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# Think Paper 10. Trust and Transparency: pre-requisites for effective eGovernment

Michael Blakemore and Peter Lloyd

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'Think Papers' aim to present strategic issues that will be explored with stakeholders and researchers. They are intended to be high-level summaries both of the issues and challenges, and of the ongoing work undertaken by the project team. They will be updated on the project web site <http://www.ccegov.eu/> where registered participants can contribute to interactive explorations of definitions and issues.

Think Paper 10 examines a range of ICT and eGovernment metrics to add context to the empirical material gathered through research and interviews during this project. It develops a typology of eGovernment that integrates the cost of government, ICT, service availability, service use, citizen trust and government transparency. An integrated analysis was undertaken, and the results show that the highest performing eGovernment services are strongly underpinned by citizen trust, and government transparency.

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# 1. Key Messages

- While investment in infrastructure and eGovernment service development is fundamental to service delivery, the governance characteristics of transparency and trust are critical in legitimating the investment and in creating the conditions for widespread usage of services.
- The Scandinavian model of governance remains a role model. It combines a high cost of government with high levels of trust and citizen participation, and delivers quality services. However, maintaining this model will be challenging as populations age, and pressures on government finances increase.
- Large countries have particularly complex challenges in creating and maintaining trust, particularly concerning the balance between central control and local/regional power and identity.
- New member states have particular challenges in raising investment levels for the modernisation government without raising the cost of government, at a time when raising trust and transparency will be vital in transforming government to encourage service uptake.

## 2. Introduction: Efficient and effective eGovernment

The cceGov study<sup>1</sup> has examined the relationship between organisational change and the citizen-centric provision of public services through eGovernment – providing services through channels that are convenient for citizens rather than for organisations. We have differentiated between functional eGovernment services such as classic tax, customs, car registration, and emotional services such as health and social security. Our work initially focused first on Public Value<sup>2</sup>, and the joint focus of delivering better services through cost savings, and using existing resources much more efficiently.

We observed diverse political rhetoric, such as transforming government organisationally, driving down costs, linking government reorganisation to political promises to reduce taxation, and more recently in using electronic channels to increase citizen participation with the aim of accentuating democracy<sup>3</sup>. We benefited from EC activities in the examination of efficiency and effectiveness of eGovernment<sup>4</sup>, which is one of the five pillars of the eGovernment Action plan for 2010<sup>5</sup>. The

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<sup>1</sup> <http://www.ccegov.eu/>

<sup>2</sup> The Work Foundation uses the definition “public value is what the public values, and it is the role of public managers to help determine through the democratic processes of deliberation and public engagement what social outcomes are desirable. It is through such processes that public managers can help to articulate collective citizens’ preferences and thereby redress the ‘democratic deficit’ between public services and citizens”. HORNER, L., LEKHI, R. & BLAUG, R. (2006). *Deliberative democracy and the role of public managers: Final report of The Work Foundation’s public value consortium*. London: The Work Foundation. November, 53 p.

<sup>3</sup> ANON. (2007b). *Internet contributing to change in governance structures says ESRC*. (August 3) Public Technology, [cited August 9 2007]. <http://www.publictechnology.net/modules.php?op=modload&name=News&file=article&sid=10691>

<sup>4</sup> [http://ec.europa.eu/information\\_society/activities/egovernment\\_research/doc/e\\_e\\_%202007\\_2010.pdf](http://ec.europa.eu/information_society/activities/egovernment_research/doc/e_e_%202007_2010.pdf)

<sup>5</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52006DC0173:EN:NOT>

other four pillars are; no citizen left behind; implementing high-impact key services; putting key enablers in place; and, strengthening participation and democratic decision-making.

From the material we have covered in the Think Papers<sup>6</sup>, and from evidence of eGovernment service usage, it is clear that while it is possible to reduce the costs of government and raise efficiency, the more efficient delivery of government services (through both electronic and non-electronic channels) may not in itself result in citizen and business uptake of those services. In effect the 'e' in eGovernment has become less an issue of 'electronic' than 'engaged'. The emphasis therefore is moving more towards building 'engagement' with citizens so that they use services through trusted channels.

We therefore have explored other possible contributory factors, since there may not be a direct causal link between organisational change, cost reduction and service quality. In their study *The Cost of Government*<sup>7</sup>, Osborne and Hutchinson observe from US evidence that there is a broad price range within which citizens are willing to pay their taxes, and thus to trust government to spend the money effectively. Furthermore, the best service delivery often comes when citizens are embedded in the prioritisation and design of the services in a transparent relationship with government. Government needs both to be 'rightsized' and it needs to be transparent with its use of information, as is seen by Osborne and Hutchinson with the New York Compstat<sup>8</sup> and Baltimore CitiStat<sup>9</sup> systems, where citizens see online the information the administrations are using in their decision-making, and where also the citizens are deeply engaged in prioritising services.

We explored these and other issues in depth through the 20 cceGov Interviews<sup>10</sup> with stakeholders across Europe and beyond. The scenarios emerging were complex, often paradoxical. In the UK there has been a significant emphasis on reducing the price of government, and in making it more efficient, even though recent research indicates that many organisations are unclear about the return on investment<sup>11</sup>. The eGovernment activity has been subsumed into the Transformational Government Agenda, but the uptake of eGovernment services was comparatively low, and the "*un-coordinated growth of government websites*" has led to a confusing landscape of service offerings<sup>12</sup>. In addition, while local government was important in delivering local services, it increasingly was being tied to central control mechanisms through performance targets and budget allocations.

In Finland we were informed that the high levels of taxation were broadly accepted by citizens because there was a high level of trust in government. The Finnish President has emphasised the link between government openness and transparency, and the trust that can be built to

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<sup>6</sup> <http://www.ccegov.eu/?Page=ThinkPapers> Where we examine issues such as citizens as customers, business techniques and the public sector, participation and democracy, information technologies and citizens, eGovernment strategies and policies, typologies of organisational change, and trust and identity.

<sup>7</sup> OSBORNE, D. & HUTCHINSON, P. (2004) *The Price of Government: Getting the Results We Need in an Age of Permanent Fiscal Crisis*, New York, Basic Books.

<sup>8</sup> <http://www.nyc.gov/html/nypd/html/chfdept/compstat-process.html>

<sup>9</sup> <http://www.ci.baltimore.md.us/news/citistat/index.html>

<sup>10</sup> <http://www.ccegov.eu/?Page=Case+Studies> We interviewed leading eGovernment projects in France, Belgium, Germany, the Netherlands, Denmark, Estonia, Finland, Norway, India, Dubai, Ireland, the UK, and Greece.

<sup>11</sup> ANON. (2007c). *Organisations are in dark about workflow ROI, says survey*. (August 7) Public Technology, [cited August 9 2007]. <http://www.publictechnology.net/modules.php?op=modload&name=News&file=article&sid=10738>

<sup>12</sup> NAO. (2007). *Government on the internet: progress in delivering information and services online*. (July 13) National Audit Office, [cited July 13 2007]. [http://www.nao.org.uk/publications/nao\\_reports/06-07/0607529es.htm](http://www.nao.org.uk/publications/nao_reports/06-07/0607529es.htm)

encourage the active participation of citizens in the democratic process<sup>13</sup>. However, the change of Government in 2007 had led to an acknowledgment that there will be significant challenges maintaining the high-cost model of government in the face of demographic change and pressures on tax income<sup>14</sup>.

Estonia's Information Society strategy highlights the need to protect citizen information and to build citizen trust through transparency<sup>15</sup>. While debates in the UK about identity cards focus on emotional issues of security, surveillance and privacy<sup>16</sup>, Estonia has developed a fully integrated identity card that can be used for a wide range of services from social security to transportation. Underpinning the identity card is a dramatic act of transparency. An Estonian citizen can log onto a secure Web service and see which civil servant in which ministry has used their data, and for what purposes, on a daily basis. The Estonian transparency linked effectively to the Netherlands eCitizen project which also highlights the interrelationship between trust and transparency through its promotion of rights linked to responsibilities and obligations<sup>17</sup>. Citizens cannot expect to receive services unless they are aware also of their obligations to society. It was put simply to us: you have a right to live in peace in your house, and that is accompanied by your obligations not to inflict noise and disturbance on your neighbours.

In Belgium the Crossroads Bank<sup>18</sup> delivers highly integrated services in a delivery area (social security) that we note as being 'emotional'. To overcome concerns that highly integrated personal information may prejudice citizen privacy, Crossroads works as a trusted third party which has a clearing house function between stakeholders. It does not store integrated citizen information, but uses a reference directory that contains details of what files a person has in the stakeholder institutions, and only processes the data when needed. As with Estonia, this 'due diligence' process serves to reassure citizens that their data are being both protected, and used for clearly defined purposes.

Trust can also be built within organisations through transparency of process. This was evident in the Irish tax agency Revenue Online (ROI)<sup>19</sup>, where organisational reform was undertaken in a partnership with employees, who have become flexible in skills and knowledge, as the service priorities of ROI have shifted from checking paper forms to checking broader compliance. By valuing the knowledge that is embedded in its human capital, ROI has built trusted and flexible relationships with staff.

The empirical evidence was therefore starting to build up a picture where eGovernment works best when set in systems of good governance, and where good governance explicitly involves trust and transparency. It was important that we explore whether those observations are

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<sup>13</sup> HALONEN, T. (2007). *Keynote Address by President of the Republic Tarja Halonen At the Seventh Doha Forum on Democracy, Development and Free Trade in Qatar on 23 April 2007*. (April 23) President of Finland, [cited May 3 2007]. <http://www.kauppalehti.fi/4/i/yritykset/stt-info/tiedote.jsp?selected=kaikki&oid=20070401/11773460033730>

<sup>14</sup> ANON. (2007a). *Intense bargaining over taxation expected in government talks*. (April 11) Helsingin Sanomat, [cited May 4 2007]. <http://www.hs.fi/english/article/Intense+bargaining+over+taxation+expected+in+government+talks/1135226487704>

<sup>15</sup> ESTONIA. (2006). *Estonian Information Society Strategy 2013*. Tallinn: Ministry for Economic Affairs and Communications, Estonia. November 30, 24 p. [http://www.riso.ee/en/files/IYA\\_ENGLISH\\_v1.rtf](http://www.riso.ee/en/files/IYA_ENGLISH_v1.rtf)

<sup>16</sup> And are also deeply embedded in associated issues of security against terrorism and border control: KABLENET. (2007a). *Biometrics tackle immigration abuse*. (August 8) Kable Government Computing, [cited August 9 2007]. <http://www.kablenet.com/kd.nsf/Frontpage/1401F0E3504EA10980257330005636FE?OpenDocument>

<sup>17</sup> "As a citizen I know which services I am entitled to under which conditions. Government ensures that my rights and duties are at all times transparent". BURGER. (2007). *e-Citizen Charter*. Burger@Overheid.nl [cited March 13 2007]. [http://www.burger.overheid.nl/service\\_menu/english/what\\_we\\_do](http://www.burger.overheid.nl/service_menu/english/what_we_do)

<sup>18</sup> <http://www.epractice.eu/cases/1908>

<sup>19</sup> <http://www.epractice.eu/cases/249>

supported quantitatively. There was not time, or resources, to set up another pan-European survey, so we focused on a broad set of existing surveys that cover governance, eGovernment, and the Information Society.

Therefore this exploratory focus is on sixteen metrics relating to government and governance that have been produced by eleven organisations: the variables and sources used are detailed in Annex 1.

Themes such as the cost of government are covered by Eurostat taxation statistics. Transparency and trust are covered by Transparency International (looking at government transparency and good governance), the Global Peace Survey and the University of Cambridge Well-Being survey (in effect looking at contentment in society), and the Edelman Trust Survey. The Edelman Trust survey was a 30-minute telephone survey conducted in October - November 2006 with respondents in 17 countries, asking them for example to rank institutions on a nine-point scale of trustworthiness, involving also credibility of the institutional leaders and of information sources. The availability of ICT infrastructure, the provision and use of eServices are covered by Network Readiness metrics from the Economist Intelligence Unit, and EGEP statistics from the European Commission. The extent and quality of eServices is covered by internationally accepted metrics from Cap Gemini, Brown University and Accenture surveys. The actual uptake and use of eServices is provided by Eurostat statistics.

### 3. How were the data sources combined?

Exploring causal relationships between surveys of different times and different methodologies can be contentious. Furthermore, all the surveys used report statistics at country level. They are subject therefore to the ecological fallacy: comparing a state such as Estonia with a population of just over 3 million with the UK and 65 million population can be statistically unwise, but the simple fact is that European governance focuses strongly on the state, and there is policy logic in using harmonised country-level surveys as a starting point to explore pan-European characteristics.

So, rather than applying unnecessary statistical precision to the metrics (listed in Annex 4) since almost all of them were composite statistics, ranked metrics (listed in Annex 3) were used to explore relationships on the basis of Spearman's Rank Correlation between pairs of metrics.

Annex 1 contains the full list of data sources identified, and the organisations which produce them. However, because of missing data (not all studies covered all EU28 member states) the full correlation matrix was sparse, and did not really provide much insight. Instead, a subset of 23 countries was identified as having data for most variables, and rank correlations were calculated. The variables, and the themes they relate to, are:

- A TaxLab - Implicit tax rate on labour (Eurostat)
- B TaxGDP - Taxes as a percentage of GDP "The cost of government" (Eurostat)
- C Corrup - Corruption Perception Index "Transparency" (Transparency International)
- D Network - Networked Readiness Index "infrastructure" (World Economic Forum)
- E eGovBr - eGovernment Service Rankings (Brown University -both the 2006 and 2007 ranks are used)

- F eGovSoph - eGovernment Sophistication (Cap Gemini)
- G eGovAv - eGovernment Service Availability (Cap Gemini)
- H eReady - e-Readiness Overall Index (Economist Intelligence Unit)
- I ConBusAd - e-Readiness Index – Consumer and Business adoption of e-services (Economist Intelligence Unit)
- J eGovIndiv - Individual use of the Internet to interact with public authorities (Eurostat)
- K eGovEnt - Enterprises using the Internet to interact with public authorities (Eurostat)
- N Peace - Global Peace Index “Societal Stability” (Vision of Humanity Project))
- O Maturity - eGovernment Maturity Index (Accenture)
- P EdelmanGov - Edelman Trust Index “Trust”

**Table 1: Correlations between the Metrics**

SUBSET n=23	A	B	C	D	E	F	G	H	I	J	K	N
A TaxLab	-											
B TaxGDP	0.64	-										
C Corrup	0.17	0.70	-									
D Network	0.14	0.64	0.97	-								
E eGovBr	-0.19	0.21	0.62	0.63	-							
F eGovSoph	0.19	0.54	0.72	0.73	0.42	-						
G eGovAv	0.20	0.56	0.70	0.72	0.43	0.98	-					
H eReady	0.17	0.75	0.94	0.93	0.61	0.65	0.66	-				
I ConBusAd	0.19	0.71	0.95	0.95	0.64	0.77	0.76	0.96	-			
J eGovIndiv	0.23	0.56	0.79	0.78	0.48	0.51	0.50	0.70	0.70	-		
K eGovEnt	0.25	0.24	0.21	0.19	0.00	0.23	0.20	0.24	0.25	0.21	-	
N Peace	0.22	0.45	0.59	0.56	0.22	0.39	0.31	0.50	0.51	0.64	0.37	-
Significance 1% level is $r > 0.6$ .												

The intercorrelations and co-linearities between the variables were assessed (See Annex 2 for details), and highly intercorrelated variables were discarded.

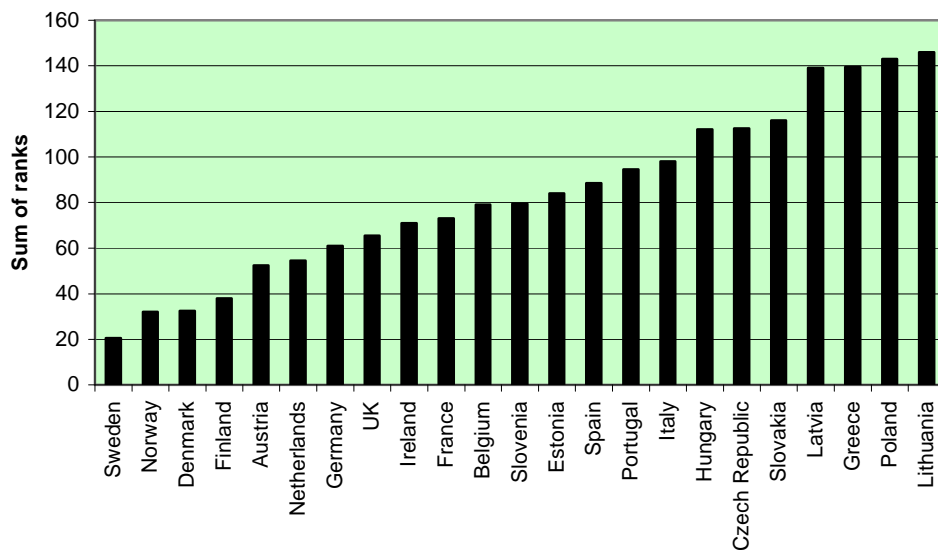
Variables B, D, E, G, H, J and N were identified as contributing to an exploration of relationships between trust, transparency, cost, delivery and uptake of eGovernment services. For each member state the ranks were summed and the resulting totals were ranked:

**Table 2: Composite Rankings**

1. Sweden	20.5	8. UK	65.5	16. Italy	98
2. Norway	32	9. Ireland	71	17. Hungary	112
3. Denmark	32.5	10. France	73	18. Czech Republic	112.5
4. Finland	38	11. Belgium	79	19. Slovakia	116
5. Austria	52.5	12. Slovenia	79.5	20. Latvia	139
6. Netherlands	54.5	13. Estonia	84	21. Greece	139.5
7. Germany	61	14. Spain	88.5	22. Poland	143
		15. Portugal	94.5	23. Lithuania	146



Composite Rankings



## 4.A typology of trust and eGovernment

The quantitative ranking above does not in itself provide a definitive segmentation of eGovernment in Europe. However, it does have a role in helping to underpin some of the key outcomes from the research, interviews, and workshops undertaken during the cceGov project. There has been a clear and consistent message regarding trust and transparency. There has been the apparent contradiction presented by the Scandinavian countries where high tax rates are broadly accepted by citizens, when in countries such as the UK the political emphasis is on lower taxation – yet the uptake of eGovernment services has been more robust in Scandinavia. The following grouping of countries therefore uses Table 2 as the basis using also the qualitative material gathered during the project, and also referring to other research and information sources.

### 4.1. Scandinavian Role Models?

The range of metrics show that **Sweden** has a high cost of government, high levels of trust, high infrastructure and ICT readiness, and a high IT spend per head. It has a relatively low ranking on business use of eGovernment services, but very high levels of citizen use, and a continuing investment into infrastructure and public service efficiency<sup>20</sup>. However, the reputation of the Nordic ‘social model’ has been questioned, particularly by McKinsey in the context of employment levels, noting that citizens on long-term sickness benefit are counted as being employed<sup>21</sup>.

<sup>20</sup> EPRACTICE. (2007q). *Stockholm gives new boost to eGovernment*. (June 25) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3663>

<sup>21</sup> McKinsey “conclude that the ‘true’ unemployment rate is around 15-17%, which puts Sweden among the worst job-fillers in the EU”. ECONOMIST. (2006). *Admire the best, forget the rest*. (September 7) Economist, [cited September 11 2006]. [http://www.economist.com/world/europe/displaystory.cfm?story\\_id=7880173](http://www.economist.com/world/europe/displaystory.cfm?story_id=7880173)

**Norway** ranks high on cost, high on trust and social stability. It has very high levels of citizen use of services and medium levels of business use. Like other Scandinavian countries, Norway was quick to provide eGovernment services, and citizens and businesses were quick to use them<sup>22</sup>. Local and national government are working together to deliver relevant services through multiple channels, where security and privacy are visibly maintained (essential for maintaining trust), and “provide citizens with the option to participate in a democratic dialogue”<sup>23</sup>.

**Denmark** metrics indicate high levels of trust, and a high cost of government. There are medium rankings of service sophistication, but high levels of business use, and quite high levels of citizen use of eGovernment services. Denmark, like Sweden, ranks high on investment in infrastructure and readiness. Admittedly the high levels of business use may be boosted by compulsion, for in 2006 regulations mandated that “companies dealing with state institutions must submit their invoices electronically”<sup>24</sup>, but the ability to mandate compliance in itself indicates a trusted relationship between government and business. In 2006 the Government also initiated personal web pages for citizens<sup>25</sup>, and Borger.dk will provide a single portal for citizens to access public services. Borger.dk does not implement these services but provides an overview of them and guides people directly to the relevant service where they can complete their online transaction.

**Finland** has a high cost of government and very high levels of trust, and shows strong societal stability. A high rank in investment in ICT is contrasted with medium rankings on service sophistication and stability. However, there are very high levels of service use by citizens and business. Finland places a high priority on measuring and maintaining “trust of citizens in administration” within its Information Society Strategy<sup>26</sup>, but as noted earlier, the recent change of government in Spring 2007 brought with it policy concerns over the cost of government and demographic change<sup>27</sup>.

On a superficial level, the Scandinavian countries provide a potential role model that we could aspire to if only we could develop the critical linkage between the cost of government, service availability, citizen trust and social responsibility. Nevertheless, some of the assumptions of the model are critiqued, as has Scandinavia’s high levels of ‘happiness’ on a recent global ‘happiness index’: “a study by the University of Southern Denmark earlier this year found success in happiness surveys might be down to low expectations”<sup>28</sup> rather than absolute levels of happiness!

Each of the Scandinavian countries present high cost governments, high levels of trust in government, and generally high levels of eGovernment service uptake, While Sweden has the

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<sup>22</sup> EMARKETER. (2001). *Norway Leads the Way with E-Government*. (November 12) Taylor Nelson Sofres, [cited November 9 2001]. [http://www.emarketer.com/estatnews/estats/eglobal/20011112\\_tns.htm](http://www.emarketer.com/estatnews/estats/eglobal/20011112_tns.htm), FERRELL, K. (2003). *Scandinavia Dominates Information Society Index: Sweden Takes Fourth Straight First-Place*. (July 15) TechWeb News, [cited July 27 2003]. <http://www.techweb.com/wire/story/TWB20030715S0004>

<sup>23</sup> NALRA. (2006). *eMunicipality 2009 – the digital leap*. Oslo: Norwegian Association of Local and Regional Authorities (KS). February 1, 39 p. <http://www.ks.no/upload/77518/eMunicipality%202009.zip>

<sup>24</sup> FURLONG, R. (2006). *E-revolution forces Danes online*. (March 2) BBC, [cited March 4 2006]. <http://news.bbc.co.uk/1/hi/world/europe/4767852.stm>

<sup>25</sup> EPRACTICE. (2006g). *Everyone on-line – State to provide personal web pages for Danish citizens*. (July 10) Interoperable Delivery of European eGovernment Services to public Administrations, European Commission, [cited July 14 2006]. <http://www.epractice.eu/document/399>

<sup>26</sup> FINLAND. (2006). *Government Policy Decision on the Development of IT Management in State Administration*. (June 15) Ministry of Finance, Finland, [cited May 2 2007]. [http://www.vm.fi/vm/en/04\\_publications\\_and\\_documents/01\\_publications/08\\_other\\_publications/20060615Govern/name.jsp](http://www.vm.fi/vm/en/04_publications_and_documents/01_publications/08_other_publications/20060615Govern/name.jsp)

<sup>27</sup> FINLAND. (2007). *Finland’s new government says to overhaul labour policy*. (April 16) Ministry for Foreign Affairs, Finland, [cited May 4 2007]. <http://newsroom.finland.fi/stt/showarticle.asp?intNWSAID=15500&group=Politics>

<sup>28</sup> BBC. (2007d). *What can the Danes teach us about happiness?* (April 17) BBC, [cited May 3 2007]. [http://news.bbc.co.uk/2/hi/uk\\_news/magazine/6563639.stm](http://news.bbc.co.uk/2/hi/uk_news/magazine/6563639.stm)

highest rankings it is clearly open to criticism as a single role model. In September 2006 Carl Bildt, a former Prime Minister of Sweden, presented a composite ideal in his

*“tongue-in-cheek recipe for the perfect ‘Nordic model’, stretching the geography: Finland’s education, Estonia’s progressive tax policy, Denmark’s labour market, Iceland’s entrepreneurship, Sweden’s management of big companies and Norway’s oil”<sup>29</sup>.*

## 4.2. Authoritative and Trusted Government

Beyond the Scandinavian model, **Austria** is an individual leader in the composite rankings in delivering public value at a moderate cost. The cost of government ranks quite high, though the trust and transparency levels rank only medium, as does investment in ICT per person. Network readiness, service availability and sophistication are matched by high levels of citizen and business use of services. At the Eastern Europe eGovernment Conference (Prague, April 2007) , Reinhard Posch (Austrian Federal Chief Information Officer), in his keynote, argued that electronic ID is central to service delivery, and the Government had adopted an electronic ID law in 2004<sup>30</sup>. The Austrian strategy has successfully followed an evolutionary strategy, and has focused on efficient and effective use of IT and organisational transformation, and was undertaking a ‘stock-check’ of activity in the summer of 2007 through a census of all activity<sup>31</sup>. This has made it an attractive model to new member states such as Bulgaria<sup>32</sup>. Austria shows strong government commitment to deliver services that matter, and which deliver both high levels of efficiency and public value in society that has respect for government.

The **Netherlands** has a medium cost of government, but high levels of trust and transparency, and is highest on the Edelman trust ranking within Europe. Service sophistication and availability ranks medium, but there are very high levels of citizen use, and medium levels of business use of eGovernment services. The Netherlands had placed considerable emphasis on both measuring and maintaining trust and transparency through the independent eCitizen Programme<sup>33</sup>, which has been important in reassuring citizens of their privacy in the context of the new Citizen Service Number (CSN)<sup>34</sup>. The Netherlands has focused significantly on institutional reform, agency status and privatisation (we the two case studies of the Kadaster and RDW show in our interviews<sup>35</sup>), and research indicates that reform has been undertaken where:

*“The Netherlands seems to have embraced Osborne and Gaebler’s ‘steering not rowing’ principle: policy making and policy implementation and delivery are separated, and*

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<sup>29</sup> ECONOMIST. (2006). *Admire the best, forget the rest*. (September 7) Economist, [cited September 11 2006]. [http://www.economist.com/world/europe/displaystory.cfm?story\\_id=7880173](http://www.economist.com/world/europe/displaystory.cfm?story_id=7880173)

<sup>30</sup> KABLENET. (2004). *Austria adopts ID law*. (February 5) Kable News Service, [cited February 7 2004]. <http://www.kablenet.com/kd.nsf/Frontpage/AB428434681467ED80256E300039B1A0?OpenDocument>

<sup>31</sup> EPRACTICE. (2007e). *eGovernment census*. (July 2) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3678>

<sup>32</sup> EPRACTICE. (2006b). *Bulgarians turn to Austria for eGovernment know-how*. (September 4) European Commission, [cited September 7 2006]. <http://www.epractice.eu/document/354>

<sup>33</sup> BURGER. (2007). *e-Citizen Charter*. Burger@Overheid.nl [cited March 13 2007]. [http://www.burger.overheid.nl/service\\_menu/english/what\\_we\\_do](http://www.burger.overheid.nl/service_menu/english/what_we_do), EPRACTICE. (2007d). *Dutch citizens content with eGovernment*. (July 13) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3714>

<sup>34</sup> EPRACTICE. (2007b). *Citizen Service Number gets green light*. (July 24) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3722>

<sup>35</sup> <http://www.ccegov.eu/?Page=Case+Studies>

*incentive structures are introduced to ensure that local authorities and market actors will contribute to realizing the policy objectives of national government*<sup>36</sup>.

The maintenance of trust will be vital as budget pressures create challenges not only for governance, but for the physical security of the Netherlands as climate change presents risks of flooding. The robust sea defences in recent years meant that “*no catastrophic flood has befallen the nation since 1953. That freedom from disaster has bred complacency*”<sup>37</sup>, and as the 27 separate organisations responsible for managing water resources need to move beyond their individual databases, and integrate and share information more effectively for the wider national good.

### 4.3. Service Delivery and Trust Challenges

This is a group of countries that are working to match service delivery to use in an environment of concerns over trust.

**Germany** has a medium cost of government at a time that the investment legacy of unification still hurts. The medium ranking on trust must be cautioned in the context of the dichotomy of the old west/east Germany cultures, although recent figures indicate that “*Germany’s western and eastern states show no significant differences in their use of the internet to contact the authorities*”<sup>38</sup>. There is low service sophistication and availability and use by individuals and businesses ranks only moderately, and it has good infrastructure readiness. While there is a stated national strategy (Bund Online<sup>39</sup>) the strongly federated nature of eGovernment<sup>40</sup> also means that Germany displays a much more heterogeneous eGovernment landscape. Recent research also indicates higher levels of concern over privacy, at a time when the Government is introducing unique citizen numbers<sup>41</sup>, and some reluctance by citizens to engage with new forms of democratic engagement<sup>42</sup>.

The **UK** has a medium cost of government, and moderate levels of overall trust, although the Edelman Survey shows the UK to be the least trusted government in its study covering some European states. The UK has a low Peace index indicating societal uncertainty. There is a high level of sophistication and service availability that is not matched by use, which is low overall in spite of network availability. The UK indicates a country whose eGovernment uptake is held back

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<sup>36</sup> BORGHI, V. & BERKEL, R. V. (2007) New Modes of Governance in Italy and the Netherlands: the Case of Activation Policies. *Public Administration*, 85, 83–101.

<sup>37</sup> TALBOT, D. (2007). *Part I: Saving Holland*. (June 18) Technology Review, [cited June 18 2007].  
<http://www.technologyreview.com/Energy/18895/>

<sup>38</sup> EPRACTICE. (2006c). *eGovernment majority*. (November 6) European Commission, [cited November 9 2006].  
<http://www.epractice.eu/document/276>

<sup>39</sup> EPRACTICE. (2006d). *eGovernment talks in Berlin*. (July 31) European Commission, [cited August 2 2006].  
<http://www.epractice.eu/document/375>

<sup>40</sup> EPRACTICE. (2006a). *Action Plan 2009*. (October 30) European Commission, [cited November 2 2006].  
<http://www.epractice.eu/document/277>, EPRACTICE. (2007p). *State administration goes VoIP*. (February 12) European Commission, [cited February 19 2007]. <http://www.epractice.eu/document/165>, EPRACTICE. (2006m). *Meeting the eMayors – eGovernment Days in Lower Saxony*. (November 13) European Commission, [cited November 17 2006].  
<http://www.epractice.eu/document/263>

<sup>41</sup> EPRACTICE. (2007r). *Unique citizen numbers from July*. (June 22) European Commission, [cited August 9 2007].  
<http://www.epractice.eu/document/3660>

<sup>42</sup> POL-DI.NET. (2006). *Facilitating Active Citizenship. E-participation in the United Kingdom and Germany: A Status Report with Examples From Both Countries*. Berlin: British Council Germany. June, i+82 p.  
[http://www.britishcouncil.de/pdf/e\\_participation.pdf](http://www.britishcouncil.de/pdf/e_participation.pdf)

both by relatively low levels of Internet use<sup>43</sup>, by over-complex Web sites<sup>44</sup>, and by concerns over trust and transparency typified by privacy concerns over the planned introduction of identity cards<sup>45</sup>, and doubts about the effectiveness of e-Voting<sup>46</sup>. It is of relevance that in the summer of 2007 the new Prime Minister, Gordon Brown, accentuated the building of citizen trust<sup>47</sup>.

**Ireland** ranks relatively low on the cost of government with moderate levels of trust. The high levels of business service use, but medium levels of citizen use, may be explained by the higher concentration of business around Dublin and major cities/towns where broadband and network access is highest. For Ireland the continuing investment in broadband and infrastructure for rural areas may help to increase use, but there will be remaining challenges over problems of trust in government. The uptake in services continues to be uneven, with 25% of potential users accessing the integrated Reachservices.ie portal<sup>48</sup>, part of the Public Services Broker (PSB) initiative. There also is significant investment in local eGovernment initiatives, involving community groups, schools and inclusion<sup>49</sup>, and local planning applications<sup>50</sup>.

**France** has a high cost of government, but low levels of trust and low Peace index, with medium rankings on network readiness and sophistication, There is relatively low ranking for eGovernment use. The Government in 2006 expressed concerns over public cohesion and 'civic obligations':

*"En France, où la loi n°97-1019 du 28 octobre 1997 a suspendu le service militaire obligatoire pour les jeunes gens nés après le 31 décembre 1978, l'instauration d'un service civique obligatoire est évoquée depuis le début des années 2000. Selon ses promoteurs, ce service, mixte, permettrait de renforcer à la fois le sens civique des jeunes et la cohésion sociale"*<sup>51</sup>.

The new French Government in 2007 has provided a strong focus on challenging the high cost of government and in delivering services that are trusted and which deliver high levels of public value. There remains a challenge to *"move away from a traditional mindset of dependency on the central ministries towards one where the field services could exercise greater autonomy in their operational management and be held more accountable for their own actions"*<sup>52</sup>.

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<sup>43</sup> "A large proportion (two fifths) of the population do not have internet access at home and there is a risk that many may not benefit from the advantages of using online services, particularly the elderly or people who lack the skills necessary to use the internet effectively". NAO. (2007). *Government on the internet: progress in delivering information and services online*. (July 13) National Audit Office, [cited July 13 2007]. [http://www.nao.org.uk/publications/nao\\_reports/06-07/0607529es.htm](http://www.nao.org.uk/publications/nao_reports/06-07/0607529es.htm)

<sup>44</sup> BBC. (2007b). *Government websites 'too complex'*. (July 12) BBC, [cited July 13 2007]. [http://news.bbc.co.uk/1/hi/uk\\_politics/6896614.stm](http://news.bbc.co.uk/1/hi/uk_politics/6896614.stm)

<sup>45</sup> KABLENET. (2007b). *Privacy core to ID success, ICO warns*. (July 10) Kable Government Computing, [cited July 10 2007]. <http://www.kablenet.com/kd.nsf/Frontpage/3ED1B90A1E21850780257313005A25AB?OpenDocument>

<sup>46</sup> BBC. (2007c). *Halt e-voting, says election body*. (August 2) BBC, [cited August 3 2007]. [http://news.bbc.co.uk/1/hi/uk\\_politics/6926625.stm](http://news.bbc.co.uk/1/hi/uk_politics/6926625.stm)

<sup>47</sup> HUTTON, R. (2007). *Brown, Seeking to Rebuild Trust, Plans U.K. Constitution Change*. (July 3) Bloomberg, [cited July 3 2007]. <http://www.bloomberg.com/apps/news?pid=20601102&sid=abieTyVCDzbc&refer=uk>

<sup>48</sup> SMITH, G. (2007). *Extending its Reach to taxpayers*. (April 30) Silicon Republic, [cited May 16 2007]. <http://www.siliconrepublic.com/news/news.nv?storyid=single8229>

<sup>49</sup> RYAN, E. (2007). *'Quiet revolution' stirring in e-government*. (February 23) Electricnews.net, [cited February 26 2007]. <http://www.enr.ie/news.html?code=9922570>

<sup>50</sup> BYRNE, N. (2007). *A self-made success for Mayo*. (May 8) Silicon Republic, [cited May 16 2007]. <http://www.siliconrepublic.com/news/news.nv?storyid=single8283>

<sup>51</sup> FRANCE. (2006). *Étude de législation comparée n° 168 - décembre 2006 - Le service civique obligatoire*. (December) Senate of France, [cited January 9 2007]. [http://www.senat.fr/lc/lc168/lc168\\_mono.html](http://www.senat.fr/lc/lc168/lc168_mono.html)

<sup>52</sup> COLE, A. & JONES, G. (2005) *Reshaping the State: Administrative Reform and New Public Management in France. Governance*, 18, 567-588.

**Belgium** has a very high ranking on cost of government, but ranks medium on trust. The overall low ranked levels of service sophistication and availability have medium levels of uptake by citizens, and very low ranked uptake by businesses. ICT spend per head ranks low. However, significant projects such as the Crossroads Bank<sup>53</sup> show how new projects can span both institutional barriers, and deliver public value across the Flemish/Walloon landscape.

**Slovenia** ranks medium/high on cost of government, and is medium throughout most of the rankings, although it has the potential to capitalise on its high level of service readiness and sophistication. The moderate rankings on trust and peace indicate that the relatively high costs of government, and high levels of service availability. Slovenia aims to widen eGovernment usage through a strategy that builds on wider best practice and a shared architecture<sup>54</sup>, and by promoting citizen participation in the construction of eGovernment<sup>55</sup>.

#### 4.4. eEstonia

It does seem that **Estonia** is a very individual model by maximising investment in trust and public value. It ranks low on the cost of government, medium on trust and peace. The May 2007 events over Russian/Estonian identity, where the Government moved a statue commemorating Russian soldiers, and the result was riots and a diplomatic dispute with Russia<sup>56</sup>), show that trust is a complex issue for Estonia. However, it ranks strongly on sophistication and availability of services, network readiness, and ICT spend per head. Combined with the particularly impressive information transparency Estonia shows how low cost, effective investment, and the building of citizen trust translates into clear public value. Although levels of service use by citizens and business ranks only medium, the conditions are in place for continuing and effective uptake of services, as was evident in the use of eVoting in 2007<sup>57</sup>, participatory governance<sup>58</sup>, and the integrated ID card<sup>59</sup> with very transparent use by Government. These conditions provide strong foundations for trusted use of electronic services.

#### 4.5. Iberian and Italian Usage and Trust challenges

**Spain** has a medium ranking for cost of government and transparency, but is high trust on the Edelman scale. There are medium levels of network readiness, ICT spend, service sophistication and availability. Individual usage is medium ranked, but business is low. The Government announced a 43% increase in information society investment for 2007<sup>60</sup>, with both public and

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<sup>53</sup> <http://www.epractice.eu/cases/1908>

<sup>54</sup> EPRACTICE. (2007o). *Slovenia adopts eGovernment Action Plan 2010*. (February 26) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/136>

<sup>55</sup> EPRACTICE. (2007c). *Citizens' Forum enables eDebate*. (July 30) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3741>

<sup>56</sup> LANDLER, M. & MARKOFF, J. (2007). *In Estonia, what may be the first war in cyberspace*. (May 29) New York Times, [cited May 29 2007]. [http://www.nytimes.com/2007/05/29/technology/29estonia.html?\\_r=1&oref=slogin](http://www.nytimes.com/2007/05/29/technology/29estonia.html?_r=1&oref=slogin)

<sup>57</sup> BBC. (2007a). *Estonia claims new e-voting first*. (March 1) BBC, [cited May 4 2007]. <http://news.bbc.co.uk/2/hi/europe/6407269.stm>

<sup>58</sup> EPRACTICE. (2007m). *New website gives Estonians their say in government issues*. (July 13) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3708>

<sup>59</sup> EPRACTICE. (2006f). *Estonian eID card passes 1 million threshold*. (October 23) European Commission, [cited October 25 2006]. <http://www.epractice.eu/document/295>

<sup>60</sup> EPRACTICE. (2006h). *Government gives budget boost to information society*. (October 30) European Commission, [cited November 2 2006]. <http://www.epractice.eu/document/282>

private investment<sup>61</sup>, investment in electronic ID cards<sup>62</sup>, and legislation that will now make electronic transactions with government as legally binding as conventional physical transactions<sup>63</sup>,

**Portugal** is similar in profile to Spain, though citizen and business use are equally medium/low on the rankings and it has a higher ICT spend than Spain, and a higher Peace Index ranking. Portugal has experienced significant infrastructure investments since joining the EU, and in 2003 Prime Minister Barroso set out the Government strategy “*to put behind us a country that is embittered by its backwardness, and to become a country confident in its progress*”<sup>64</sup>. While Portugal is set in this grouping using the metrics listed in the index, the Government is focusing on maximising access to the infrastructure<sup>65</sup>, and the concluding section of this study notes that an updated eGovernment metric shows significant improvement for Portugal, and it seems that the investments are now delivering public value.

**Italy** has low rankings on trust and transparency, in spite of the relatively high costs of government. The low network readiness, medium rankings on service sophistication and availability result in very low levels of use by citizens, but paradoxically business use is high. The low Wellbeing and Peace Index perhaps reflect the political turbulence in Italy, although in previous years there was significant political prioritisation of eGovernment<sup>66</sup>.

#### 4.6. Eastern and Southern European investment and trust challenges

In 2004 a report by the Economist Intelligence Unit noted “*Given limited resources and competing priorities, Central Europe’s governments will be well-advised to focus digital initiatives on areas most in need of change*”<sup>67</sup>. The situation in 2007 shows both that investment took place, but that it remains difficult to raise the overall value of the investments towards the levels experienced in older member states.

**Hungary** ranks medium on cost of government, medium/low on trust and transparency, and medium on network readiness, service availability and sophistication. The medium ranking in ICT spend underpins the challenges that exist in raising the medium/low levels of citizen, and low levels of business use. In recent years the government has invested heavily in raising institutional

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<sup>61</sup> EPRACTICE. (2006q). *Plan Avanza successful in mobilising extra private and public-sector investment*. (November 20) European Commission, [cited December 5 2006]. <http://www.epractice.eu/document/262>

<sup>62</sup> EPRACTICE. (2007h). *eIdentity and eSecurity*. (July 30) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3734>

<sup>63</sup> EPRACTICE. (2006p). *New laws to protect citizens’ electronic access*. (November 20) European Commission, [cited November 21 2006]. <http://www.epractice.eu/document/261>

<sup>64</sup> REUTERS. (2003). *Portugal Aims to Get Wired, Boost Economy*. (June 27) Reuters, [cited June 30 2003]. <http://www.reuters.com/newsArticle.jhtml?type=internetNews&storyID=3001945>

<sup>65</sup> EPRACTICE. (2007n). *Portuguese ministers hand out computers as internet access booms*. (July 30) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3735>

<sup>66</sup> ANON. (2003b). *e-Government: Stanca Launches the Challenge, Europe Online*. (March 10) AGI Online, [cited March 12 2003]. <http://www.agenziaitalia.it/english/news.pl?doc=200303101803-0207-RT1-ECO-0-NF82&page=0&id=agionline-eng.italyonline>, KABLENET. (2003). *Berlusconi’s e-government flourish*. (March 11) Kable News Service, [cited March 11 2003]. <http://www.kablenet.com/kd.nsf/Frontpage/BB6356B7AB02CD2E80256CE60052671E?OpenDocument>, ANON. (2003a). *e-Government: Second Phase Now with 209.5 mln, says Stanca*. (August 14) AGI Online, [cited September 3 2003]. <http://www.agi.it/english/news.pl?doc=200308141857-0098-RT1-ECO-0-NF82,NF30&page=0&id=agionline-eng.italyonline>

<sup>67</sup> EIU. (2004). *E-government in Central Europe: Rethinking public administration*. London: Economist Intelligence Unit. August, 21 p. <http://www.eiu.com/>

capacity<sup>68</sup>, institutional reform<sup>69</sup>, and ICT infrastructure<sup>70</sup>. Back in 2003 Bogdanowicz observed for the then Candidate Countries that “*CCs today confront, and will continue to confront, difficult choices between ‘Bread and/or broadband’. Only policies offering a compromise solution to this dilemma — by seeking growth and at the same time, attending to welfare and quality of life issues — will be politically sustainable*”<sup>71</sup>, and these tensions remain evident in the development of eGovernment.

The **Czech Republic** is ranked medium/low on cost of government, relatively low on trust and transparency and medium on the Peace Index. Medium/low rankings on service readiness and sophistication link to low citizen service use, through paradoxically high in business use. There is a high IT spend per head. The Czech Republic shows promise of an upward trajectory if the ICT investment can be maintained, and is accompanied both by better service availability and higher levels of citizen trust in government to deliver public value. In November 2006 a conference on e-Society development in Central and Eastern Europe (participants came from Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Serbia, Macedonia, Montenegro, Romania, Czech Republic) stressed the potential role of NGOs in legitimating eGovernment developments: “*it was underlined that it is unlikely to have high impact without the full involvement of NGOs which represent the interests of citizens in various ways and act as a bridge across the gap of trust which very often exists between citizens and governments*”<sup>72</sup>. In June 2007 the Ministry of Information Technology was integrated into the Ministry of the Interior to provide better coordination of eGovernment activities<sup>73</sup>.

**Slovakia** has low cost ranking on the cost of government, a low ranking on trust and medium Peace Index. There is low IT spend, low service sophistication and availability. In spite of this the level of service use is relatively highly ranked, Slovakia has significant latent potential to keep raising service use if investment is maintained in physical and institutional capacity<sup>74</sup>, and that services are relevant in delivering public value that help increase trust levels.

The final group of **Latvia, Greece, Poland and Lithuania** present low levels of trust, low levels of service sophistication, availability and use. This group has major investment challenges, since raising the cost of government to deliver more public value may prejudice the process of raising trust. These governments naturally have focused on eGovernment applications that are revenue generating such as tax and customs.

**Greece** is medium ranking on the cost of government, but low on trust, transparency, and societal Peace. There is a low IT spend, low service availability and sophistication, with very low levels of use by citizens, and paradoxically a very high ranking on business use of services. Greece

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<sup>68</sup> EPRACTICE. (2006j). *Hungary to learn about eGovernment*. (July 31) European Commission, [cited August 2 2006]. <http://www.epractice.eu/document/371>

<sup>69</sup> EPRACTICE. (2006n). *Minister calls for reform of state administration to facilitate eGovernment*. (December 4) European Commission, [cited December 5 2006]. <http://www.epractice.eu/document/232>

<sup>70</sup> EPRACTICE. (2006i). *Hungarian government plans ‘one-stop shop’ for government services*. (August 28) European Commission, [cited August 31 2006]. <http://www.epractice.eu/document/367>

<sup>71</sup> BOGDANOWICZ, M., BURGELMAN, J.-C., CENTENO, C., GOUROVA, E. & CARAT, G. (2003). *Factors of regional/national success in Information Society developments: Information Society strategies for candidate countries*. (volume 8, number 10 (October)) First Monday, [cited October 9 2003]. [http://www.firstmonday.org/issues/issue8\\_10/bogdanowicz/index.html](http://www.firstmonday.org/issues/issue8_10/bogdanowicz/index.html)

<sup>72</sup> EDRI. (2006). *E-society in SE Europe*. (November 22) EDRI.org, [cited November 24 2006]. <http://www.edri.org/edrigram/number4.22/endoritorial>

<sup>73</sup> EPRACTICE. (2007f). *eGovernment moves to Ministry of the Interior*. (June 18) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3638>

<sup>74</sup> EPRACTICE. (2006k). *Learning to drive – public sector employees improve their computer know-how*. (December 4) European Commission, [cited December 4 2006]. <http://www.epractice.eu/document/234>



suffers from low levels of political trust<sup>75</sup>, and while there are beacons of excellence such as e-Trikala<sup>76</sup>, these often are projects driven by dynamic local politicians, rather than being coherently developed throughout the country<sup>77</sup>.

**Poland** has the lowest corruption perception/transparency ranking, the lowest ranking also for individual use, and very low rankings for network and service readiness. There has been recent social and political turbulence, for example surrounding the impact of the “*nationalist conservative Law and Justice government*”<sup>78</sup> and the purging of people who had contacts with the communist secret police<sup>79</sup>. The relatively high costs of access to the Internet have been evident through people on the German border going into Germany to use free Internet services there<sup>80</sup>. The border issues have been acknowledged in the joint Polish-German initiative “*Across borders – eGovernment in structurally weak regions*” where joint eGovernment initiatives have been proposed<sup>81</sup>. While there is clearly institutional turbulence in Government there have been prior investments in electronic health cards<sup>82</sup>, computers for schools<sup>83</sup>, and proposals for secure eSignatures via mobile phones to promote eCommerce and eGovernment use<sup>84</sup>.

**Lithuania** ranks very low on the cost of government, low on trust, Peace, and network readiness. There is moderate individual service use, and medium business use, are matched by a moderate ICT spend. There are real challenges in raising investment levels without raising the cost of government, at a time when raising trust and transparency will be vital in encouraging service uptake. However, internet usage is expanding well<sup>85</sup>, the Government has invested heavily in eHealth, eVoting, access through libraries, and digital signatures<sup>86</sup>, and transparency and trust are being built through electronic access to Parliament<sup>87</sup>.

This overall grouping may, like Bulgaria, look to nations such as Austria as role models in the effective and efficient construction of services on a low cost government basis, and to the

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<sup>75</sup> ECONOMIST. (2007b). *School for scandal*. (April 4) Economist, [cited April 10 2007].  
[http://www.economist.com/world/europe/displaystory.cfm?story\\_id=8972460](http://www.economist.com/world/europe/displaystory.cfm?story_id=8972460)

<sup>76</sup> BASU, I. (2007). *Digital City*. (June 1) Govtech.com, [cited June 25 2007]. <http://www.govtech.com/gt/articles/124734>

<sup>77</sup> <http://www.ccegov.eu/?Page=Case+Studies>

<sup>78</sup> ECONOMIST. (2007a). *Last rites*. (August 16) Economist, [cited August 16 2007].  
[http://www.economist.com/world/europe/displaystory.cfm?story\\_id=9657113](http://www.economist.com/world/europe/displaystory.cfm?story_id=9657113)

<sup>79</sup> DEMPSEY, J. (2007). *Poland's purges open Communists' playbook*. (February 21) International Herald Tribune, [cited February 26 2007]. <http://www.ihf.com/articles/2007/02/21/news/letter.php>

<sup>80</sup> REUTERS. (2007). *Free Internet lures Poles to Germany*. (January 5) Reuters, [cited January 6 2007].  
[http://today.reuters.com/news/articlenews.aspx?type=internetNews&storyID=2007-01-05T141357Z\\_01\\_L05596691\\_RTRUKOC\\_0\\_US-GERMANY-POLAND-INTERNET.xml&WTmodLoc=InternetNewsHome\\_C2\\_internetNews-5](http://today.reuters.com/news/articlenews.aspx?type=internetNews&storyID=2007-01-05T141357Z_01_L05596691_RTRUKOC_0_US-GERMANY-POLAND-INTERNET.xml&WTmodLoc=InternetNewsHome_C2_internetNews-5)

<sup>81</sup> EPRACTICE. (2007g). *eGovernment tackles regional problems*. (July 2) European Commission, [cited August 9 2007].  
<http://www.epractice.eu/document/3679>

<sup>82</sup> EPRACTICE. (2006e). *Electronic patient card for every citizen in Poland by the end of 2007*. (November 27) European Commission, [cited November 28 2006]. <http://www.epractice.eu/document/244>

<sup>83</sup> EPRACTICE. (2007g). *eGovernment tackles regional problems*. (July 2) European Commission, [cited August 9 2007].  
<http://www.epractice.eu/document/3679>

<sup>84</sup> EPRACTICE. (2007l). *Mobile eAdministration – using your phone to access eServices*. (January 29) European Commission, [cited February 5 2007]. <http://www.epractice.eu/document/177>

<sup>85</sup> EPRACTICE. (2007k). *Lithuanian household internet users up by 20 % on last year*. (July 9) European Commission, [cited August 9 2007]. <http://www.epractice.eu/document/3690>

<sup>86</sup> EPRACTICE. (2006o). *New eHealth project for Lithuania*. (October 23) European Commission, [cited October 25 2006].  
<http://www.epractice.eu/document/289>, EPRACTICE. (2006l). *Lithuanian Parliament approves eVoting*. (November 20) European Commission, [cited November 21 2006]. <http://www.epractice.eu/document/253>, EPRACTICE. (2007j). *Libraries help open up Information Society in Lithuania*. (February 12) European Commission, [cited February 19 2007].  
<http://www.epractice.eu/document/159>, EPRACTICE. (2007a). *300.000 eSignature certificates to be freely distributed to citizens*. (February 12) European Commission, [cited February 19 2007]. <http://www.epractice.eu/document/160>

<sup>87</sup> EPRACTICE. (2006u). *Towards eParliament in Lithuania*. (July 24) European Commission, [cited August 10 2006].  
<http://www.epractice.eu/document/389>

Netherlands for a robust trust-based society, and they particularly can learn from role models such as Estonia so that they accompany service development with the development of stronger trust and transparency.

## 5. The dynamic landscape of European eGovernment performance

This exploratory review of a range of government and governance metrics focused on national level comparisons, using metrics that are harmonised, and which provide insights into broad eGovernment characteristics of 23 European nations.

The Scandinavian model still predominates, but fracture points are starting to appear. The strong basis of trust, transparency, and an accepted high price of government is an ideal that may become difficult to sustain in the face of demographic shifts.

Austria and the Netherlands show that culture, and trust, are strong influences on citizen participation and engagement. Then there is a mixed group of big countries with big governments, showing that scale, as well as trust is important. Big government and big countries have a local problem, and trust and identity are harder to create and embed. Within this grouping are two small nations: Ireland could exploit its small size better if it can increase trust and diminish the urban/rural divides, and Slovenia's relatively high cost of government can capitalise on building trust and transparency.

Overall, transparency matters, and trust is a central enabler. Price can be high if trust and transparency are high, but there are challenges in retaining trust if the financial conditions change. Moving from a low tax base, with a low level of trust, is a challenge for new member states when considering how emotional services can be brought online, and can be used

Below this initial national-level assessment there will be a rich sub-national complex picture. Further work could involve building an extended typology involving economic and social surveys, drill down below the national to the regional and local, expand coverage to more European states, and explore possible scenarios for new member states.

Finally, we see this analysis as a starting point for an ongoing understanding of the dynamic eGovernment landscape. As the analysis was being finalised the 2007 Brown University eGovernment classification was published. When the 2007 figures were used the resulting composite table showed some notable variations to Table 2.

**Table 3: Composite Ranks (using the 2007 Brown University ranking)**

1. Sweden	29	8. UK	65.5	16. Estonia	96
2. Denmark	35	9. Ireland	73	17. Hungary	105
3. Finland	38	10. France	75	18. Czech Republic	106.5
4. Norway	39	11. Belgium	76	19. Slovakia	123
5. Austria	45	12. Portugal	80.5	20. Poland	136.5
6. Netherlands	56.5	13. Slovenia	83	21. Greece	139.5
7. Germany	61	14. Spain	90.5	22. Latvia	141.5
		15. Italy	92	23. Lithuania	145

**Table 4: Shifts in Brown University eGovernment Scores 2006-2007**

1. Portugal	12.5	8. Finland	1.7	16. Netherlands	-0.6
2. Austria	5.4	9. UK	1.7	17. Greece	-0.9
3. Italy	5.1	10. Germany	1.4	18. Latvia	-1.6
4. Czech Republic	5	11. France	0.9	19. Slovakia	-2.5
5. Hungary	2.8	12. Ireland	0.5	20. Norway	-2.6
6. Poland	2.6	13. Lithuania	0.4	21. Spain	-2.9
7. Belgium	2.4	14. Denmark	0.3	22. Sweden	-5.6
		15. Slovenia	-0.5	23. Estonia	-6

The Brown University metrics are not focused on trust, and their analysis is a detailed technical investigation where “websites are evaluated for the presence of various features dealing with information availability, service delivery, and public access”. However, the shifts from one year to another show some declines in Scandinavia. Austria, Italy and the Czech Republic show increases in score, indicating the continuing robustness of the Austrian model, and for the other two countries the fact that the scores show a dynamically changing eGovernment landscape.

The biggest increase in score was for Portugal, and this may reflect the outcomes of recent significant investment in ‘electronic post boxes’ for citizens<sup>88</sup>, service quality for eGovernment<sup>89</sup>, eInvoicing<sup>90</sup>, and online tax returns where “over the past four years, the number of electronic tax declarations in Portugal has risen from 306,000 to 1.57 million”<sup>91</sup>.

<sup>88</sup> EPRACTICE. (2006t). *Portuguese get ‘e-post’*. (July 10) European Commission, [cited August 10 2006]. <http://www.epractice.eu/document/400>

<sup>89</sup> EPRACTICE. (2006s). *Portugal’s regulator sets out parameters for internet access service quality*. (October 30) European Commission, [cited November 2 2006]. <http://www.epractice.eu/document/279>

<sup>90</sup> EPRACTICE. (2006r). *Portugal puts eInvoicing to the test*. (November 27) European Commission, [cited November 28 2006]. <http://www.epractice.eu/document/243>

<sup>91</sup> EPRACTICE. (2007i). *eTax boom*. (April 27) European Commission, [cited May 4 2007]. <http://www.epractice.eu/document/43>

While we must not read too much into the shift in position from one updated metric, the composite table continues to provide a context against which we can place the interview and research material from this project. It does continue to underline what we called the 'bricolage' of eGovernment<sup>92</sup>, and to the different rates at which member states are implementing and using eGovernment, we now add the different levels of investment capability, and the very different levels of trust and transparency, all of which critically influence implementation and use.

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<sup>92</sup> BLAKEMORE, M. (2006). *Think Paper 4: eGovernment strategy across Europe - a bricolage responding to societal challenges*. (November) Ccegov Project, [cited November 22 2006]. <http://www.ccegov.eu/thinkpapers.asp>

## 6. Annex 1: Sources of Data

### Variable A: Implicit tax rate on labour employed 2005

Source: Eurostat<sup>93</sup>

### Variable B: The total amount of taxes and social contributions as a % of GDP 2005

Source: Eurostat<sup>94</sup>

### Variable C: Corruption Perception Index 2006

Source: Transparency International<sup>95</sup>

*“The CPI ranks more than 150 countries by their perceived levels of corruption, as determined by expert assessments and opinion surveys”.*

### Variable D: Networked Readiness Index (NRI) 2006-2007

Source: World Economic Forum<sup>96</sup>

*“Networked Readiness Index (NRI) to measure the degree of preparation of a nation or community to participate in and benefit from ICT developments. The NRI is composed of three component indexes which assess: - environment for ICT offered by a country or community; readiness of the community's key stakeholders (individuals, business and governments); usage of ICT among these stakeholders”*

### Variable E: eGovernment Ranking 2006/2007

Source: Insidepolitics.org (Brown University)<sup>97</sup>

*“Websites are evaluated for the presence of various features dealing with information availability, service delivery, and public access. Features assessed included the name of the nation, region of the world, and having the following features: online publications, online database, audio clips, video clips, non-native languages or foreign language translation, commercial advertising, premium fees, user payments, disability access, privacy policy, security features, presence of online services, number of different services, digital signatures, credit card payments, email address, comment form, automatic email updates, website personalization, personal digital assistant (PDA) access, and an English version of the website”.*

### Variable F: eGovernment Online Sophistication Index 2006

Source: Cap Gemini<sup>98</sup>

*“In order to measure the indicator “availability of public services online”, an e-service sophistication model was developed used This model illustrates the different degrees of sophistication of online public services going from ‘basic’ information provision over oneway and two way interaction to ‘full’ electronic case handling. Online sophistication: The level of online availability of the basic public service.*

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<sup>93</sup> [http://epp.eurostat.ec.europa.eu/extraction/evalight/EVALight.jsp?A=1&language=en&root=/theme2/gov/gov\\_a\\_tax\\_itr](http://epp.eurostat.ec.europa.eu/extraction/evalight/EVALight.jsp?A=1&language=en&root=/theme2/gov/gov_a_tax_itr)

<sup>94</sup> <http://europa.eu/rapid/pressReleasesAction.do?reference=STAT/07/41&format=HTML&aged=0&language=en&guiLanguage=en>

<sup>95</sup> [http://www.transparency.org/policy\\_research/surveys\\_indices/global/cpi](http://www.transparency.org/policy_research/surveys_indices/global/cpi)

<sup>96</sup> <http://www.weforum.org/en/initiatives/gcp/Global%20Information%20Technology%20Report/index.htm>

<sup>97</sup> <http://www.insidepolitics.org/egovt07int.pdf>

<sup>98</sup> [http://www.capgemini.com/resources/thought\\_leadership/2006\\_online\\_availability\\_of\\_public\\_services/](http://www.capgemini.com/resources/thought_leadership/2006_online_availability_of_public_services/)

### **Variable G: eGovernment Fully Available Index 2006**

Source: Cap Gemini<sup>99</sup>

*“In order to measure the indicator “availability of public services online”, an e-service sophistication model was developed used This model illustrates the different degrees of sophistication of online public services going from ‘basic’ information provision over oneway and two way interaction to ‘full’ electronic case handling. Fully available online: The total number of basic public services that are fully (=100%) available online”.*

### **Variable H: EIU e-readiness Index 2007**

Source: Economist Intelligence Unit<sup>100</sup>

*“The EIU e-readiness rankings for 2007 ranked 69 countries in terms of six criteria. In order of importance, these are: consumer and business adoption; connectivity and technology infrastructure; business environment, social and cultural environment, government policy and vision; and legal and policy environment”.*

*“1. Connectivity and technology infrastructure Weight in overall score: 20% 2. Business environment Weight in overall score: 15% 3. Social and cultural environment Weight in overall score: 15% 4. Legal environment Weight in overall score: 10% 5. Government policy and vision Weight in overall score: 15% 6. Consumer and business adoption Weight in overall score: 25%”*

### **Variable I: EIU e-readiness Index component Consumer and business adoption 2007**

Source: Economist Intelligence Unit<sup>101</sup>

*“6. Consumer and business adoption. Weight in overall score: 25%” Category description: If connectivity, societal adoption, and legal and policy environments are necessary enabling platforms for e-readiness, then the actual utilisation of digital channels by people and companies is a measure of successful implementation. The Economist Intelligence Unit looks at the amount that businesses and consumers spend on accessing ICT services and their adoption levels of e-commerce. This year the Economist Intelligence Unit has also re-oriented the category to include analysis of the availability of digital channels for accessing government services”.*

### **Variable J: Percentage of individuals who have used the Internet, in the last 3 months, for interaction with public authorities 2006**

Source: Eurostat<sup>102</sup>

### **Variable K: Percentage of enterprises which use the Internet for interaction with public authorities 2006**

Source: Eurostat<sup>103</sup>

### **Variable L: Well-Being Index 2004**

Source: University of Cambridge, Department of Economics

*“First, we assess the determinants of well-being using a multilevel modelling approach using data at the national, regional and individual levels. Second, we have extended the*

<sup>99</sup> [http://www.capgemini.com/resources/thought\\_leadership/2006\\_online\\_availability\\_of\\_public\\_services/](http://www.capgemini.com/resources/thought_leadership/2006_online_availability_of_public_services/)

<sup>100</sup> [http://globaltechforum.eiu.com/index.asp?layout=rich\\_story&channelid=4&categoryid=29&doc\\_id=10599](http://globaltechforum.eiu.com/index.asp?layout=rich_story&channelid=4&categoryid=29&doc_id=10599)

<sup>101</sup> [http://globaltechforum.eiu.com/index.asp?layout=rich\\_story&channelid=4&categoryid=29&doc\\_id=10599](http://globaltechforum.eiu.com/index.asp?layout=rich_story&channelid=4&categoryid=29&doc_id=10599)

<sup>102</sup> [http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=0.1136250.0.45572555&\\_dad=portal&\\_schema=PORTAL](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0.1136250.0.45572555&_dad=portal&_schema=PORTAL)

<sup>103</sup> [http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=0.1136250.0.45572555&\\_dad=portal&\\_schema=PORTAL](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=0.1136250.0.45572555&_dad=portal&_schema=PORTAL)

*model to account for the effects of social interactions within each group, as well as intrinsic socio-demographic indicators and higher-level exogenous contextual factors”.*

**Variable M: Public Administration Spend on IT per person, adjusted by GDP Per Head**

Source: eGovernment Economics Project<sup>104</sup>

**Variable N: Global Peace Index 2007**

Source: Vision of Humanity Project<sup>105</sup>

*“This project has approached the task on two fronts— the first aim is to produce a scoring model and global peace index that ranks 120 nations by their relative states of peace using 24 indicators. The indicators have been selected as being the best available datasets that reflect the incidence or absence of peace, and contain both quantitative data and qualitative scores from a range of trusted sources. The second aim is to use the underlying data and results from the Global Peace Index to begin an investigation into the relative importance of a range of potential determinants or “drivers” that may influence the creation and nurturance of peaceful societies, both internally and externally”.*

**Variable O: 2005 eGovernment overall maturity scores**

Source: Accenture<sup>106</sup>

*“Our scoring this year consists of two components, each with a weighting of 50 percent. The first is service maturity, which measures the level to which a government has developed an online presence. Service maturity takes into account service breadth (the number of national services available online) and service depth (the level of completeness at which the service is offered (publish-, interact- or transact-level service). The second component is customer service maturity, which measures the extent to which government agencies manage interactions with their customers (citizens and businesses) and deliver service in an integrated way. Our customer service maturity score considers how well governments have addressed the four dimensions of leadership in customer service: citizen-centered, multi-channel, cross-government service delivery and proactive communications about the services to the citizens and businesses that are the end recipients”.*

**Variable P: Trust Barometer 2007 - Trust in Government in general**

Source: Edelman<sup>107</sup>

*“The 2007 Edelman Trust Barometer is the firm’s eighth trust and credibility survey. The survey was produced by research firm StrategyOne. The survey was conducted by a 30-minute telephone survey conducted in October - November 2006. The survey population included respondents who are between the ages of 35 and 64; college educated; in the top 25% of household income nationally; report a significant interest and engagement in the media, economic, and policy affairs. The nations represented include United States (400 respondents), China (300), United Kingdom (150), Germany (150), France (150), Italy (150), Spain (150), the Netherlands (150), Sweden (150), Poland (150), Russia (150), Ireland (150), Mexico (150), Brazil (150), Canada (150), Japan (150), South Korea (150), and India (150)”.*

<sup>104</sup> [http://82.187.13.175/eGEP/Static/Contents/final/D.1.3Expenditure\\_Study\\_final\\_version.pdf](http://82.187.13.175/eGEP/Static/Contents/final/D.1.3Expenditure_Study_final_version.pdf)

<sup>105</sup> <http://www.visionofhumanity.com/rankings/>

<sup>106</sup> [https://www.accenture.com/NR/rdonlyres/081E84B0-E655-4F9B-95DF-94A3F34B09FA/0/leadership\\_customerservice.pdf](https://www.accenture.com/NR/rdonlyres/081E84B0-E655-4F9B-95DF-94A3F34B09FA/0/leadership_customerservice.pdf)

<sup>107</sup> <http://www.edelman.com/trust/2007/>

## 7. Annex 2: Correlation Evaluation

- Variable A TaxLab: Implicit tax rate on labour employed 2005. This variable correlates only weakly with all except the total taxes variable (B) and is therefore discounted.
- Variable B TaxGDP: The total amount of taxes and social contributions as a % of GDP 2005. This has strong correlations with: Corrup, eReady, ConBusAd. This variable is the one which we identify as being the 'cost of government'.
- Variable C Corrup: Corruption Perception Index 2006. This variable is used to equate with trust and transparency. Strongest correlations are with: Network, eReady, ConBusAd. Strong correlations with: TaxGDP, eGovSoph, eGovAv. The key correlation is 0.97 with Network, indicating that Network Readiness is best in countries with high levels of government transparency and trust. This means that Variable C could be discarded since it is in effect measured also by Variable D, with 0.97 meaning that 94% of the variance is explained by this relationship.
- Variable D Network: Networked Readiness Index (NRI) 2006-2007. Strongest correlations with: eReady, ConBusAd. Strong correlations with: eGovSoph, eGovAv, eGovIndiv
- Variable E eGovBr: eGovernment Ranking 2007. Strong correlations are not really evident with this variable, the Brown University Global eGovernment rankings. There are correlations in the .6 range, and this variable is retained for further examination since it is a ranking with a global, rather than a regional perspective.
- Variable F eGovSoph: eGovernment Online Sophistication Index 2006. Strongest correlations with: eGovAv, which at 0.98 indicates that these two variables are so strongly correlated that they measure much the same things – 96% of the variance is explained by this relationship. F is discarded in favour of G
- Variable G eGovAv: eGovernment Fully Available Index 2006. Strong correlations with: Corrup, Network, ConBusAd. Full availability of services is used most when there is a high level of trust, as well as high levels of network readiness/availability.
- Variable H eReady: EIU e-readiness Index 2007. Strongest correlations with: Corrup (.95) and Network (.95) and ConBusAd (.96) cover variances of 88%, 86% and 92% respectively. There are also strong correlations with TaxGDP and ConBusAd. This variable further confirms the value of trust and transparency in the successful delivery and utilisation of services, and variable I is discarded.
- Variable I ConBusAd: EIU e-readiness Index component Consumer and business adoption 2007. Discarded due to the intercorrelation with Variable H.
- Variable J eGovIndiv: Percentage of individuals who have used the Internet, in the last 3 months, for interaction with public authorities 2006. Strongest correlations with: Corrup, Network, ConBusAd, and eReady.
- Variable K eGovEnt: Percentage of enterprises which use the Internet for interaction with public authorities. This variable generally has lower correlations, and is not included in the summary of rankings.
- Variable L WellBeing: Well-Being Index 2004. Not analysed in the subset because there was insufficient coverage



- Variable M ITSpHead: Public Administration Spend on IT per person, adjusted by GDP Per Head. Not analysed in the subset because there was insufficient coverage
- Variable N Peace: Global Peace Index 2007. Relatively strong correlations with: Corrup, Network, ConBusAd
- Variable O Maturity: 2005 eGovernment overall maturity scores. Not analysed in the subset because there was insufficient coverage
- Variable P EdelmanGov: Trust Barometer 2007 - Trust in Government in general. Not analysed in the subset because there was insufficient coverage

## 8. Annex 3: Rankings

Country	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	TaxLab	TaxGDP	Corrup	Network	eGovBr	eGovSoph	eGovAv	eReady	ConBusAd	eGovIndiv	eGovEnt	WellBeing	ITSpHead	Peace	Maturity	EdelmanGov
Austria	8	7	7	8	19.5	1	1	6	4	7	7	8	13	7		
Belgium	2	3	12	12	24	17.5	17.5	9	12	10.5	20	7	16	8	9.5	
Bulgaria		21	25.5	28	28			26	26	26	24			26		
Cyprus	26	20	18	24	25.5	20	20			23.5	26		22	25		
Czech Republic	6	18.5	21.5	19	16	22	21.5	18	19	19	10.5		5	10		
Denmark	14	2	2	1	14.5	9	9	1	3	6	2.5	1	2	2	1	
Estonia	13	24	14	9	10	4	2	16	13.5	12	15		8	18		
Finland	5	6	1	3	7	9	10	5	5.5	4	1	2	3	4	3.5	
France	3	4	10.5	11	9	9	7.5	11	10.5	13.5	17	11	7	20	2	6
Germany	9	10	9	7	3	17.5	17.5	8	8	8.5	23	12	10	9	7.5	7
Greece	11	16	25.5	25	27	21	21.5	19	22	25	4.5	13	20	22		
Hungary	7	13.5	19	18	21	13	15.5	20	18	19	25		19	13		
Ireland	23	22.5	10.5	10	2	11	15.5	10	9	13.5	4.5	3	18	3	9.5	4
Italy	4	8	20	20	12	14	12	13	13.5	21.5	2.5	15	15	19		5
Latvia	17	25	23.5	23	19.5	26	26	21	24	15.5	27		23	23		
Lithuania	15	27	21.5	21	25.5	19	19	24	20.5	23.5	10.5		21	21		
Luxembourg	22	12	7	13	18	23	23			5	6	6	9			
Malta	25	15	16.5	14	11	2	3	12	10.5	21.5	16		14			
Netherlands	19	11	5	4	6	15.5	14	4	7	2.5	14	5	6	14	5	1
Norway	10	5	4	6	8	4	5	7	5.5	1	13			1	3.5	
Poland	18	22.5	27	27	23	24	24.5	23	23	27	18		25	17		8
Portugal	20	18.5	15	15	17	12	11	15	15.5	19	19	14	12	6	12	
Romania		28	28	26	22			25	25	28	28			16		
Slovakia	16	26	23.5	22	13	25	24.5	22	20.5	8.5	9		24	12		
Slovenia	12	9	16.5	16	14.5	7	7.5	17	17	10.5	12		11	11		
Spain	21	17	13	17	4	15.5	13	14	15.5	15.5	21	10	17	15	11	3
Sweden	1	1	3	2	5	4	4	2	1	2.5	8	4	1	5	6	2
UK	24	13.5	7	5	1	6	6	3	2	17	22	9	4	24	7.5	9

Country	A	B	C	D	E	F	G	H	I	J	K	L	M	N
	TaxLab	TaxGDP	Corrup	Network	eGovBr	eGovSoph	eGovAv	eReady	ConBusAd	eGovIndiv	eGovEnt	WellBeing	ITSpHead	Peace
SUBSET														
Austria	8	7	6.5	8	17.5	1	1	6	4	6	6			7
Belgium	2	3	11	12	21	16.5	16.5	9	11	9.5	18			8
Czech Republic	6	16	18.5	17	15	20	19.5	17	18	18	9.5			10
Denmark	14	2	2	1	13.5	8	8	1	3	5	2.5			2
Estonia	13	20	13	9	10	3	2	15	12.5	11	14			17
Finland	5	6	1	3	7	8	9	5	5.5	4	1			4
France	3	4	9.5	11	9	8	6.5	11	10	12.5	15			19
Germany	9	10	8	7	3	16.5	16.5	8	8	7.5	21			9
Greece	11	14	22	22	23	19	19.5	18	21	22	4.5			21
Hungary	7	12.5	16	16	19	12	14.5	19	17	18	22			13
Ireland	22	19	9.5	10	2	10	14.5	10	9	12.5	4.5			3
Italy	4	8	17	18	11	13	11	12	12.5	20	2.5			18
Latvia	17	21	20.5	21	17.5	23	23	20	23	14.5	23			22
Lithuania	15	23	18.5	19	22	18	18	23	19.5	21	9.5			20
Netherlands	19	11	5	4	6	14.5	13	4	7	2.5	13			14
Norway	10	5	4	6	8	3	4	7	5.5	1	12			1
Poland	18	17.5	23	23	20	21	21.5	22	22	23	16			16
Portugal	20	17.5	14	13	16	11	10	14	14.5	18	17			6
Slovakia	16	22	20.5	20	12	22	21.5	21	19.5	7.5	8			12
Slovenia	12	9	15	14	13.5	6	6.5	16	16	9.5	11			11
Spain	21	15	12	15	4	14.5	12	13	14.5	14.5	19			15
Sweden	1	1	3	2	5	3	3	2	1	2.5	7			5
UK	23	12.5	6.5	5	1	5	5	3	2	16	20			23
n=23														

## 9. Annex 4: Raw Statistics

Country	A	B	C	D	E	F	G	H	I	J	K	N	O	P
	TaxLab	TaxGDP	Corrup	Network	eGovBr	eGovSoph	eGovAv	eReady	ConBusAd	eGovIndiv	eGovEnt	Peace	Maturity	EdelmanGov
Austria	40.7	43.6	8.6	5.17	30.6	95	83	8.39	9.1	33	81	1.483		
Belgium	43	47.7	7.3	4.93	28.4	74	47	7.9	7.95	30	59	1.493	46	
Bulgaria		34.8	4	3.53	26			5.01	4.45	8	46	1.936		
Cyprus	23.1	36.2	5.6	4.12	28.3	66	35			13	44	1.915		
Czech Republic	41.5	36.3	4.8	4.28	31.7	61	30	6.32	6.7	17	76	1.524		
Denmark	37.4	51.2	9.5	5.71	31.8	85	63	8.88	9.15	43	87	1.377	56	
Estonia	37.6	31	6.7	5.02	34	90	79	6.84	7.6	29	69	1.684		
Finland	41.9	44	9.6	5.59	35.6	85	61	8.43	8.9	47	93	1.447	54	
France	42.4	45.8	7.4	4.99	34.7	85	65	7.77	8.15	26	66	1.729	55	26
Germany	39.2	40.2	8	5.22	41.5	74	47	8	8.45	32	49	1.523	48	24
Greece	37.9	36.7	4	3.98	28	62	30	6.31	6.2	9	84	1.791		
Hungary	40.8	38.6	5.2	4.33	30.5	81	50	6.16	7	17	45	1.575		
Ireland	26.3	32.2	7.4	5.01	41.9	84	50	7.86	8.25	26	84	1.396	46	37
Italy	42	40.8	4.9	4.19	32.9	80	58	7.45	7.6	16	87	1.724		32
Latvia	36.3	29.6	4.7	4.13	30.6	47	10	5.88	5.5	25	40	1.848		
Lithuania	37	29.2	4.8	4.18	28.3	68	40	5.76	6.35	13	76	1.788		
Luxembourg	29	39.1	8.6	4.9	30.7	60	25			46	83			
Malta	23.9	37.7	6.4	4.52	33.6	92	75	7.56	8.15	16	68			
Netherlands	31	39.2	8.7	5.54	37.4	79	53	8.5	8.65	52	70	1.62	50	66
Norway	38.9	45	8.8	5.42	35	90	72	8.35	8.9	57	74	1.357	54	
Poland	34.6	34.2	3.7	3.69	30.1	53	20	5.8	5.8	6	61	1.683		17
Portugal	29.8	36.3	6.6	4.48	31.3	83	60	7.14	7.35	17	60	1.481	34	
Romania		28.8	3.1	3.8	30.2			5.32	4.95	3	39	1.682		
Slovakia	36.5	29.5	4.7	4.15	32.3	51	20	5.84	6.35	32	77	1.571		
Slovenia	37.8	40.7	6.4	4.41	31.8	87	65	6.66	7.2	30	75	1.539		
Spain	29.4	36.4	6.8	4.35	40.6	79	55	7.29	7.35	25	58	1.633	45	40
Sweden	45.9	52.1	9.2	5.66	38.3	90	74	8.85	9.35	52	80	1.478	49	57
UK	24.8	38.6	8.6	5.45	42.6	89	71	8.59	9.25	24	52	1.898	48	16