have computer at home
- 99.8 % of bank transfers are performed electronically
- 95% of income tax declarations made via the e-Tax Board
- 95% of medication is bought with a digital prescription in 2013

Finally, the Danish government underpin the practical case for digitising public services by supporting people who cannot, due to their skills or access to computers, use them. The Danish government accept that up to 20% of people may not be able to use a new technology, and put into place practical arrangements to support those people. This transparent work to support the 'digitally excluded' removes a common rationale found elsewhere to resist eGovernment initiatives – as it allays fears that vulnerable groups in society will inadvertently get left behind as the process of accessing support moves online.

What we learnt	What we recommend
<p>Citizen take up of eGovernment initiatives relates to their perception of the legitimate and effective delivery of public services</p>	<p>Prioritise initiatives to digitise services that citizens already consider to be at the 'uncontested core' of the public sector's role.</p> <p>Prioritise initiatives that address known areas of dissatisfaction with public service provision.</p>
<p>Citizen take up of eGovernment initiatives depends upon them being more convenient than non-digitised services</p>	<p>Adopt the principle that 'usability is king'</p> <p>Allow the customer experience to define the process rather than letting the existing process define the customer experience.</p> <p>Set the success criterion that every eGovernment offering should be more convenient and useful than its (non-digitised) precursors.</p>
<p>Citizens need a clear articulation of how the 'digitally excluded' will be supported</p>	<p>Implement a clear plan for 'mediated self-service' at the start of any eGovernment programme.</p>

The Relationship with the Private Sector

On the basis of the UK press' coverage of public sector IT programmes, one could conclude that relationships between the public and private sectors were often poor. High profile 'horror stories', such as the cancellation of the NHS' National Programme for IT and the BBC's Digital Media Initiative, and the write down of £34m on computer systems supporting the Department for Work and Pensions' Universal Credit programme, suggest that the public sector is highly dependent on the private sector for intellectual property, which it sometimes procures ineffectively and at a punitive cost.

Our studies of Denmark and Estonia show that this does not have to be the case. We have found, rather, that the public and private sectors can work together in a balanced and mutually beneficial manner. We think that this is an area where there are positive and tangible lessons to be learnt for the Channel Islands.

One of the most notable aspects of Denmark's major eGovernment initiatives are that they are designed in a manner that 'builds in' benefit to the private sector. When Denmark implemented NEMid (the electronic ID system), it made it available to all Danish banks and ecommerce businesses. These organisations took up this access to a robust and simple platform, saving them money, and also making the Danish citizen's use of online technologies easier.

Similarly, when developing an e-invoicing solution, NEMhandle, the Danish government made sure that it could be used for business-to-business invoicing. The provision of a standard platform for e-invoicing saves the Danish private sector huge amounts of administrative cost. On top of this, it has made the NEMhandle standards openly available to software developers, so that they can build the functionality into their products. This both increases take up of NEMhandle, and allows a private sector industry to benefit from public sector intellectual property. As with NEMid, the public sector has used its scale to support and stimulate the private sector.

This support for the private sector is also seen in Denmark's current work to create a pan-public sector 'basic data' set of core property and demographic

information. As part of this project, this significant data set is being made freely available to the private sector, in an explicit effort to stimulate 'data-driven' business and thus encourage new industry within the country.

All of these examples from Denmark show that the public sector does not have to have a one-dimensional, and often unsatisfactory, supplier-consumer relationship with the private sector. The Danes have shown that public sector initiatives can, with intelligent design, be used to generate savings and even new income lines for industry.

Where the Danish government does contract with the private sector it is also working hard to build stable and balanced relationships. Painful lessons from earlier contracts are being learnt. New contracts ensure that data and intellectual property are appropriately owned by the public sector and that the state can re-use technologies it has purchased. In some instances parallel contracts are being let for specific functionality, to avoid inappropriate dependence on a single supplier. Despite all of this, however, the Danes acknowledge that they are still highly dependent upon multi-national IT providers for core systems. This limits the size of the supplier market and makes it harder for them to negotiate strong commercial positions.

Many governments are adopting the 'no more big IT' approach as they continue to the journey towards digital services for their citizens, and this is something that Estonia have been adopting for a number of years.

The public sector and private sector working together was also a critical success factor in the Estonian journey to eGovernment. This partnership involved the Estonian government using the local ICT suppliers and skillset to help them achieve their Digital Society targets.

As a result of this partnership and collaboration by public and private sector Estonia has a thriving and, many would say, a world-leading ICT Industry. The focus is now on sharing these skills and knowledge beyond the Estonian border.

The Government has worked with the Private sector to ensure that any potential ICT skills gap are avoided by working to increase the number of students enrolled in ICT studies in universities. The Estonian IT Academy was

What we learnt	What we recommend
<p>eGovernment initiatives can generate innovative and mutually beneficial relationships between the public and private sector.</p>	<p>That the public sector should work with a cross-section of industry (especially core industries to a jurisdiction – such as finance industries to the Channel Islands), to explore how the digitisation of government services can:</p> <ul style="list-style-type: none"> • Make the jurisdiction more attractive to the private sector • Foster new industries
<p>The public sector can use the development of eGovernment as a way of strengthening and building local industries.</p>	<p>That an eGovernment programme should articulate what sections of its remit it wishes to be supported by local businesses and SMEs, as opposed to multi-national companies.</p>
<p>The public sector holds data of huge value to the private sector. This can be leveraged to support the growth of industry.</p>	<p>eGovernment programmes in small jurisdictions, such as the Channel Islands, can make an attractive proposition to the private sector, allowing them to buy or access population-wide (appropriately anonymised) data. Becoming, for example, the ‘big data isles’ could be very attractive to companies investing in research and development of new products.</p>

established in 2012 in order to improve the quality of ICT training and increase its international competitiveness. The Estonian government worked with local companies such as Cybernetica, Guardtime and Signwise to deliver the key eGovernment components. And now these companies, in collaboration with the Government are now exporting their skills, services and products globally.

The Relationship with Legislation

A shared feature of the Danish and Estonian eGovernment programmes is that they have carefully calibrated the relationship between the delivery of initiatives and the legislative process.

In Denmark, the government Agency for Digitisation works to the principle that **‘Legislation + Incentives = Results’**. When introducing the NEMhandle e-invoicing solution, the Danes ensured that the €30m annual

saving was achieved by making the use of the system mandatory. This legislation drove a 98% compliance rate from NEMhandle’s implementation. This approach is now standard in Denmark; with a suite of services being slated for legislatively backed ‘mandatory digitisation’ every year (for example, the new ‘digital mailbox’ solution). As is discussed above, a clear set of arrangements for supporting the ‘digitally excluded’ complements this.

Parallel to this, however, Denmark also works to make sure that legislative and political processes do not inappropriately shape its eGovernment initiatives. Digitisation programmes require significant financial input, and take a long time to complete and deliver benefits. Denmark’s work to create a core data set will, for example, take seven years between inception and completion. The Danes have recognised that the scale of these initiatives requires them to be, to some degree, insulated from the day-to-day political cycle. To do

What we learnt	What we recommend
<p>eGovernment programmes flourish when supported by a legislative requirement to use digitised services.</p>	<p>eGovernment programmes should incorporate, and be supported by, a clear programme to develop supportive legislation. This is particularly true in small states, with legislative independence, such as the Channel Islands.</p>
<p>eGovernment programmes benefit from being insulated from short-term political cycles.</p>	<p>A stable political base should be created, and formalised in a 5-year plan, to underpin any eGovernment programme.</p> <p>An independent scrutiny body, such as Denmark's Independent Project Council, should be put in place to provide non-partisan challenge of an eGovernment programme.</p>

this, the Danish government sets five-year strategies for eGovernment initiatives, ensuring cross-party agreement to them before they are approved. This means that major projects can be delivered across electoral-cycles with limited risk of being derailed by short-term political interests.

Complementing this, Denmark has invested in an 'Independent Project Council', which tracks progress on all major eGovernment initiatives. This is populated from experts across the private and public sector, and provides rigorous challenge to ensure that these initiatives are running to time and cost, and to good quality. This helps ensure that the creation of 5-year strategies for eGovernment does not divorce them from appropriate oversight and challenge.

Conclusions

CBO Projects' study of the Danish and Estonian eGovernment programmes has provided a lot of detailed learning, and clear recommendations, as to how an effective eGovernment programme should be run.

When summarised, this learning provides four fundamental success criteria for eGovernment:

- The digitisation of services must be designed with a sensitivity to the local context within which the public services are being provided
- This sensitivity must be supported by an unstinting focus on usability, ensuring the eGovernment improves on its precursors.
- This provision of high quality services needs to be underpinned by clear legislation requiring their use.
- The digitisation of eGovernment services should be seen as an opportunity to work with, and support, the private sector.

CBO Projects believes that the Channel Islands are well positioned to leverage their size and autonomy to make a success of eGovernment.

Specifically, we believe that the Channel Islands can succeed in the delivery of an eGovernment strategy because of the integrated nature of local and national government functions, the ability to develop enabling legislation and the close relationships it has with local private sector.

Initiative in Focus: Data Sharing

The Challenge:

Denmark, like many countries, has found that the challenges of sharing data are a major barrier to efficient eGovernment. Different Danish government ministries hold parallel data sets about individuals. The cost of sharing these regularly is often prohibitive, leading public sector bodies to use out-of-date or partial information about citizens.

The Solution:

Denmark recognised that this had to be resolved if they were to achieve their goal of e-government being the only channel for government transactions. Consequently, they are investing €125m over seven years to create a shared core data set of demographic, GIS and property data to be used across the public sector.

By 2020, it is estimated that this will save the Danish Government €33m a year. 80% of this will be from improved efficiency in the delivery of services to the citizen, and the other 20% from reduced data-management overheads.

In addition to this, the Danish government is making this data set freely available to private sector bodies. They anticipate that this will generate another €66m benefit a year, allowing Danish companies to use rich information about the population to build new and better-informed businesses.

Importantly, Denmark has done this solely using data that they already have the agreement to share. The generation of €99m a year benefit is being done without requiring any changes to data sharing legislation.

Initiative in Focus: Electronic Invoicing

The Challenge:

The Danish government processes 15m invoices a year. Electronic invoices are €2 cheaper to process than their paper equivalent, so Denmark knew that it could save €30m per annum, without diminishing services to the citizen, if it could effect a wholesale transition to e-invoicing.

The challenge was that e-invoicing software has traditionally been expensive, with little interoperability between competing platforms. Consequently, small and medium-sized businesses were not willing to move to e-invoicing.

The Solution:

Denmark addressed this challenge by following the maxim that 'legislation plus incentives equals results'.

The legislation put in place specified that all invoices paid by the public sector had to be received electronically. This, on its own, led to 70% of invoices to the state being electronically generated. The remaining 30% were, however, created on paper and then 'digitised' at centralised scanning bureaus. This process was necessary to allow small businesses to invoice the public sector, but was significantly diminishing the savings being achieved.

Consequently, the Danish government generated a set of e-invoicing standards, known as 'NEMhandel' (which translates as 'Easy Trade'). This included data standards for e-invoices, a centralised directory of businesses, and a set of security protocols. NEMhandel is internet-based and open source, so that any software developer can include it in their platforms.

As a result of NEMhandel, small businesses could adopt e-invoicing at a very low cost, resulting in over 90% of invoices to the public sector being generated electronically.

The open source nature of NEMhandel had an additional benefit: it created a simple platform for business-to-business electronic invoicing. Consequently, private sector adoption of NEMhandel when invoicing other companies is widespread. This initiative has, therefore, increased efficiency across Denmark's economy, not just in the public sector.

Why Involve CBO Projects?

CBO Projects is a successful Channel Island's-based management consultancy, with a proven track record of maximising the benefits delivered by technology for our private and public sector clients. Without the overheads associated with UK-based staff, we are supporting our Channel Islands clients at unparalleled value for money

We only recruit experienced people with a track record of success. Through this approach, we have brought together three highly qualified individuals, with complementary knowledge of the digital, technology and eGovernment agenda:



- **Philip Smith**, who has led a number of technology based programmes for large organisations, which delivered significant operational improvements and service delivery innovation.
- **Alastair Bisson**, who has led channel shift programmes in the private and public sector, including for FTSE100 companies.
- **Ed Gowan**, who has extensive experience of implementing channel shift in UK local government organisations, including for particularly complex services, such as adult social care.

We are building on this experience by investing in an exploratory programme to capture and understand international best practice in eGovernment. This has started with a highly successful visit to Estonia (please see our blog posts on this at cboprojects.com), and a more recent visit to Denmark.

As we hope you will agree, we have converted this expertise and learning into a straight-forward approach to implementing eGovernment, that builds from CBO Projects' core commitment to 'getting the basics right'.

We would be delighted to discuss our experience and insights in more detail with you.



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