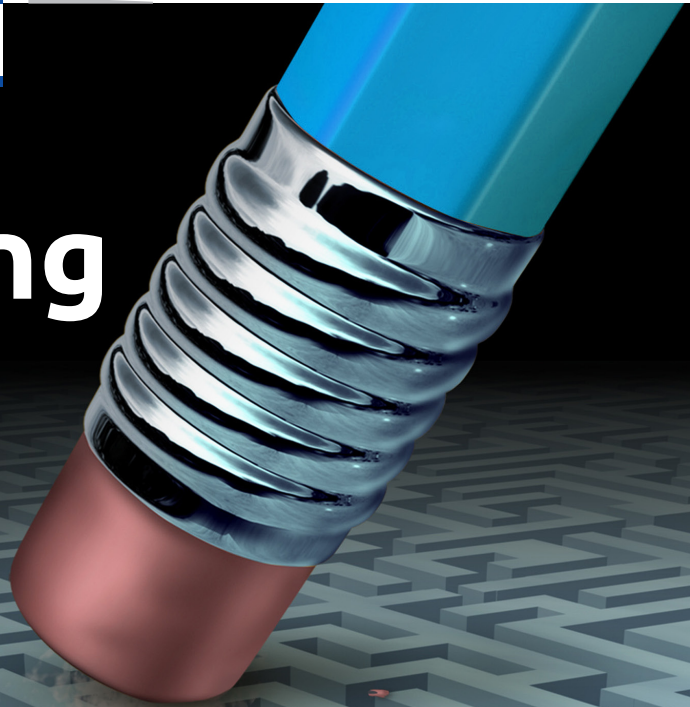




# Future-proofing eGovernment for a Digital Single Market



**FINAL INSIGHT REPORT: June 2015**

A study prepared for the European Commission DG  
Communications Networks, Content and Technology

*Digital  
Agenda for  
Europe*

This study has been prepared by Capgemini, IDC, Sogeti, and Politecnico di Milano for the Directorate General for Communications Networks, Content and Technology.



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# Future-proofing eGovernment for a Digital Single Market

#### FINAL INSIGHT REPORT: June 2015

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# Executive Summary

## Public Sector Innovation in Europe

“It is always wise to look ahead, but difficult to look further than you can see”.<sup>1</sup> This also reflects the dilemma many organisations must confront today: when technology is advancing as quickly as it is in this day and age, how can we define a sustainable strategy that allows us to improve fundamentally in the long run?

There are two parts to the story: the **first** is the ability to use technology for customer engagement, better internal processes and to change business models. Technology is used as a means to increase value, in the case of public organisations: to increase public value. The **second** lever for a successful digital journey is committed leadership. Research<sup>2</sup> shows that successful digital transformation does not happen bottom-up, but is steered at executive level: setting direction, building momentum and ensuring the organisation has followed through on its initial successes.

Perhaps it is time for a paradigm shift? The key to unlocking the potential of eGovernment for EU Member States might very well be in shifting the focus from the national level to the European Digital Single Market.

**The Digital Single Market for Europe is an important goal and offers huge growth potential.** In a Digital Single Market, everything that is possible in the physical Single Market – and more – should also be possible in the digital world<sup>3</sup>. The European Commission’s new Digital Market Strategy was unveiled in May 2015<sup>4</sup>. It will focus on<sup>5</sup>:

- **Better access for consumers and businesses to digital goods and services across Europe:** facilitating e-commerce, tackling geo-blocking, modernising copyright and simplifying VAT arrangements.
- **Creating the right conditions, level playing field and environment for digital networks and services to flourish:** infrastructure as a backbone for innovative digital services, 4G, increasing transparency and trust, personal data protection.
- **Maximising the growth potential of the digital economy:** industry 4.0, standards, data economy, cloud computing, interoperable e-services and digital skills.

*“It is always wise to look ahead, but difficult to look further than you can see.”*

<sup>1</sup> Quote attributed to Winston Churchill, <https://www.nationalchurchillmuseum.org/winston-churchill-and-the-cold-war.html>  
<sup>2</sup> ‘Leading Digital. Turning technology into business transformation.’, G. Westerman, D. Bonnet, A. McAfee, HBR press, 2014.  
<sup>3</sup> <https://ec.europa.eu/futurium/en/content/vision>  
<sup>4</sup> [http://europa.eu/rapid/press-release\\_IP-15-4919\\_en.htm](http://europa.eu/rapid/press-release_IP-15-4919_en.htm)  
<sup>5</sup> [http://europa.eu/rapid/press-release\\_IP-15-4653\\_en.htm](http://europa.eu/rapid/press-release_IP-15-4653_en.htm)

### Three perspectives on eGovernment performance in Europe

The eGovernment benchmark which these reports have been following since 2001 assesses the eGovernment state-of-play in 33 European countries, the EU, Iceland, Norway, Serbia, Switzerland and Turkey (the EU-28+). This Insight report is aimed at government leadership and aims to contribute to steering European and national eGovernment strategies<sup>6</sup>. To this end, the key findings and recommendations of this study are presented in three sections, each reflecting a different perspective:

**1. The policy perspective:** indicating progress made with regard to implementing the policy priorities of the eGovernment Action Plan 2011-2015<sup>7</sup>. These policy priorities are reflected in the benchmarks of User-centricity, Transparency, Cross-border Mobility, and the adoption of Key Enablers. Details per country can be found in the country fact sheets published separately and the Background Report. The key findings are:

- **Europe is gaining in digital maturity.** With an average score of 73% in 2014, **user centricity** is confirmed as the most advanced indicator at the EU-28+ level, ending 3 percentage points higher than a year earlier. The results indicate year-on-year progress across all the European countries compared. There is, however, a big difference between the compound indicators, with much better performances for usability and online availability of services than for the ease and speed of using those services. This shows that many Member States are not focusing enough on the quality of the user's experience.

- **Half way to delivery of fully open services.** This benchmark evaluates the transparency of government authorities' operations, service delivery procedures and the accessibility to users of personal data. Despite progress in general (low growth of 3 percentage points), public authorities in Europe still have some way to go to reach acceptable transparency standards. The transparency of public organisations' data stands out by being 10 points above the average. It is also positive that users have gained better access to personal data that is handled on the governments' websites, but they still face considerable barriers when it comes to the clarity of the service delivery process.

- **Digital Single Market is yet to come.** The Digital Single Market is the one of the 10 priorities set by the Juncker Commission. Today, however, there are still many barriers to maximising its potential and which confine digital services within national borders, leaving users unable to use cross-border online services efficiently and smoothly. The cross-border mobility indicator is not yet even half way to being fully achieved. The low rate of 48% indicates that online cross-border transactions are rare.

- **Step-by-step towards smarter government.** Technology is a key driver behind improving online public services and achieving 'more with less'. This top-level benchmark shows a 1-point improvement, standing at 50%. It seems that from this assessment that the development of the key enablers is slowing and risks affecting the transition to smart government – with some positive exceptions, since

the adoption rate of the 5 technology enablers assessed varies widely (from 63% for eID to 39% for eSafe).

- **Business-oriented services lead the way, citizen services lag behind.** Online business services are generally more advanced and more widely adopted across Europe. A comparison between the top-level benchmarks of the citizen and business life events<sup>8</sup> shows that the gap has increased since the previous measurement. On average the gap is 11 points; it is most notable in the cross-border mobility benchmark (15 points).

The figure 1 shows how European countries perform on each of the top level benchmarks.

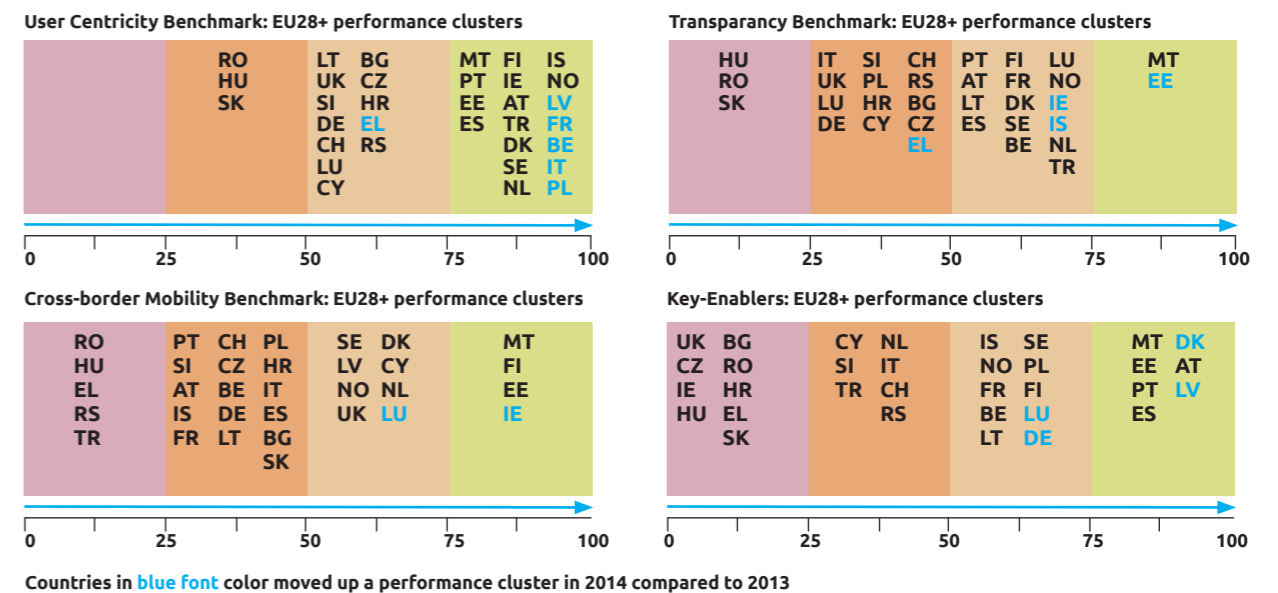


Figure 1: Performance clusters for top level benchmarks User Centricity, Transparency, Cross-border mobility and Key Enablers<sup>8A</sup>

**2. The user perspective:** providing insights into the customer journeys of starting entrepreneurs, jobseekers and students – three groups valuable to any economy. How well are these user groups facilitated on their digital journey towards a successful company, employment or graduation? Starting with accessing websites (via a mobile device!), to looking for information, capturing expectations of the process, transacting and providing feedback. Part of this is the **mobile-friendliness of public sector websites**, a new and unique element of the measurement.

<sup>8</sup> A life event reflects the user journey and makes transparent which public institutions are involved in delivery of those services and information needs. It consists of various services relevant to a person – for instance a starting entrepreneur or student. This approach makes it possible to integrate different aspects of public service delivery (such as online availability of services, cross-border mobility and key enablers) into a single, comprehensive measurement journey. Each life event is assessed once every two years to allow for sufficient time to implement improvements.

<sup>8A</sup> Please see list of country acronyms at the end of the report

“Europe is gaining in digital maturity.”

“Only 1 in 4 public websites is mobile-friendly.”

<sup>6</sup> This Insight report is complemented by a Background Report, which includes detailed analysis of each indicator, a description of the method, and the complete set of research data that is openly available for re-use.  
<sup>7</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0743:FIN:EN:PDF>



**On the positive side:**

- The customer journeys for starting entrepreneurs, jobseekers and unemployed, and students show advances in portal functionalities, support and feedback options and a steady grow in online information and services. The life events of business start-up, losing and finding a job, and studying increased their user centricity scores by 6 percentage points on average over a period of two years.

**However: challenges remain for governments to match rising customer expectations, and deliver on the potential technology offers in terms of better, faster AND cheaper services:**

- **Improving the mobile experience.** Mobile devices offer a great opportunity for further personalisation of services – but at the moment **only 1 in 4 public sector websites is mobile-friendly**. Good practice has shown that as soon as websites are designed for mobile access, the number of users increase exponentially<sup>9</sup>. There is a clear need that is not addressed at the moment.
- **Increasing transparency and participation.** If **Open Government** – one that emphasises transparency and collaboration – is the next stage after eGovernment<sup>10</sup> in modernising public administrations, we can argue that most of Europe is not there yet. There is still a great leap to make to rise to expectations, commitment, and track and trace in service delivery – but also in informing online users about how they can participate in the policy making process (information that is provided on only 1/3 of websites).
- **Personalisation and simplification.** The same is true of citizens **managing personal data** themselves, and of increasing re-use of personal data to allow more personalised services and further reduce administrative burdens by automating or even removing services. The deterioration in the score of the **Authentic Source** enabler signals a risk in this regard.
- **Cross-domain interoperability** appears to be a big challenge too, as there is no increase in the number of **automated services**. Nor has there been in the **key technological enablers** that could boost online experiences.
- **User listening. Collaboration and a closed feedback loop** to learn from users and improve service provision accordingly are essential to break through lagging satisfaction scores. With feedback options more and more available – but user experience and use of eGovernment services almost flat – questions must be asked about how governments handle feedback and implement changes. This applies not only to traditional feedback channels, but also to tracking and tracing user’s behaviour when online, and strengthening collaboration and participation.

<sup>9</sup> The UK replaced the standard and mobile versions of Directgov with gov.uk, which uses a responsive design to adapt to different screen sizes. In a few months mobile usage went up from 10% to 25%. For the e-petitions services it rose to 45% over the first year. See: <https://gds.blog.gov.uk/2013/03/12/were-not-appy-not-appy-at-all/> and <https://gds.blog.gov.uk/2014/02/06/improving-gov-uk-on-mobile-devices/>  
New York State launched their new and designed for mobile NY.gov – adaptable to mobile screens, simplified – and ‘site-wide traffic jumped from 64,966 monthly unique visits in 2013 to 244,949 mobile users by the end of the first month’. See: <http://www.govtech.com/internet/3-Lessons-from-New-Yorks-Website-Redesign.html>

<sup>10</sup> E-Government interoperability: linking open and smart government. Carlos E. Jimenez, Agusti Solanas, Fransisco Falcone, for IEEE Computer Society, 2014. See: <https://joinup.ec.europa.eu/community/egovernment/news/egovernment-interoperability-linking-open-and-smart-government>

**3. The explorative benchlearning perspective:** presents a ‘peer-perspective’ on eGovernment performance. Results can be better understood by taking the socio-economic and cultural context of a country into account. Comparisons become more relevant when evaluating the performance of peers. This section presents insights derived from a clustering analysis that introduces a new, explorative framework for measuring eGovernment performance. The analysis consisted of three steps:

- a. A cluster analysis that identified five clusters of countries with similar eGovernment maturity, based on a new explorative model.

**Neophytes Cluster:** scores very low on both penetration and digitisation, resulting in weak eGovernment that insufficiently exploits ICT opportunities and is dependent on significant efforts, which are essential to move towards eGovernment maturity.

**High Potential Cluster:** characterised by a wide contrast between the level of digitisation (low) and the level of penetration (medium-high). The lower level of digitisation implies that Public Administration processes could increase in efficiency and cost savings could be realised if the necessary action were to be initiated. It also shows that despite the efforts required, citizens are confident of the eGovernment potential and use online services.

**Progressive Cluster:** characterised by a low level of penetration, yet a medium level of digitisation. This means that countries in this cluster have been working on a digital approach, but there are some factors that constrain full distribution of satisfying eGovernment services. The Progressive Cluster should focus on removing those barriers. Policies and innovation plans should specifically address and support deployment of a citizen-centric approach to further increase use of eGovernment services.

**Builders Cluster:** characterised by the highest level of digitisation, but a medium-low level of penetration. This suggests a scenario where the innovation process has been carried out efficiently, but online interactions with government are nonetheless not yet common practice for citizens in these countries. Satisfaction is higher than in three other clusters (all but the Mature cluster). This means that in these countries the Public Administration is doing well, with a structured approach to innovation. However, the lack of penetration prevents government from completely exploiting the advantages of digitisation. These countries have to understand what causes the relatively lower level of usage, in order to identify the most suitable actions to carry out.

**Mature Cluster:** has the highest level of penetration and a high level of digitisation, displaying a successful process of innovation, making it possible to exploit the opportunities offered by ICT. The Mature Cluster also achieves quite a high level of satisfaction, showing a market-oriented approach that succeeds in meeting users’ needs. Use of eGovernment services and online interaction with governments in these countries might be the most mature in Europe, but are not close to 100%. Similarly, there is still more that can be done to digitise the internal processes and harmonise both between government tiers as well as across borders.

- b. A grouping of countries based on context-specific factors related to eGovernment supply and demand, and exogenous factors such as: size, income, demography, education, urbanisation, digital maturity, government structure (e.g. federal, central), social capital (i.e. corruption).

- **Penetration** represents the usage of online eGovernment services
- **Digitisation** has been introduced to measure a Public Administration's efficiency and effectiveness in internal procedures.
- **Harmonization** is a proxy of the ability of a Public Administration to coordinate innovation actions, homogenizing the supply of eGovernment services, in order to reduce usage barriers, to exploit economy of scale and to foster a digital single market.
- **User's satisfaction** of online services, in terms of both overall evaluation of the experience and fulfilment of expectations and objectives, should be analysed on the one hand to understand Public Administration ability to meet citizen's need implementing attractive services, on the other hand to figure out the different reasons of the lack of penetration.

c. A cross-country analysis subsequently made a better understanding possible of how context-specific variables impact on country performances. The country groups were cross-referenced with absolute performance, enabling identification of each country with countries where the context was similar but with better performances. This exercise can help in understanding what level of maturity could be targeted as the next step, and support the development of relevant and feasible eGovernment objectives and related actions for getting there. For instance, in the Figure below, a country in group 1 that is in the Neophytes Cluster could turn to the country in group 1 in the Mature Cluster to understand what might be required to advance.

	Neophytes	High Potentials	Progressive	Builders	Mature
Group 1					
Group 2					
Group 3					
Group 4					
Group 5					

Figure 2: Cross country analysis of both performance and context factors

The report includes 'customised' recommendations for each of the countries, which can support the development of an eGovernment strategy that fits with the national context. This approach also allows for another means of benchmarking – closer to benchmarking – where relative performance reveals 'fairer' insights.

### Charting a path forward

Not embracing the power of modern ICT to transform public services will only put Europe behind other regions globally. However, Europe is in a position with clear potential. The key question is whether it can use that potential to truly deliver an advantage. Preparing digital strategies for realising a Digital Single Market is now more relevant than ever – whether these are digital by default or not.

Technology is advancing at an incredibly fast pace. The view that we are at the start of the second machine age is gaining followers. **Technology can help achieve better, faster and cheaper services:**

- **Better:** quality services designed around user's needs, suitable for devices people use, simplified and personalised as much as possible to make services intuitive and easy to use – for anyone, not just the tech-savvy.
- **Faster:** data processing and automation of services which reduce obligations and cut the number of steps in the user journey, as well as reducing the time required to process information and deliver products/services to the users. Online services save time compared to face-to-face visits and increase flexibility.
- **Cheaper:** business cases in Denmark and the United Kingdom, as well as many studies, have shown the cost savings that can be achieved by digitisation – savings for both the public authorities as well as the businesses and citizens involved.

Digitisation is inevitable, including for governments, and there are not so many efficient options for achieving it. Still, as we have experienced over the past years of collaboration with many government representatives, 'Digital by default' remains a disputed concept in public sector discussions. Some clarity as to what it really means and what precedes the stage of digital by default may be valuable, i.e.:

- For citizens and businesses: mandatory use of online services (with safety nets for vulnerable groups).
- For governments: shared digitised operations.

Developing to this stage first requires completion of a shared digital infrastructure that would consequently allow the development of personalised and simplified services.

It describes an ultimate state, which is easier said than done. It will require quite some steps to get there, and a great deal of effort. **"But the key point is that, once these steps have been accomplished, making services digitally mandatory will not be such a big step anymore."** If a digital infrastructure makes it possible to work digitally across government tiers, domains and borders, and if the services you provide are highly personalised, freed from red tape and intuitive – people might have started using them already and will not consider to go back to paper.

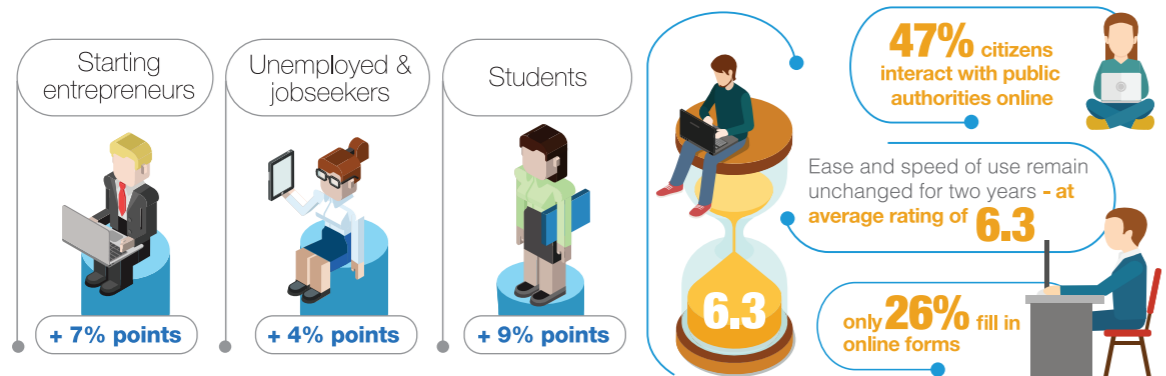
At any stage of development, it is essential to address the **digital skills** required by users, practitioners and civil servants, as well as of the leaders who are needed to steer this digital transformation. These are one of the most vital prerequisites for succeeding in the Digital Transformation journey to make eGovernment futureproof.

*"But the key point is that, once these steps have been accomplished, making services digitally mandatory will not be such a big step anymore."*

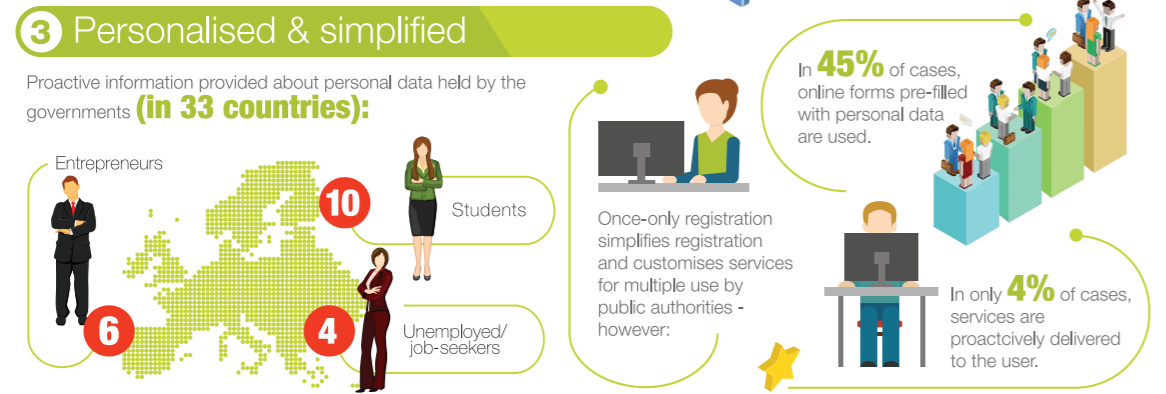
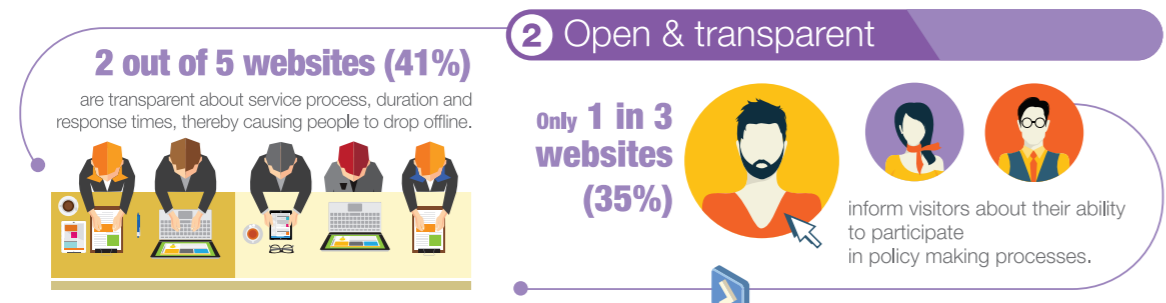


## Are government services prepared for the digital age?

**ON THE POSITIVE SIDE:** More services available online for **HOWEVER:** use and user experience remain insufficient



## 3 challenges for government services to match rising customer expectations



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# Who should read this report?

*Anyone who is interested in how governments are coping with today's societal challenges, and exploiting modern technologies in that challenge.*

Benchmarking is used to encourage mutual learning, to perform multilateral assessments, and to contribute to further convergence of the policies of Member States' of the EU, Iceland, Norway, Serbia, Switzerland and Turkey (EU-28+). It is an essential part of the response to current socio-economic challenges. The benchmarking framework used here is founded on the key EU eGovernment priorities. The results build on a very rich source of research data, using different methods, with strong collaboration from Member States; they provide a robust and coherent insight into the current state of play of eGovernment in the EU-28+. This report offers insight into how services can be made **'twice as good, in half the time, for half as much'**, and can encourage public service providers to faster and smarter responses. Benchmarking is the first step in an ongoing benchmarking and improvement cycle. This report is produced in conjunction with two other deliverables, a Background Report and open research data.

	Insight Report (THIS report)	Background report	Open research data
<b>For whom?</b>	Government leadership	Policy officers	Academics & research communities
<b>What?</b>	Key findings and recommendations	Detailed analysis of indicators and life events	All data collected in machine-readable format and method
<b>Purpose</b>	Steer European and national eGovernment strategies	Realise direct improvements in public service delivery	Stimulate re-use of data and in-depth analysis

Table 1: Purpose of this report and coherence with study's deliverables

# Public Sector Innovation in Europe

*“The future of our society is digital. [...] The internet economy is fast moving and ruthless; catching up is not sufficient – leadership is needed.”*

*Commissioner Oettinger<sup>11</sup>*

<sup>11</sup> 10 March 2015 on Date Conference: Digital Union and European Microelectronics-Strategy

# eGovernment in the Digital Single Market for Europe

**The Digital Single Market for Europe is an important goal and offers huge growth potential.** A recent European Parliament study shows the potential benefits are around EUR 640 billion of added value for the European economy<sup>12</sup>. The Digital Single Market can be the foundation for driving innovation in the digital economy. Completing the digital single market is crucial to stimulating growth and creating employment in the European economy. It is about creating “a virtuous circle in which a single market for digital services feeds consumer and business demand, which drives innovation through adoption of digital technologies, which supports productivity growth and GDP, which then creates the demand for jobs, which generate the income for consumers to obtain the products and services being produced”<sup>13</sup>.

**Achieving the Digital Single Market will avoid Europe ending up in a Digital Desert.** The precise impact of ICT on business and consumers depends on a complex combination of trends, changes and uncertainties in the medium term, and it is also highly dependent on the broader economic, social and political context. Scenario analysis shows that the way ICT affects economic growth will depend on the pace of growth in the global economy and the speed at which Europe can accomplish the completion of the internal market, espe-

cially the Single Market for Services and the Digital Single Market.

**In a Digital Single Market, everything that is possible in the physical Single Market should also be possible in the digital world**<sup>15</sup>. The Commission’s Digital Market Strategy was unveiled in May 2015. It will focus on:

- Better access for consumers and businesses to digital goods and services across Europe: facilitating e-commerce, tackling geo-blocking, modernising copyright and simplifying VAT arrangements.
- Creating the right conditions, level playing field and environment for digital networks and services to flourish: infrastructure as a backbone for innovative digital services, 4G, increased transparency and trust, personal data protection.
- Maximising the growth potential of the digital economy: industry 4.0, standards, data economy, cloud computing, interoperable e-services and digital skills.

**This report touches on various elements of this new strategy:** (cross-border) online services for businesses and citizens, transparency, key technology enablers such as electronic identification and authentic

sources, and personal data to name but a few. The benefits of tackling these come with the disclaimer ‘if the policies listed in the study were to be pursued effectively: the proof of the pudding is in the eating. Each concept needs implementation to deliver on its promises. This is where this report provides insights.

It does not merely address the need for digital transformation in the public sector. It is unique in revealing the current ‘digital status’ of Europe – by comparing the eGovernment performance of 33 countries on the basis of a robust set of indicators based on political priorities and agreed with the EU Member States and other countries.

**“Technology development is the only sustainable long term response to secure our digital future”**<sup>16</sup>. Disruptive technologies, such as the Cloud, the Internet of Things, Sensors, and Mobile Devices offer unique opportunities for all policy domains within the Digital Single Market. In addition to the focus of the measurement in this report on a set of key technology enablers, this year’s benchmark, therefore, also looked at mobile friendliness of public sector websites.

**However, technology is not the issue** The key challenge for governments is to deliver the potential of the Digital Single Market by successfully collaborating and joining-up across domains and tiers, and borders. Some countries are smaller in size and therefore can use a relatively direct governance model (e.g. Malta), or have adopted a centralised model, whereby one organisation owns a clear mandate to lead the implementation of its eGovernment strategy (e.g. Denmark, Estonia). This is not generally the case in Europe, nor easy to realise. Countries vary in size and in demo-

cratic traditions, are organised differently and are hence more dependent on cross-agency collaboration to get things done.

**Most countries seem to prioritise national online service delivery over cross-border services.** The past years of benchmarking eGovernment show that cross-border services lag significantly behind national services. The gap currently is 24 percentage points, implying that the availability and quality of services on offer to non-residents is inadequate. Studying in another country in many cases still includes paper application processes and face-to-face encounters before being able to commence. The same is true for business services in terms of the Points of Single Contact in the context of the Services Directive that should support the release of the untapped growth potential of the European Single Market<sup>17</sup>.

**Perhaps it is time for a paradigm shift? The key to unlocking the potential of eGovernment for Member States might very well be in shifting the focus from the national level to the European Single Market.** If it works across borders, it will automatically work within a country. Interoperability is crucial here: if online services are put in place with other countries (electronic ID’s, sharing and re-using data in back offices etc.), it automatically means they are in place for national service providers. This would require countries to agree on and use the same interoperability standards for sharing and re-using data (perhaps through a central component for data exchange). It would be the source of different dynamics within national eGovernment operations but could provide the lever to really move forward, instead of progressing incrementally as we have seen over the past years.

*“Technology development is the only sustainable long term response to secure our digital future.”*

<sup>12</sup> Mapping the Cost of Non-Europe, 2014-19, European Added Value Unit, European Parliamentary Research Service, PE563.350, 2nd edition July 2014, see: [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/563350/IPOL-EAVA\\_ET%282014%29563350\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/563350/IPOL-EAVA_ET%282014%29563350_EN.pdf)

<sup>13</sup> Productivity and Digitisation in Europe: Paving the Road to Faster Growth. Policy Brief by Bart van Ark, published by The Conference Board and the Centre for Innovation Economics, Lisbon Council Policy Brief Vol. 8, No. 1 (2014).

<sup>14</sup> Unlocking the ICT growth potential in Europe: Enabling people and businesses. Using Scenarios to Build a New Narrative for the Role of ICT in Growth in Europe. The Conference Board for DG CONNECT, 2013. See: <http://ec.europa.eu/digital-agenda/en/news/new-study-unlocking-ict-growth-potential-europe-enabling-people-and-businesses>

<sup>15</sup> <https://ec.europa.eu/futurium/en/content/vision>

<sup>16</sup> [https://ec.europa.eu/commission/2014-2019/oettinger/blog/innovation-secure-digital-future\\_en](https://ec.europa.eu/commission/2014-2019/oettinger/blog/innovation-secure-digital-future_en)

<sup>17</sup> The PSC Assessment study - executed for the Commission DG Markt by Capgemini and Eurochambres in 2015 - evaluates the compliance of the Points of Single Contact (in EU28+) with the PSC Charter criteria. The study shows that the PSCs still do not live up to expectations as regards: 1) Quality and availability of information provided on the PSC, 2) Transactionality of electronic procedures, 3) Accessibility for cross-border users, and 4) Usability.



# Leading the digital transformation of *public sector*

Disruptive change requires the formulation new strategies. Prominent innovation from digitally high tech companies provides well known and enlightening examples of what is ahead of us. New technologies (Social, Mobile, Big and Open Data, the Internet of Things) are opening up even more advanced practices and opportunities that put pressure on us to rethink current operations. However, the technology in itself is not the disruption – it is the impact it has on strategy and business models and implications for leadership.

However, to quote Winston Churchill: “It is always wise to look ahead, but difficult to look further than you can see”. This perfectly reflects the dilemma confronting many public and private organisations: when technology is advancing as quickly as it is in today’s day and age, how can we define a sustainable strategy that allows us to improve in the longer run?

There are two parts to the story: the first is the ability to use technology for customer engagement, better internal processes and to change business models. In this case, technology is a means of increasing value. In the case of public organisations: of increasing public value. The second lever for a successful digital journey is committed leadership. Research<sup>18</sup> has shown that successful digital transformation did not happen bottom-up, but was steered at executive level: by setting direction, building momentum and ensuring the organisation followed through.

This insight report is addressed to ‘the digital leadership’, those who are leading European governments through this ‘second machine age’. It presents the bigger picture to support the digital transformation of the European public sector. To this end, the report provides three perspectives:

- **A policy perspective: progress made with regard to implementing the policy priorities of the eGovernment Action Plan 2011-20157** (User centricity, Transparency, Cross-border Mobility, Key Enablers), and comparisons between the various countries. This part includes the hard facts and figures, strengths and weaknesses of this year’s eGovernment Benchmark (Chapter 3).
- **A user perspective: insights into the customer journeys of starting entrepreneurs, jobseekers and students** – three very valuable personae to any economy. How well are they facilitated on their digital journey towards employment or a successful company? Are governments on track with growing user expectations that build on private sector experiences? The results are observed from the point of view of the customer who accesses websites (on their mobile!), looks for information, wants to set expectations of the process, transacts, and provides feedback. Part of this is the **mobile friendliness of public sector websites**, a new and unique element of the measurement (Chapter 4).

- **An explorative benchlearning perspective: a ‘peer perspective’ on eGovernment performance.**

Results can be better understood by taking the socio-economic and cultural context of a country into account. Comparisons become more relevant when evaluating the performance of peers. Larger, federal countries will face different challenges from smaller, centralised nations. This section analyses clusters of countries with a similar performance to find explanations and determine success factors (Chapter 5).

We concluded in the previous report that not embracing the power of modern ICT to transform public services will only put Europe behind other regions globally. However, where we currently stand is in a position with potential. The key question is whether we can use that potential to deliver an advantage. **EU Member States must chart a path forward that clearly shows how they must adapt and change to exploit the untapped potential of the European (digital) advantage.**

Preparing digital strategies for realising a Digital Single Market is now more relevant than ever – digital by default or not. The last section of this report hence sketches out a maturity path for governments that helps to futureproof their digital strategies, by building on the insights gained over years of eGovernment benchmarking, interaction with government representatives and various research activities.

*“It is always wise to look ahead, but difficult to look further than you can see.”*

*Winston Churchill*

<sup>18</sup> Leading Digital. Turning technology into business transformation., G. Westerman, D. Bonnet, A. McAfee, HBR press, 2014.

## Three perspectives on eGovernment performance in Europe

*“There is even more work  
to do to achieve a truly  
connected digital single  
market.*

*A market where every  
consumer is able to enjoy  
digital content and  
services - wherever they  
are in the EU, including  
government services.”*

*Vice President Andrus Ansip<sup>19</sup>*

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<sup>19</sup> 26 November 2014 in the European Parliament plenary session,  
[http://europa.eu/rapid/press-release\\_SPEECH-14-2182\\_en.htm](http://europa.eu/rapid/press-release_SPEECH-14-2182_en.htm)



# The policy perspective: tracking implementation of the eGovernment Action Plan

The goal of this benchmarking exercise is to measure progress towards the achievement of the main priorities of the e-Government Action Plan, which together design a vision of an open and user-centred government, leveraging innovation to provide better services at lower costs.

This chapter reports on progress in implementation of policy priorities in the eGovernment Action Plan, which is incremental and leaves room to reach full maturity levels:

- The user's centrality benchmark shows better performances for usability and online availability than for ease and speed of use, which shows that many Member States are not focusing enough on the quality of the user's experience
- The benchmark for transparent government evaluates the transparency of government authorities' operations, service delivery procedures and the accessibility of personal data to users. Despite progress in general, public authorities in Europe still have some way to go to reach acceptable transparency standards.
- The cross-border mobility benchmark indicates that opportunities for and the overall experience of dealing with online public services outside one's own country is still unsatisfactory, in particular for citizens. There is a big gap with national services.
- Technology is a key driver behind improving online public services and achieving 'more with less'. It seems the development of the key enablers in this assessment is slowing and risks affecting the transition towards smart governments – with some positive exceptions.
- Businesses are better served than citizens.

The benchmarking exercise is based on four top-level benchmarks designed around four main pillars of the Action Plan: user centrality, cross-border mobility in the digital single market, transparency of services, and the deployment of the key ICT enablers making it all possible. These benchmarks are assessed in a total of 7 customer journeys, each one depending on a life event. The 2014 and 2012 measurement included three of these life events: Starting up a businesses, Losing and finding a job, and Studying. Four life events (Moving, Owning a Car, Small Claims Procedure and Regular Business Operations) were part of the 2013 assessment.

This year, for the first time, we can compare progress over time with the eGovernment priorities included in the eGovernment benchmarking framework since 2012 based on:

- The top-level benchmarks that were designed around four pillars of the Action Plan: user centrality, cross-border mobility in the digital single market, transparency of services, and the deployment of the key ICT enablers making it all possible. These are the insights this chapter will look at.
- The specific results for three life events that were also measured in 2012 (Starting a business and early trading operations, Losing and finding a job, Studying). These will be looked more closely at in the next chapter 4, which looks at the customer journey from a user perspective.

## 3.1 Action plan priorities step up their path to realisation

The e-Government Performance Dashboard presents the average results of our top-level benchmarks at the EU-28+ level, as well as the average results at country level grouped in 4 performance clusters (from laggards – the red cluster to top performers – the green cluster). At the EU28+ level the Dashboard also shows the change percentages of each benchmark and its compound indicators from the last measurement. This reveals that European governments have made some progress in all policy areas, but, on average, they have yet to reach full maturity in these policy areas.

With an average score of 73%, the user centrality benchmark is confirmed as the most advanced at the EU28+ level. Governments' efforts to improve the quality of the online experience have focused on increasing the availability of their online services and on improving the mechanisms for online support and feedback. Their performance is weaker if we look at the user friendliness and time efficiency of the online services.

The transparency benchmark shows a 3 points/6% improvement from the previous measurement, but is still quite unsatisfactory, as it is at 51%. The transparency of public organisations' data stands out for being 9 points above the average. It is also positive that users have gained better access to personal data that is handled on the governments' websites, but they still face considerable barriers when it comes to the clarity of the service delivery process.

The cross-border mobility benchmark is not even half way to full realisation, as it is still only at 48%. The good news is that there has been an increase of 9 percentage points since the last measurement.

This has been driven by the growth in both its compound indicators. Across Europe, on average, the score for the indicator of cross-border mobility for business is better than the citizen mobility indicator (58% as opposed to 43%).

The Key Enablers benchmark remains at a relative low level with a score of 50% on average, and minimal growth of one percentage point from the previous measurement. The performance of the five technology tools measured shows a considerable variation and a large gap (more than 20 points) between the eSafe and eID benchmarks, with the latter being 12 points above the average score.

In the following paragraphs, we focus on the key findings by top-level benchmark and draw the main conclusions from our assessment.

*“Technology is a key driver behind improving online public services and achieving ‘more with less’.”*

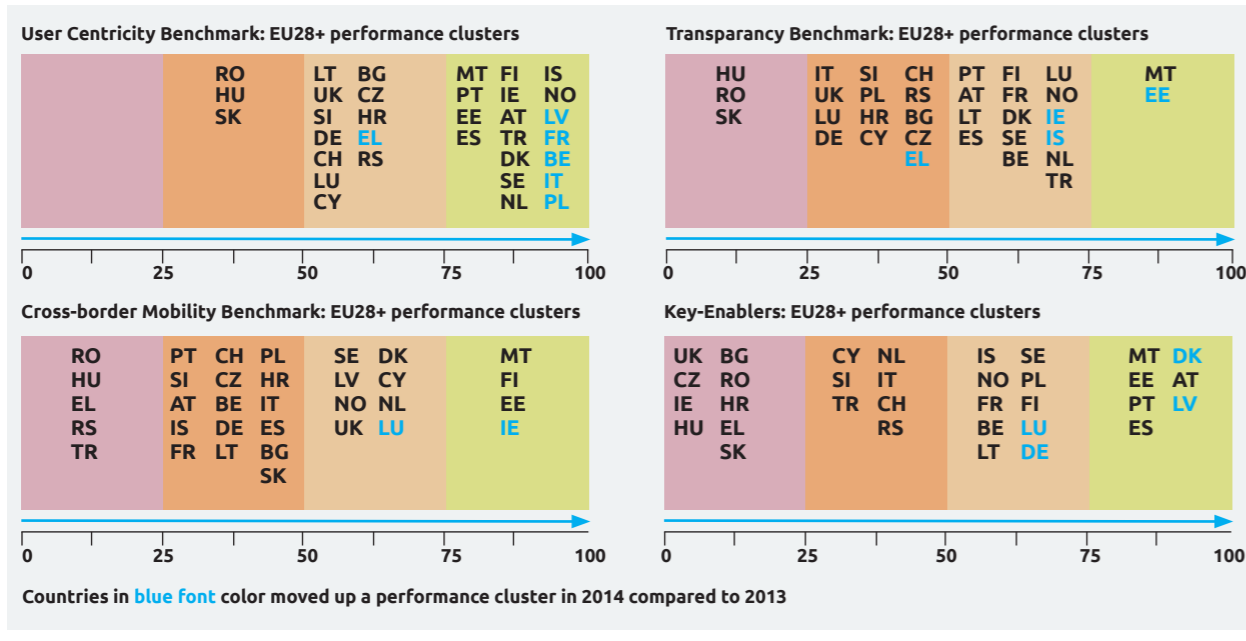
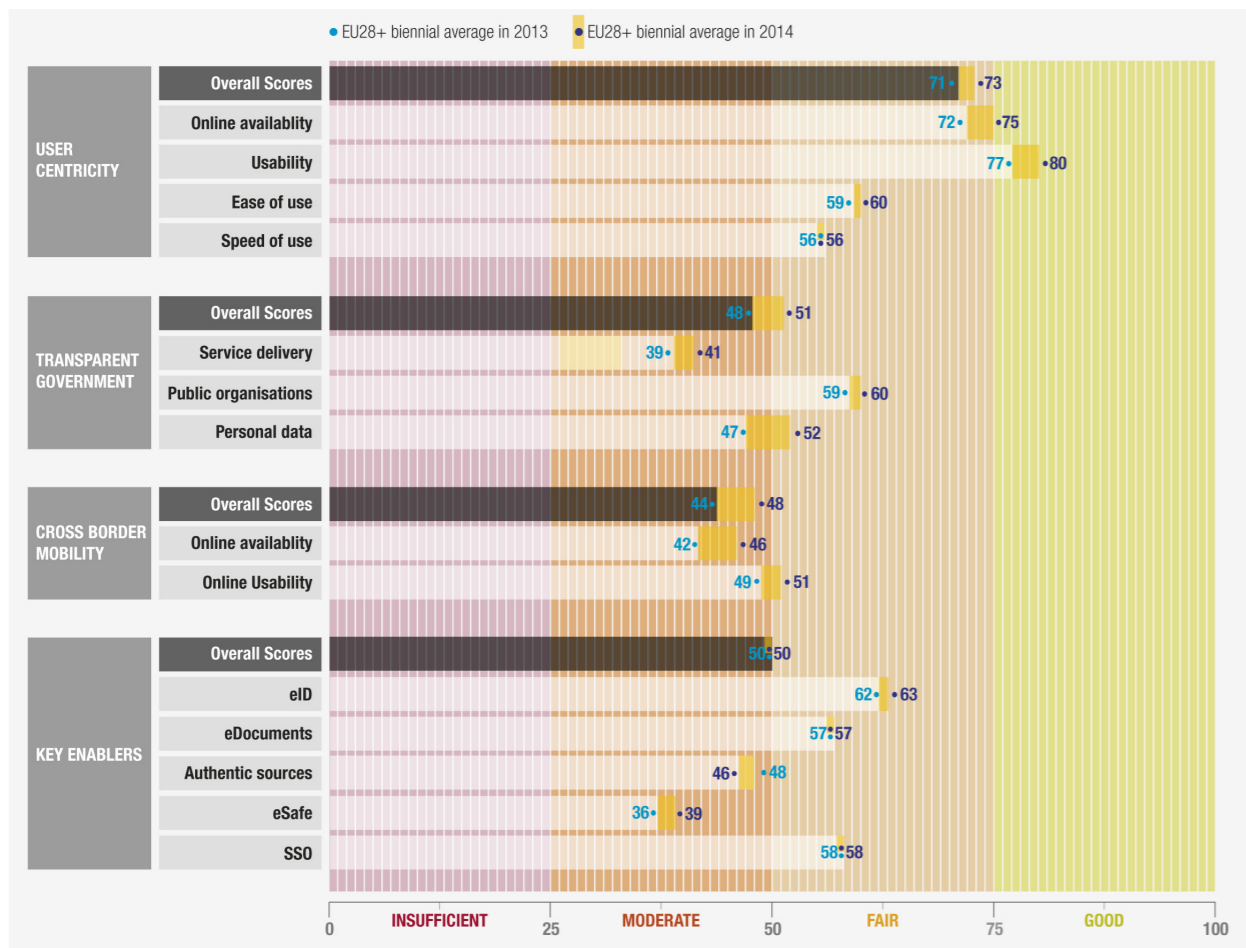


Figure 3: EU-28+ dashboard of Member States' overall performance against policy priorities

### 3.2 User centricity: gaining digital maturity

The user centricity benchmark measures the extent to which services are provided online and how users perceive the quality of these services. This is the benchmark with the best performance, achieving 20 points more than the other three top-level benchmarks. The results also indicate year-on-year progress across European countries. There is however a big difference among compound indicators, with much better performances for usability and online availability than for ease and speed of use. This shows that many Member States are not focusing enough on the quality of the user's experience.

The measurement results show that:

- More than half of the countries (55%) are in the top performance cluster and five countries have moved up from the second-best performance cluster. These countries are: Belgium, France, Italy, Latvia, and Poland.
- All the EU28+ countries generally improved on this benchmark. This year there are only three countries in the low-progress cluster (the orange section of the dashboard), and they all show a better score compared to the last measurement. This means that all governments have invested in making the quality or quantity of their online services better, in particular in the three life events that were evaluated again this year.
- The scores of the compound indicators making up this benchmark vary considerably. Whereas 75% of the countries across Europe are very close to full achievement of usability and 60% are very close to reaching full online availability, the ratios decrease considerably for ease of use and speed of use. This impacts particularly on eGovernment user's perception of quality, and therefore on their experience and satisfaction.
- For the ease of use and speed of use indicators, there are no countries

in the top performance cluster. In addition, some of the countries who perform very well for usability, have comparably low scores in the ease and speed of use indicators. There has been no improvement in the average EU benchmark indicator for speed of use in the period considered. This shows that many Member States are not yet focusing on improving the quality of the user's experience, even those who are top performers for online usability.

### 3.3 Transparency: half way to delivering fully open services

The top-level benchmark on transparent government evaluates the transparency of government authorities' operations, service delivery procedures and the accessibility of personal data to users. Despite progress in general (low growth of 3 points/6%), public authorities in Europe still have some way to go to reach acceptable transparency standards. The EU28+ average is now 51%: half way to full transparency.

- Comparing the three transparency elements that were assessed, it seems that public administrations are focusing their efforts mostly on sharing information about the organisations themselves rather than making the service delivery process clearer and more open for the users. The benchmark for transparency of public organisations now stands at 60% (up marginally from 59% in 2013).
- It is encouraging that the score for the transparency of the user's personal data handled by public administrations has increased by 5 points/10% compared to the last measurement.
- At country level, there are two top performers for this top-level benchmark (Malta and Estonia), but for the other European governments achieving this policy goal is still far away. Moreover, in the top cluster there is a considerable gap between the leader

*“For the ease of use and speed of use indicators, there are no countries in the top performance cluster.”*

(Malta), scoring 97, and the number two (Estonia), scoring 77.

- Progress towards open government is difficult, even though transparency can contribute to the user experience and should be considered as important as user centricity. For this benchmark most countries are concentrated in the moderate and fair performance clusters. A comparison with the user centricity benchmark reveals, however, that for Transparency 16 countries are still below the 50% achievement mark, as opposed to 3 for the user centricity benchmark.

### 3.4 Cross-border online public services: Digital Single Market is yet to come

The Digital Single Market is the one of the 10 priorities of the Juncker Commission. Its implementation would unlock the infinite opportunities offered by the internet to European people and companies. Today, however, there are still many barriers preventing it being maximised and confining digital services within national borders, leaving users unable to use cross-border online services efficiently and smoothly.

This is reflected in this measurement which illustrates opportunities missed by the national governments. The cross-border mobility benchmark results are quite low (48%). This reveals that opportunities for and the overall experience of dealing with online public services outside one's own country is still unsatisfactory, in particular for citizens. There is a big gap with national services.

A few key observations:

- The performance in citizen cross-border mobility is quite weak, with 23 countries out of 33 scoring less than 50%. Consequently, users who aspire to study or set up a business in another country will find many procedures still very burdensome when going through the online channel. Many services for

these groups will require face-to-face visits and paperwork.

- The results for cross-border services for businesses are better: more than half the countries (19) are performing above the 50% mark, and 8 countries are in the top-performance cluster. Cross-border online services dedicated to business users are on average 40% more available than online services for citizens.
- The online usability benchmark (51%) is at a higher level than online availability (46%), as was the case in the previous measurement, driven by a good score of the usability indicator (60%). On the other hand, the evaluation of the ease of use and speed of use comes out at 15 and 20 points lower respectively.
- Looking at the maturity clusters of the EU28+, for cross-border citizen services we find 4 top-performing countries (Estonia, Malta, Finland and Ireland – the latter being a new entry) in the top performance group, while for business mobility, there are 8 countries in the green cluster (Malta, Norway, UK, Denmark, Ireland, Finland, Cyprus and Estonia). It is worth noting that the top 4 performers for citizens are also top performers for cross-border business services.

This means that, on average, the websites assessed for cross-border services are mostly information portals, with some kind of interactive support and feedback functionalities, but are not providing transactional services. The quality of the user experience is at a very basic level. If we look at the sophistication of the user experience, there is a consistent gap (18 points) between the online usability of cross-border services and national services.

## Are European public services helping realise the Digital Single Market?





**3.5 Key enablers: step-by-step towards smarter government**

Technology is a key driver behind improving online public services and achieving ‘more with less’. This top-level benchmark shows a 1-point improvement, standing at 50%. It seems that the development of the key enablers covered in this assessment is slowing and risks affecting the transition towards smart government – with some positive exceptions.

The adoption rate of the 5 technology enablers assessed varies widely (from 63% for eID to 39% for eSafe). The overview per enabler is:

- Electronic Identification (eID) is confirmed as the most widely available enabler, scoring on average 63%. This year Estonia achieved 100% of implementation of this enabler, equalling Denmark’s score. Ten other countries are showing excellent progress in the adoption of this enabler, but 11 countries remain below the 50% mark (low or insufficient progress).
- Single Sign On (SSO), which is a functionality that allows users to obtain access to multiple websites without the need to log in multiple times, takes second place by rate of adoption (58%). Six countries (Denmark, Spain, France, Iceland, Lithuania, and Malta) have already achieved full implementation of this enabler across their websites.
- Electronic Documents (eDocuments), allowing users to send and receive authenticated documents online, is available on average at 57%, with no relevant changes from the previous measurement.
- Authentic Sources, which are base registries used by governments to automatically validate or fetch data relating to citizens or businesses, have a benchmark score of 46% (decreasing from 47% of the last measurement). This enabler is key for realising better user experiences as it is a necessity when pre-filling information,

automating services and reducing redundant obligations.

- Electronic Safes (eSafes) are a virtual repository for storing, administering and sharing personal electronic data and documents. Its benchmark score is 39%, with 3 countries in the top performers’ cluster scoring a 100% adoption rate and 16 countries in the lowest performance category. This enabler seems to be lower on the implementation agenda of countries, and perhaps functionalities such as personal mailboxes and/or MyPages are catching up with this need.

Furthermore, only 7 out of 33 countries are in the top performance cluster. What is positive is that, the top cluster has grown since the previous assessment, with Denmark and Latvia in particular improving their individual performance.

Some cases reveal a great variety in the uptake of the different enablers within a single country: Austria performs very well in the implementation of eID, eDocuments and eSafe technologies, while it is a little behind the top performers for the Authentic Sources and Single Sign On enablers. Another example is France, which is below average in eID implementation while it has achieved full adoption of the eSafe and SSO enablers. These are just two examples that show that countries have different priorities in the adoption of these enablers.

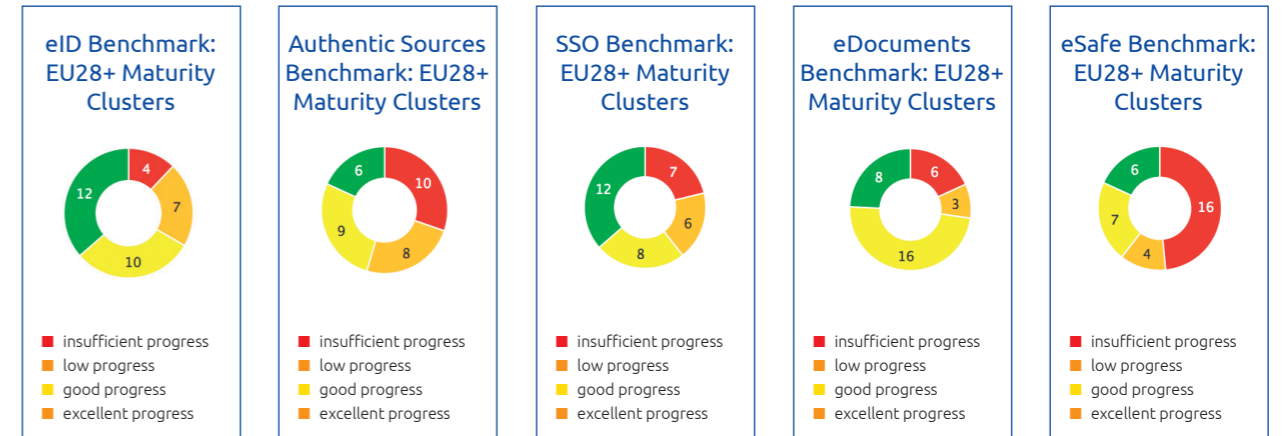


Figure 4: eGovernment Performance on the Key Enablers: EU28+ Maturity Clusters by Enabler

**3.6 Business-oriented services lead the way, citizen services lag behind**

Online business services are generally more advanced and more widely adopted across Europe. Moreover, the gap between the top-level benchmarks of the citizen and business life events has widened since the previous measurement. On average the gap is 11 points, and is most notable in the cross-border mobility benchmark (15 points).

The fact that business life events are more advanced suggests that governments are generally prioritising the digital provision of services dedicated to companies

and entrepreneurs, and thus seem to be focusing their efforts in response to a stronger demand from this target. This may also be because of the continuous attention at political level to the quality and effectiveness of the Points of Single Contact – even though these can also still improve (see text box on page 29).

Citizen-oriented digital services may be less widely available because they have intrinsic factors of complexity: these services target the whole population, which is extremely diversified, and has to deal with groups at risk of being excluded from an increasingly digital society.

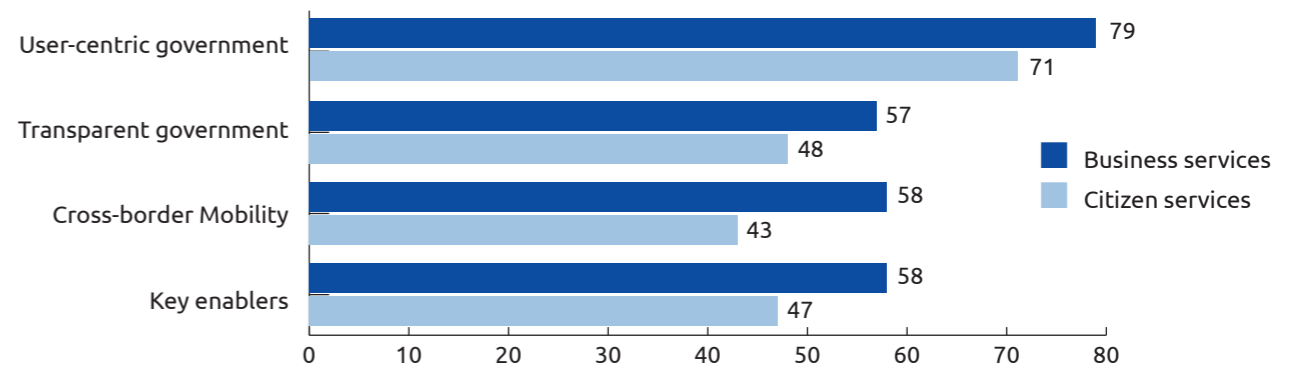


Figure 5: Comparison between Business and Citizen Life Events, top-level benchmarks, EU-28+

# The user perspective: are citizens and business experiencing better services?

The previous chapter presented the top level benchmarks in relation to the policy priorities of the European eGovernment Action Plan 2011-2015. This chapter presents the results from the perspective of the user: citizens and businesses going online to achieve what they need. The chapter studies the online customer journey of starting entrepreneurs, the unemployed and jobseekers, and students, and evaluates progress in online service delivery compared to 2012. We look into the respective life events of 'Starting-up a business and early trading operations', 'Losing and finding a job' and 'Studying' from the point of view of the customer searching for information, accessing websites, transacting, needing support, and providing feedback. Part of this is the mobile friendliness of public sector websites.

This chapter will reveal that customer journey experience for starting entrepreneurs, the unemployed and students is not futureproof – despite progress in some areas:

- Strong portal functionalities guide users when starting their journey
- Only 1 in 4 public sector websites is mobile-friendly
- More transparency prevents users from dropping off-line and builds trust
- There is steady growth in online services but room for Europe to accelerate
- Personalisation can bring satisfaction to people filing tax returns – and more is needed to reach that level
- Feedback options for users are increasing – but is feedback followed up?

## 4.1 The customer journey shows how users and service providers interact online

The eGovernment Benchmark evaluates life events: a set of services that together compose an event in a person's or entrepreneur's life. This year, three life events were evaluated and compared against performance two years ago:

- Starting up a business and early trading operations;
- Losing and finding a Job;
- Studying.

Each user takes several steps when going online for any of these life events. The eGovernment benchmark assesses various indicators that can be plotted on this journey to make clear the extent to which users are facilitated in their online journey. Comparison with the evaluation of these life events in 2012 reveals improvements over the years. Are citizens and businesses indeed experiencing better services? And what could be done to ensure service providers can succeed in matching the expectations of their customers?

To find an answer to that question we looked at the following elements of the customer journey:

- Finding the right website: are national portal websites increasingly guiding users towards the information and services they are looking for?
- Accessing the website: with an increasing number of mobile users, are public sector websites becoming mobile-friendly?

- Consulting information: has the online provision of information about the life events under evaluation increased?
- Understanding the service process: has the clarity of the process (duration, timing, deadlines etc.) improved? Does an entrepreneur know how long the service process will take to complete?
- Transacting: are there more opportunities to complete a service fully online?
- Support: are help functionalities improving to support users when online?
- Feedback: are users increasingly stimulated to provide feedback on the services they used? And do governments act on the feedback obtained?

The following sections present the findings for each of these steps, for both the citizen and business life events, based as much as possible on the comparison over time (2014 vs 2012 results).

See figure 6.

## 4.2 Strong portal functionalities support users in starting their journey effectively

If you have experienced a 'Eureka moment' and want to make your entrepreneurial dream a reality, you start wondering about many things (funding, business plan, proposition, sales pitches) and also about properly registering your company. You then need to understand how you can best start up your business, what it takes and where you can take the necessary steps.

Most people go online for this purpose. Although more and more people use search engines, a strong central website (portal)

that provides an explanation of what is needed and unlocks specific online services will in any event support these users in their journey. With various public entities providing various relevant services in the business start-up processes across Europe (Company Registry, Tax Agency, Chamber of Commerce, Local government, Public Employment Service and more), a Point of Single Contact can act as a funnel and guide for starting entrepreneurs to help them find what they are looking for online. The same is true for people who have lost their job and want to get back into work as soon as possible, and for students enrolling in higher education (either in their country or across borders).

The measurement results show that on average 90% of the relevant services in each of the life events can be accessed through a national portal. In the case of the Points of Single Contact for businesses this is 90%, while the national portals for employment perform slightly better (93%) and portals for students are slightly behind the average (86%). At the same time the support and help functionalities on these portals are also well advanced (at 92% in 2014, up from 86% in 2012), facilitating visitors in finding what they are looking for and if needed accessing other channels to get support.

*“Are citizens and businesses indeed experiencing better services?”*

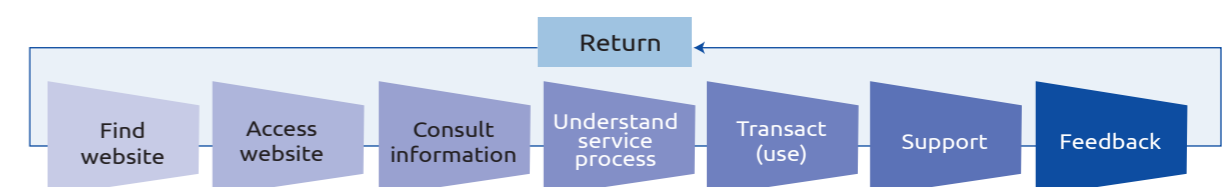


Figure 6: Steps in the customer journey when interacting with government.

While these scores seem excellent in general and national portals for these life events can in theory guide users to the relevant information and services in these life events (on the portal website, or to websites of the relevant public administra-

tions), deeper assessment is required to really understand the quality and effectiveness of these portals. A recent assessment of the Points of Single Contact for business start-ups provides a different view of performance (as is shown in textbox below).

#### Performance of the Points of Single Contact: an assessment against the PSC Charter

Since 2009, it has been a requirement under the Services Directive for EU Member States to set up Points of Single Contact (PSCs)<sup>20</sup>. The Points of Single Contact aim to release the untapped growth potential of services markets in Europe by providing domestic and cross-border service providers with easy online access to information and government procedures.

A series of studies has underpinned the finding that the PSCs are not fully living up to business needs and that there are substantial differences between Member States in the quality of the PSCs. To improve the performance of PSCs, the Commission introduced the PSC Charter which sets out the key criteria for a second generation PSC:

- I. Quality and availability of information provided on the PSC.** Information provided through the PSC takes a holistic approach in terms of scope, is clearly structured and takes into account the different stages of the business lifecycle;
- II. Transactionality of electronic procedures.** Relevant administrative procedures are available online via the PSC, and the entire procedure can be completed online;
- III. Accessibility for cross-border users.** Users from other Member States should be able to complete procedures online. Therefore, the PSC should be multilingual and should distinguish between a permanent establishment and cross-border service provision;
- IV. Usability.** The necessary administrative steps can be completed smoothly and within a reasonable amount of time, and assistance services are at the disposal of users of the PSC.

The PSC Assessment study<sup>21</sup> – carried out for the Commission’s DG MARKT by Capgemini and Eurochambres – evaluated the compliance of the Points of Single Contact (in the EU-28 + Iceland, Liechtenstein and Norway) with the PSC Charter criteria. The study shows that the PSCs are still not living up to expectations. The average EU-scores for all four criteria lie between 44% and 61%. The main weakness of the PSCs remains the accessibility to cross-border users. Often translation is limited to general information and non-resident users are not able to transact digitally with government bodies (forcing entrepreneurs to go to physical government offices). However, national businesses also encounter barriers in complying with government requirements. Often information is provided based on the logic of the administration instead of the logic of business, making it hard for entrepreneurs to understand what exactly is required. Furthermore, information may be poorly structured or out-of-date. Finally, even for national users, only a few PSCs enable entrepreneurs to complete government procedures (other than general registration and tax) fully online.

#### 4.3 A ‘call to action’: only 1 in 4 public websites is mobile-friendly

Mobile phones have invaded our lives over the last couple of years. Some might remember what it was like making appointments with friends or business partners at a specific place and time, and not being able to contact the other person if the traffic was bad, your train got delayed or you could not find the location: no mobile phone to call with, no apps to guide you. You do not need to have grandchildren to remember that these devices were costly and only for the happy few early adopters. Remember those ‘machines’?

Well, we now live on a continent where in every country there are more mobile subscriptions than citizens – with no exceptions. The number of people accessing the internet through their mobile phones is increasing significantly: in Europe by 138% in two years on average (EU-28, 2012 compared to 2010<sup>22</sup>). In some countries this number has even tripled or more over the course of only a few years. It is likely this trend has not yet peaked, with only 18% of European citizens accessing the internet through their mobile as of 2012 (most recent figures available).

Though accurate numbers for the EU-28 are lacking, it is likely that more and more citizens (entrepreneurs, unemployed, jobseekers, students) are also using their mobile phone to access public sector websites to find information, to share feedback and to use online services. Public organisations should be prepared to match the expectations of citizens and companies who will compare this to their experiences in the private sector (e.g. in e-commerce or e-banking).

One of the key success factors that explain the doubling in the number of users

of NY.gov after its redesign, was adapting the website to fit the screen size of a mobile device. With 25% of mobile users, and numbers increasing, this was a key step in ‘making it easier, more intuitive, and simpler to work with’<sup>23</sup>. Many states in the USA are adopting ‘mobile first’ strategies,<sup>24</sup> which confirms the idea that mobile access is quickly becoming the norm for people searching for information.

A similar increase in mobile usage has been reported in the UK. The UK replaced the standard and mobile versions of Directgov with gov.uk, which uses a responsive design to adapt to different screen sizes. In a few months mobile usage went up from 10% to 25%. For the e-petitions services it rose to 45% over the first year<sup>25</sup>.

In this year’s eGovernment Benchmark we looked at the ‘mobile friendliness’ of public sector websites to learn if governments are prepared for (a significant increase in) mobile users. Almost 4000 urls were assessed by means of a crawler to determine whether these public sector websites adapt to your mobile device, allowing you to read and navigate through information and services. The results are presented below:

#### I. On average 1 in 4 European public websites is mobile-friendly

On average 27% of European public sector websites in the domains Business start-up, Losing and finding a job, and Studying are mobile-friendly. There is not much difference between the life events if we look at the European averages. There are however big differences within countries between the mobile friendliness of public sector websites in these life events. Only a few countries, like the UK, show consistent – and positive – results across all life

*“Mobile phones have invaded our lives over the last couple of years.”*

20 <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32006L0123>

21 This study will be published in May/June 2015, this text box is included with consent of DG Markt.

22 Eurostat: Individuals accessing the Internet through a mobile phone via UMTS (3G), by All Individuals (aged 16-74)

23 From: <http://www.govtech.com/internet/3-Lessons-from-New-Yorks-Website-Redesign.html>

24 <http://www.govtech.com/local/The-Public-Sector-Considers-Mobile-First.html>

25 See: <https://gds.blog.gov.uk/2013/03/12/were-not-appy-not-appy-at-all/> and <https://gds.blog.gov.uk/2014/02/06/improving-gov-uk-on-mobile-devices/>



events. Figure 7 (below) shows the mobile friendliness of European countries.

**II. It is doubtful whether countries are prepared for the rapid growth in mobile usage**

The heat map in Figure 7 (to the right) shows the numbers of mobile internet users in Europe in 2012. Countries have seen these numbers of mobile internet users increase exponentially in just two years, with an EU average of 138%. In some countries, the numbers even quadrupled (e.g. Finland: +373%, UK: +306%). If this trend were to continue, the Figure would go deep red in no time. The question then is question whether public sector websites will be made mobile-friendly by design to allow mobile users to access information and to start/continue their

online journey – and deliver on user’s needs.

**III. Only a few countries exploit the potential of mobile-friendly websites**

Most countries do not apply a consistent approach to design mobile-friendly public sector websites across domains and leave opportunities to make services and information available through mobiles unused. Figure 8 shows that most countries are much more advanced in the user centricity of their websites than mobile friendliness. Only the UK manages to provide mobile-friendly websites across domains, and is therefore also able to open up the online information and services to mobile internet users. This is no surprise as the gov.uk portal is mobile-friendly by design<sup>26</sup>. It saw

mobile visits rise to 45% of all visits within a year. Denmark has implemented a responsive design on its citizen portal, including its authentication procedure (through the use of digital signatures)<sup>27</sup> making it fully adaptable to mobile device. In addition, Denmark has announced a stronger focus on adaptation to mobile services in the coming years<sup>28</sup>.

so hinder users access to information ‘any time, any place’. This is information that is already online. It seems a missed opportunity that is definitely worth exploring – as the number of mobile internet users is increasing exponentially. The recently launched DESI index<sup>29</sup> showed that the greatest progress was attained in Connectivity. This was mostly the result of significant improvements in the take-up of mobile broadband (from 58 to 67 subscribers per 100 people)<sup>30</sup>.

Many other countries do not provide their users with mobile-friendly interfaces, and

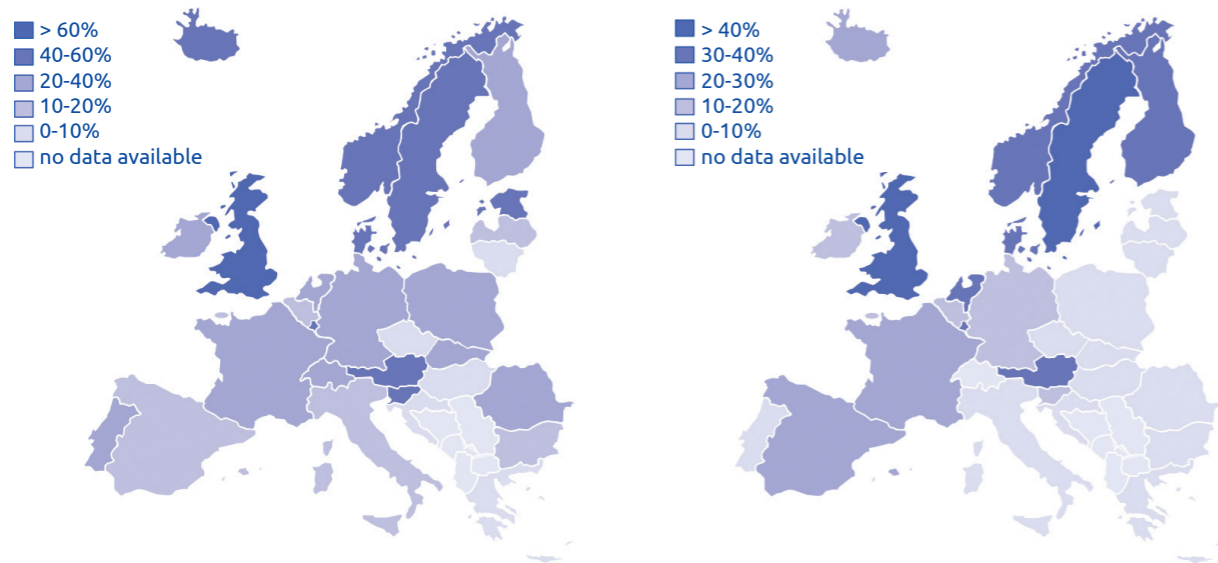


Figure 7: Mobile friendliness of public sector websites (left) and individuals accessing the internet through mobiles (right)

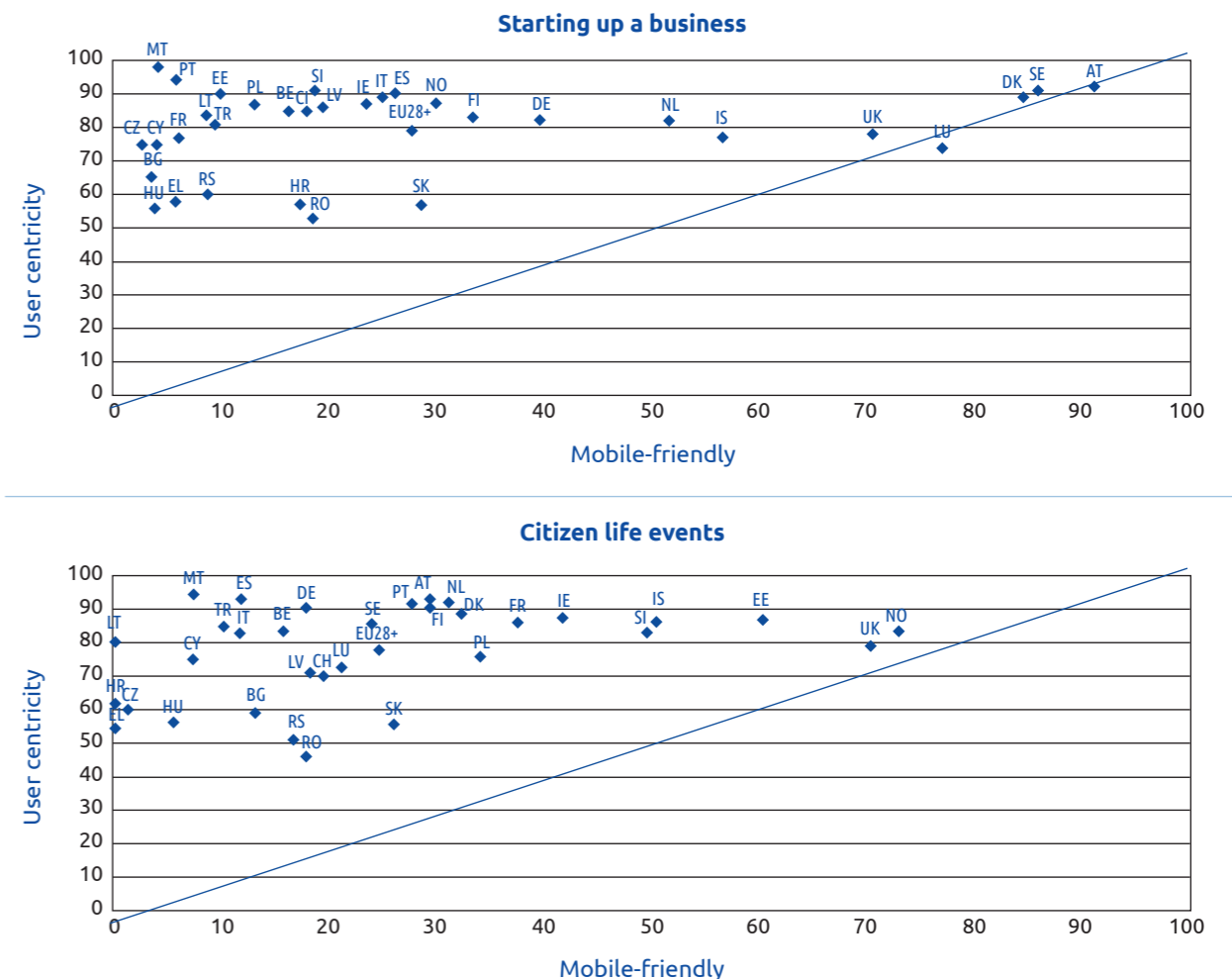


Figure 8: User centricity vs mobile friendliness of business and citizen websites

26 <https://gds.blog.gov.uk/2012/11/02/designing-for-different-devices/> and <https://gds.blog.gov.uk/2013/03/12/were-not-appy-not-appy-at-all/>

27 <http://www.digst.dk/ServiceMenu/Nyheder/Nyhedsarkiv/Digitaliseringsstyrelsen/2014/Mobil-NemID-er-klar>  
 28 <http://www.digst.dk/ServiceMenu/Om-os/Direktionen/Direktoerens-klummer/Januar-2013.aspx>  
 29 <https://ec.europa.eu/digital-agenda/en/desi>  
 30 <http://ec.europa.eu/digital-agenda/en/digital-economy-and-society-index-desi>

### To app or not to app – that is the question

**What is happening in the private sector?** How are companies using mobile technology to their advantage? What can governments expect their users will ask for in the near future? In order to profit from consumer mobile use in 2015, the advice is to focus more and more on “seizing mobile moments on apps that already have consumer’s attention. For example, rather than expecting consumers to download a company’s app, it will become increasingly important that the company embeds its services in an existing app that has a strong user base. Don’t just rely on customers to seek you out; go to them”<sup>31</sup>.

Young people use internet websites less and less – they use apps. We saw in the 2012 user survey that lack of awareness is one of the barriers to young people using online services. This might very well be caused by the fact that governments are addressing them in the wrong way, through the wrong channels. The solution to attracting the new generation of ‘public customers’ to online public services might also be in creating apps. However, the UK is leading practice in Europe and takes a clear stand in this regard<sup>32</sup>. The UK believes the benefits of developing and maintaining apps will very rarely justify their costs, especially if the underlying service design is sub-optimal. It believes its government departments should focus on improving the quality of the core web service.

Responsive design basically means that when users access a site using a mobile device, the website adapts automatically to allow for appropriate resolution, image size and scripting, thus making for easy viewing on any device. A website is simply

easier to access than an app: visitors tap into a government portal and click through, without a download necessary. An overload of apps can also cause a cluttered mobile home screen. Apps on the other hand allow a user to access data when offline. It also allows for a certain personalisation that could enable eg push messages to be send based on user’s interests. Users have also become accustomed to the ‘app experience’ in a way, and that could in certain cases be preferable for government services. Imagine arranging all your student engagements through one app: overview of registered classes, credits, grants and such – in a way comparable to eBanking. Perhaps hybrid apps will be the solution. These combine the best of both worlds. A hybrid app may be thought of as a core of Web information, wrapped inside a smart-phone shell. It looks like a downloadable app and delivers like a responsive website. The complexity and maintenance related to building regular apps is lower. Gartner says that by 2016, more than 50 percent of mobile apps deployed will be hybrid<sup>32A</sup>.

In any case, ‘mobile first’ approaches imply far more than developing an app. To truly deliver on the potential of mobile, a different organisational mindset is required. Processes, data, services – all should be tuned to the situation of the user at a particular moment to create an excellent customer experience. Otherwise mobile is just an additional channel, and not in sync with expectations of customers (and civil servants!).

The big opportunity for governments is that most can start from scratch and use the latest insights to implement mobile first, without the legacy that many private sector companies have built up over the years.

<sup>31</sup> Daniel Burrus: <https://www.linkedin.com/pulse/12-trends-grow-your-business-daniel-burrus>

<sup>32</sup> Other viewpoints: UK chose a ‘by default, no apps’ approach, whereby stand-alone mobile apps will only be considered once the core web service works well on mobile devices, and if specifically agreed with the Cabinet Office. See: <https://gds.blog.gov.uk/2013/03/12/were-not-appy-not-appy-at-all/>

<sup>32A</sup> Source: <http://www.gartner.com/newsroom/id/2324917>

## Importance of Mobile Government

- Increased customer satisfaction** as mobile allows for personalisation of services and burden reduction. Gov.UK shows mobile responsive designed websites attract significantly more mobile users.
- Improved operational efficiency and productivity.**
- Offering a solution to bridge the digital divide.** For instance for the 28% of Europeans that have no internet access at home.
- Transform traditional operating models.** Mobile signatures open up new opportunities for delivery of online public services.

## Where does Europe stand?

- 1 in 4 public websites is mobile-friendly** huge variations within countries for business and citizen services websites.
- Pre-filling data into forms is pivotal for a smooth mobile experience – **however this indicator dropped to 45%.**
- Assessment included websites for starting entrepreneurs, **unemployed/jobseekers and students.**
- UK Mobile is leading the way: mobile by default**  
“The mobile web as a winner both from a user and a cost perspective.”
- Mobile is the answer. To app or not to app? That’s the question.**

“To app or not to app – that is the question.”

**4.4 More transparent service process prevent users from dropping offline**

Besides wanting access anytime and anywhere, users have a desire to understand how the delivery of the service works: if your submission has been received, how long the process will take (so you can plan when to do it), where in the process you are at that moment, and if there are deadlines for the public administration to comply with.

The good news is that governments have improved the transparency of service delivery by comparison with the same data for the three life events two years ago. There

has been a 6 percentage point increase overall. As can be seen in Figure 9, this is mostly due to increased transparency in the Business start-up (+6 percentage points) and Studying (+11) life events. The unemployed/job-seekers have seen little improvement (+1).

The bad news is that there is still much room for improvement. Users are provided with information about the duration of the process in only 39% of cases. The figure for maximum delivery timelines for government is 46%. At the same time, administrations rarely give an account of their service performance (in 38% of cases) – if this is monitored by the organisation at all.

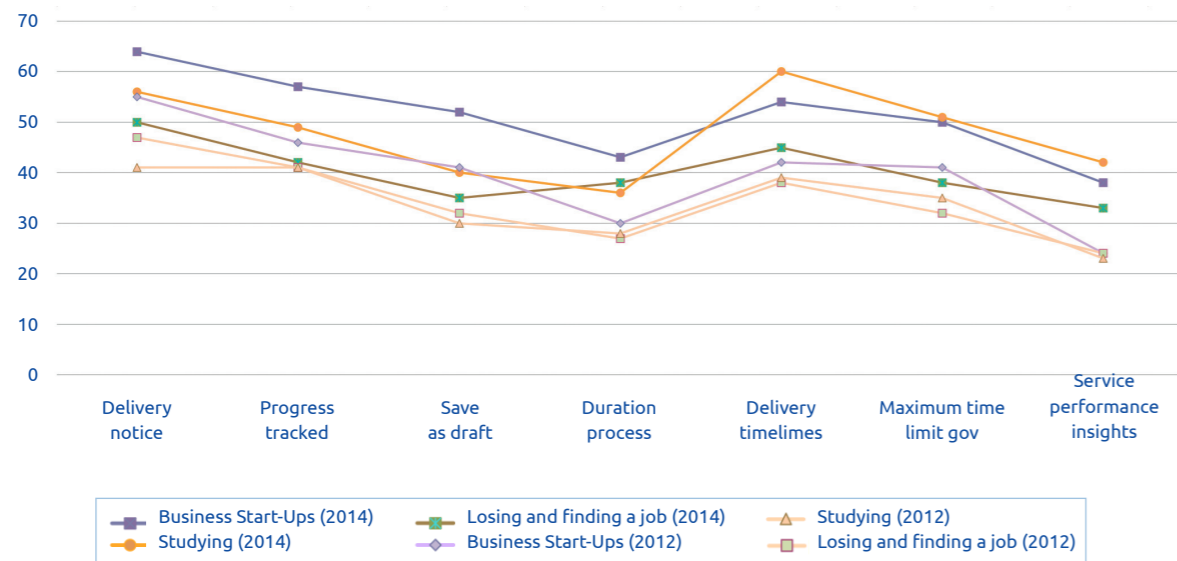


Figure 9: Transparency of service delivery, per question, comparison 2014 – 2012

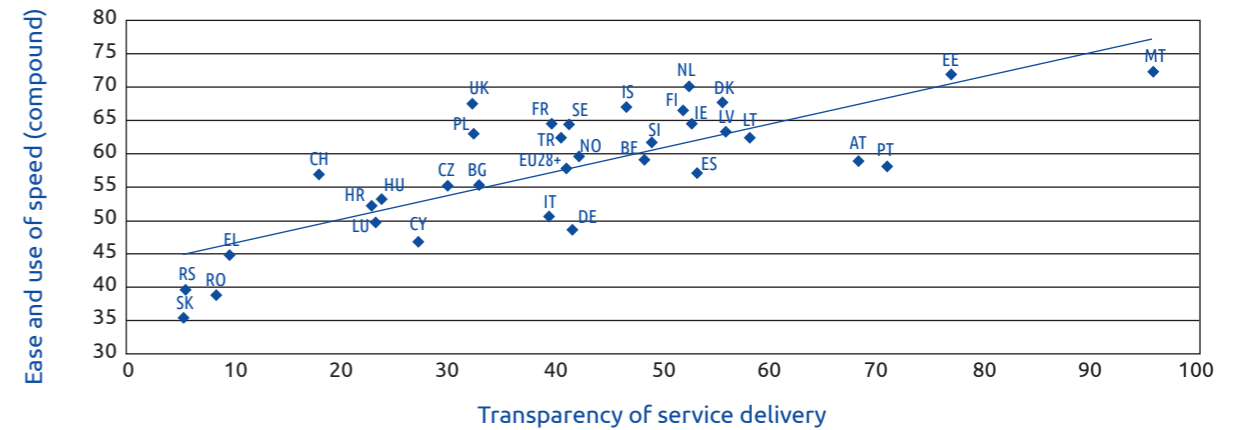


Figure 10: Transparency of service delivery vs Ease and Speed of Use (biennial averages: 2013+2014)

In general, the more transparent governments are about the service process, the better users evaluate the ease and speed of use of the services. Figure 10 shows the correlation between transparency and how users experience ease and speed of the process. More transparency will help attract people to use, and keep using, the online channel for interactions with government.

**4.5 Steady growth of online services – and how Europe can accelerate**

The core of public service delivery is bringing services and information about those services online. The results show a steady increase in online availability of services (up 3 points up from 72% in 2012 to 75% in 2014).

A closer look at how services are made available in three life events shows that in general more services have been brought online, and through a portal:

- For business start-ups the biggest increase is seen in the first stages of the life event: when providing guidance on **funding** and drawing up a business

plan, but also in basic **registration activities and administrative requirements**. The first is important, as access to finance is a major issue that needs to be tackled. Especially for smaller, more innovative and riskier ventures, access to finance remains difficult, not only seed capital, but also the capital required to scale up<sup>33</sup>. Remarkably, the online availability of services on tax-related matters declined, but the lower score in Figure 11, on the next page, is mostly the result of some countries automating this service (another category).

- For losing and finding a job the **emphasis is on the job search services**, rather than the actions for unemployed. It might be that the online channel is more suitable for the first category, as some countries prefer an offline contact at the start to prepare jointly with the unemployed how to get back into work. It is noteworthy that services that could prevent the unemployed spiralling out of control – such as debt counselling, guidance for the disabled, health promotion,

*“In general, the more transparent governments are about the service process, the better users evaluate the ease and speed of use of the services.”*

33 Productivity and Digitisation in Europe: Paving the Road to Faster Growth. Policy Brief by Bart van Ark, published by The Conference Board and the Centre for Innovation Economics, Lisbon Council Policy Brief Vol. 8, No. 1 (2014).



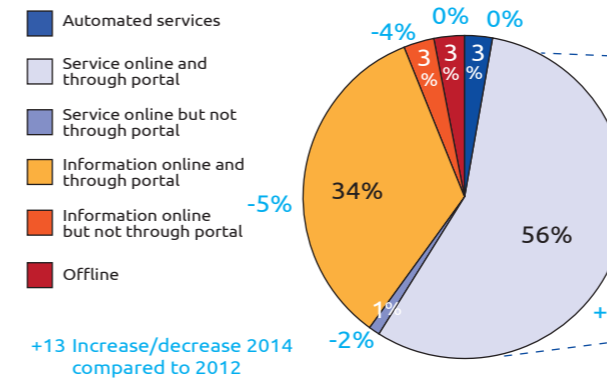
guidance related to housing – are increasingly part of the online customer journey of the unemployed (+11% percentage points compared to 2012), though this is still one of the lesser developed stages in this life event.

- The life event of **studying shows the biggest improvements**: in 65% of cases services are available online (up 16% compared to 2012). All stages show progress, in particular the orientation stage. What is striking is that – similar to the losing and finding a job life event – the socially disadvantaged are not served very well. Applying for social benefits is not nearly as developed as online enrolment and applying for regular student grant.

Online transactions are driven by the key enabler electronic identification (eID). The growth in this enabler (from 59% to 62% in 2014) is comparable to the increased online availability of transactional services (from 68 to 72 in 2014). The adoption of the eIDAS regulation<sup>34</sup> will increase mutual recognition of eID solution across borders, but will also drive national adoption of eID's. This will contribute to reducing the current fragmentation of the market and increase trust and confidence. It will also boost the opportunities for online transactional services – within countries and across borders.

Losing and finding a job

- Automated services
- Service online and through portal
- Service online but not through portal
- Information online and through portal
- Information online but not through portal
- Offline



Online services available per life event stage

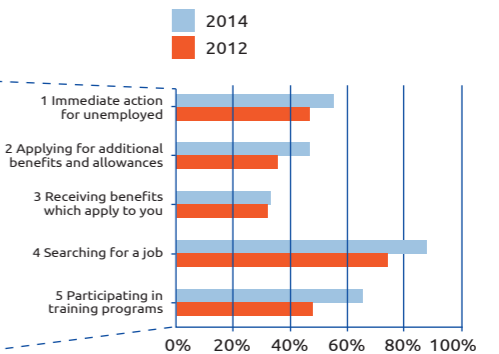
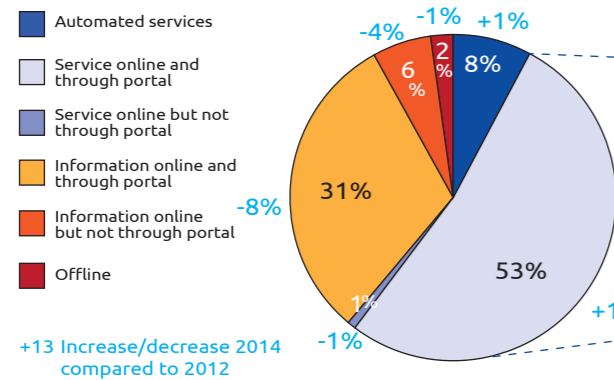


Figure 12: How services are made available in the life event of 'Losing and Finding a Job', and the progress towards fully online services in each of the stages of the life event.

Business start-up & early trading operations

- Automated services
- Service online and through portal
- Service online but not through portal
- Information online and through portal
- Information online but not through portal
- Offline



Online services available per life event stage

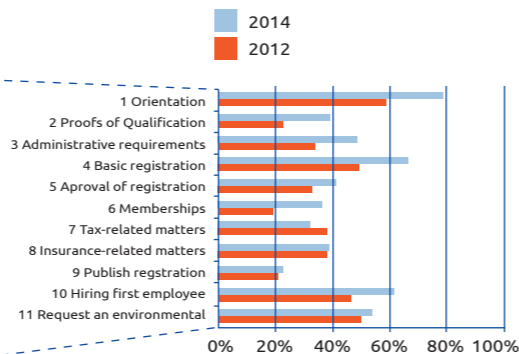
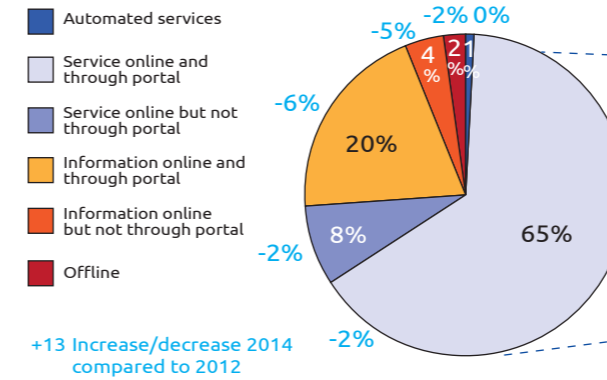


Figure 11: How services are made available in the life event of 'Starting a business and early trading operations', and the progress towards fully online services at each of the stages of the life event.

Studying

- Automated services
- Service online and through portal
- Service online but not through portal
- Information online and through portal
- Information online but not through portal
- Offline



Online services available per life event stage

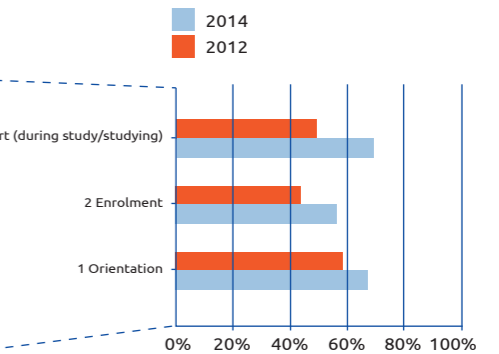


Figure 13: How services are made available in the life event of 'Studying', and the progress towards fully online services in each of the stages of the life event.

4.6 How personalisation can help and even satisfy people declaring taxes

Citizen-managed data and personalisation are one of the key technology trends that governments will need to embed in their service processes. Customers expect access to data on them that is stored by the government, and transparency in who is using that data for what purpose. Personalisation refers to customising services

to individual needs, based on personal preferences or information that is already known to the service provider. However, before being able to personalise services, governments need to have solid foundations that allow re-use of personal data for that purpose. Re-using data for multiple services ('once-only principle') ensures that citizens and businesses supply certain standard information only once, because public administration offices take

34 <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52012SC0135>

*“Governments need to have solid foundations that allow re-use of personal data for that purpose”.*

action to share this data internally, so that no additional burden falls on citizens and businesses.

According to an earlier study<sup>35</sup> more than 70% of 34 European countries have undertaken initiatives to put this principle into practice. The study also states that the putative savings of EUR 5 billion depend to a great extent on how the principle is implemented. Once-only registration is only effective when applied cross-agency and cross-tiers. This requires a high degree of interoperability. The study also reports that there is a trend towards centralisation to make this happen.

If we look at the evaluation of the life events, we see three relevant findings:

- Transparency of personal data increased by 11 percentage points (from 43% to 54%), increasingly allowing users to access their personal data, to

send notifications where corrections are necessary and to complain if their data is used erroneously. The progress is significant in all three life events.

- The biennial average for the key enabler Authentic Sources, that makes it possible to pre-fill forms with personal data from existing registers, decreased slightly, by 2% (from 47% to 45%). But when looking at this enabler, which is of critical importance to increasing personalisation of services (simplifying, reducing steps, pre-filling) and saving costs, it shows that the drop in the three life events being assessed here is much bigger. This is particularly true of Losing and Finding a Job, where this enabler dropped 12 points.
- There has been no increase in the number of automated services, i.e. services that are delivered without the user having asked for it. This is still at 4%.

One might assume that increased access and transparency in use of personal data would also imply that governments are better able to use that data in various service processes. Opening up data for users or other public organisations should make no difference. Apparently this is not so easy, and this is not so strange if we take into account the harmonisation that is required in the back offices to enable sharing and re-using of data. The deterioration of authentic sources and stagnation of automated services reveal that more is needed to enter the next stage of personalisation and create services that are as simple as possible for users.

The success of many income tax services in Europe that pre-fill data and simplify the procedure might serve as an example. When the average satisfaction of users with this service is compared, as the only public service, with e-commerce and e-banking applications and was awarded a 7.6 (scale of 10)<sup>36</sup>. Surely if it is possible that people are satisfied after having submitted their tax returns, this could become common practice for all public services?

#### 4.7 Governments should eat their breakfast

It has frequently been said that “feedback is the breakfast of champions”. It is essential for improvement and closes the learning cycle: from experiences and lessons learned, improvements can be defined and implemented. It can help providers improve their efficiency and effectiveness, be a source of innovative ideas for improvement, and also prevent customers from starting formal (burdensome) complaint procedures. Smart governments take these recommendations into account and see how to implement them in the regular service process. Some even monitor the behaviour of online visitors to be able to re-structure the website and make

frequently searched-for products and information available more easily and quickly. All these actions will result in better user experiences, and satisfied and returning customers.

What we see in practice is that the significantly increased number of feedback mechanisms available in service delivery do not necessarily lead to better user experiences or more users. While in the life events being assessed here the options for starting entrepreneurs, jobseekers and students to share experiences and feedback with the relevant public entities have grown over the past two years, this has not resulted in better user experiences of these life events (ease and speed of use remain unchanged). The number of individuals interacting with public authorities shows a small increase. There are two possible reasons for the slow rate of progress:

- Low user response rates, for instance because the online feedback mechanisms are not themselves easily accessible, or user- (mobile-)friendly, and perhaps not tailored to the needs, for instance, of disadvantaged segments – or users are not engaged (but the latter seems to be in contrast with the increased attention paid to collaboration and participation initiatives);
- Missing action on the part of service providers, e.g. there is no suitable process in place within the public organisation to follow up and act, and no mechanism for reporting back to the user what has been done with the feedback – with the result that there is no concrete improvement to service delivery, and this may even discourage users who feel their advice has been ignored.

It is difficult to say where the bottleneck is, though both could undoubtedly be improved by public sector organisations.

*“The deterioration of authentic sources and stagnation of automated services reveal that more is needed to enter the next stage of personalisation.”*

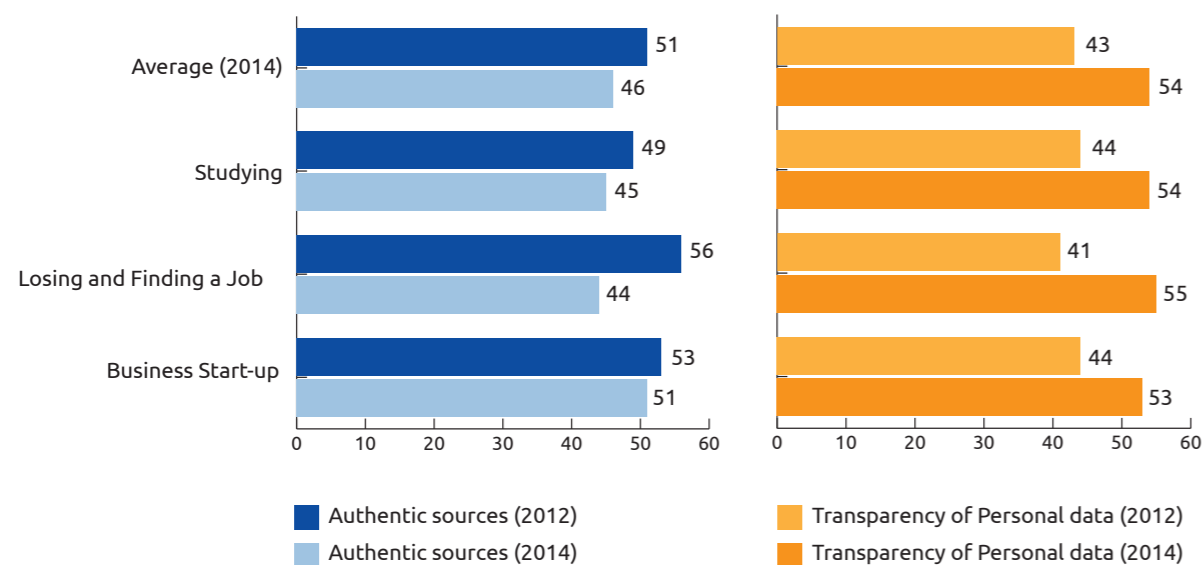


Figure 14: Comparison of Authentic Sources and Transparency of Personal Data, for three life events 2014 vs 2012 (EU28+, %)

<sup>35</sup> Study on eGovernment and the Reduction of Administrative Burden, DGCONNECT, 2014. See: <http://ec.europa.eu/digital-agenda/en/news/final-report-study-egovernment-and-reduction-administrative-burden-smart-20120061>.

<sup>36</sup> User survey 2012, see eGovernment benchmark report: [https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/eGov%20Benchmark%202012%20insight%20report%20published%20version%200.1%20\\_0.pdf](https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/eGov%20Benchmark%202012%20insight%20report%20published%20version%200.1%20_0.pdf)

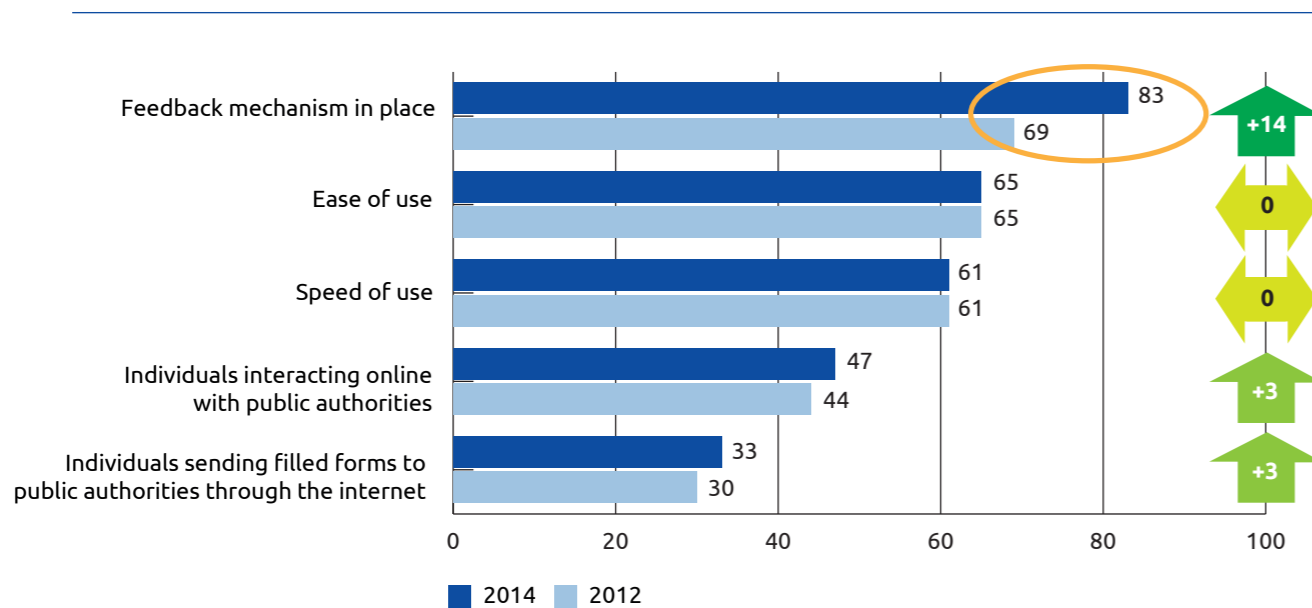


Figure 15: Availability of feedback mechanisms and effect on user experience and use of online services<sup>37</sup>

Collecting feedback is only the beginning. Service providers must respond. At the moment only 2 in 5 countries provide information online about the methods employed for monitoring and assessment of the administration's performance, and fewer than 2 in 5 publish information on user satisfaction with the administrations' services<sup>38</sup>. Culture change is required on the part of public service deliverers. Receiving feedback from public service users, particularly complaints, is often seen as something to be wary of, not celebrated<sup>39</sup>. However effective public sector organisations should view complaints not as a problem, to be ignored, dismissed or undervalued, but as useful early warning signs that something has gone wrong, which then enable public services to engage with citizens<sup>40</sup>.

#### 4.8 Conclusion: the online customer journey is not yet futureproof

An objective look at the performance dashboard of policy priorities (in Chapter 3) gives a generally positive view: there is progress in almost all areas. This progress might be incremental, but it is progress. If we look at the customer journey for starting entrepreneurs, the unemployed and job-seekers, and students we see advances in the portal functionalities, support and feedback options offered by public administrations and a steady growth in online information and services. The question is if this is enough to satisfy users and have them return to the online channel. The answer to the question at this moment is: 'no'. We know from the user survey in 2012, which surveyed citizens across Europe about their experiences

with public and commercial services that citizens are significantly more satisfied with the services provided by banks (satisfaction rate of 8.5) than for regular public services (6.5). This survey also revealed that fewer than half of eGovernment users (47%) found what they were looking for online.

If we take a look at some strategic technology trends for smart governments – the same trends that are more and more adopted by commercial services and give rise to customer expectations – the challenge for the public sector to catch up is huge. Particular issues include:

- Mobile devices offer a great opportunity for further personalisation of services – but the issue at the moment is that only 1 in 4 public sector websites is mobile-friendly. Good practices show that as soon as websites are designed for mobile, the number of users increase exponentially. There is a clear need that is not addressed at the moment.
- If Open Government – that emphasises transparency and collaboration – is the next stage after eGovernment<sup>41</sup> in modernising public administrations, we can argue that most of Europe is not there yet. There is still a great leap to make in terms of meeting expectations, commitment and track and trace in service delivery.
- The same is true of enabling citizens to manage personal data themselves, and of increasing re-use of personal data to allow more personalised services and further reduce burdens by automating or even removing services.
- Cross-domain interoperability also appears to be a big challenge, as the number of automated services is not rising. Nor is the use of key technological enablers that could boost online experiences (as we have seen in Chapter 3).

- Collaboration and a closed feedback loop to learn from users and improve service provision accordingly is essential to break through lagging satisfaction scores. With feedback options more and more available – but user experience and use almost flat – the question that arises is how governments handle feedback and implement changes. This applies not only to traditional feedback channels, but also to tracking and tracing user's behaviour when online, and strengthening collaboration and participation.

Of course, there are more disruptive technologies that open up great opportunities for better online services, reducing burdens and saving costs – Open Data, Internet of Things, Big Data and Analytics, Cloud Computing and Gamification – but research in these areas shows that the public sector is in an embryonic state.

The results show that many governments are building on concepts and routes that are familiar, that were planned for over the years – concepts and ideas that are commonly accepted, that most of the civil servants are used to and understand; ideas that have been through many meetings, discussions and workshops, that took time to develop and agree upon. This traditional – conservative – approach to eGovernment is not sufficient. It is not futureproof.

The public sector is not alone in this challenge. Yes, Google and Apple move ahead of the pack, but many private sector companies struggle with the digital transformation as well. They have issues with incorporating new technologies, with innovating their business models despite an unremitting drive to deliver on user needs. However, research shows that companies that did not manage to

*“The golden rule that applies here is that ‘If you do what you did, you get what you got.’”*

<sup>37</sup> Availability of online feedback mechanisms and Ease and Speed of use (for Starting up business, Losing and finding a Job, Studying, eGovernment Benchmark 2012 and 2014), and individuals interacting with public organisations (of total population) and sending forms (of internet population) (EU average, Eurostat, 2012 and 2014, retrieved from Digital Agenda Scoreboard).

<sup>38</sup> eGovernment Benchmark 2014 (this study), Transparency of Public Organisations, question E6.1 and E6.2

<sup>39</sup> Open government guide, Establish easy feedback mechanisms for public services, see: <http://www.opengovguide.com/commitments/establish-easy-feedback-mechanisms-for-public-services/>

<sup>40</sup> Simmons, Richard and Carol Brennan, and Grievances, The role of complaints in transforming public services, London: NESTA, 2013.

<sup>41</sup> E-Government interoperability: linking open and smart government. Carlos E. Jimenez, Agusti Solanas, Francisco Falcone, for IEEE Computer Society, 2014. See: <https://joinup.ec.europa.eu/community/egovernment/news/egovernment-interoperability-linking-open-and-smart-government>

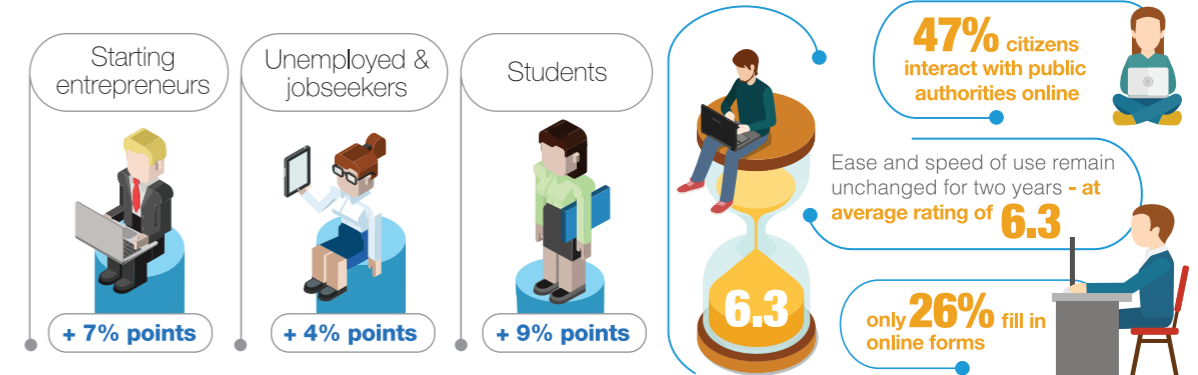


change, and failed to transform to digital, disappeared. The golden rule that applies here is that 'If you do what you did, you get what you got'.

To overcome this challenge, governments should be devoting themselves to designing the customer experience outside in, in the same way that private sector companies work, so that customer expectations can be met (tailored in a timely fashion to their specific needs). They should be focused on systematically learning how their customers interact with their channels (all channels, not just the digital channel), services, employees and so on. Furthermore, they should focus on delivery from start and think about their organisational challenge: what people, process and technology changes are required to make the new customer experience work? This comes from the use of digital technologies to increase reach (mobile!) and engagement, and from using sophisticated analytics tools to analyse a mass of data to adjust and improve the customer experience.

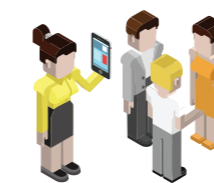
## Are government services prepared for the digital age?

**ON THE POSITIVE SIDE:** More services available online for **HOWEVER:** use and user experience remain insufficient



## 3 challenges for government services to match rising customer expectations

### 1 Mobile-friendly



Only **1 in 4** public services in Europe (**27%**) is 'mobile-friendly', creating a smooth experience when visiting public websites on your mobile device.

**UK leads the way:** 'for government services, the mobile web is a winner, both from a **user** and a **cost** perspective'.



### 2 out of 5 websites (41%)

are transparent about service process, duration and response times, thereby causing people to drop offline.



### 2 Open & transparent

only **1 in 3** websites (**35%**)



inform visitors about their ability to participate in policy making processes.

### 3 Personalised & simplified

Proactive information provided about personal data held by the governments (**in 33 countries**):

Entrepreneurs



6

10



Students

4



Unemployed/ job-seekers



Once-only registration simplifies registration and customises services for multiple use by public authorities - however:

In **45%** of cases, online forms pre-filled with personal data are used.



In only **4%** of cases, services are proactively delivered to the user.

# The explorative benchlearning perspective: peers in their context

The previous Chapter looked at developments in Europe in general. The findings there may not be exactly representative of individual countries, as there are huge differences among European countries. It is precisely these differences that explain performance results and provide a fresh view of what individual countries could do to improve. Countries are at different stages of eGovernment development and this requires different actions. There are some countries that lead the charts. There are some that do not, but if you look more closely are still ahead of countries with similar characteristics. This brings us to the following: how do countries compare when clustered with their peers? What can then be said about success factors and barriers to improvement? This will be the objective of this Chapter.

## 5.1 Benchmarking is core to a continuous benchlearning and improvement cycle

The European eGovernment Benchmark has evaluated online service evolution since 2001, at first by measuring basic

service availability and sophistication. For over a decade it has supported policy makers, provoked valuable discussion, set new ambitions and identified countries to learn from. However, Information and Communication Technologies not only enhance the relationship between citizens and Government, they also make it possible to increase the efficiency of a Public Administration's processes. A sustainable eGovernment should produce efficiently. Thus, innovation policy objectives should not only take into account how to disseminate online services and increase citizen eGovernment usage, but also, for example, the degree of digitisation of the back office. This is a proxy of a country's ability to manage eGovernment projects in order to improve efficiency and effectiveness through the correct use of ICT. Hence, new eGovernment performance indicators should be considered.

Moreover, despite investments and efforts in eGovernment, the results obtained by some countries show only incremental progress and only a slow rate of take-up in the use of eGovernment services. What are the factors hindering innovation activities? How do the characteristics of a country (such as the educational level of the population, different levels of government structure, and the availability of adequate ICT infrastructures) influence eGovernment performance and, consequently, eGovernment strategy?

Even if the strategic objectives can remain the same, the operational goals and actions required may differ from country to country. So, in order to define a specific eGovernment policy and strategy for a country to overcome the constraints and

maximise the efficiency and the effectiveness of its actions, it is important to understand:

- the impact of a specific context on eGovernment maturity performance;
- the contextual differences of countries with similar performance;
- the differences between countries with similar contexts but different performance.

The following sections present the insights derived from a clustering analysis in three steps:

1. Introduction of a new, explorative framework for measuring eGovernment performance (paragraphs 5.2 and 5.3);
2. Clustering of countries with a homogeneous context based on factors related to eGovernment supply and demand, and exogenous factors such as: size, income, demography, education, urbanisation, digital maturity, government structure (e.g. federal, central), social capital (i.e. corruption) (paragraph 5.4);
3. A cross-country analysis that makes clear how context-specific variables

impact on countries' performances, and what is needed to bring about improvement.

This allows for comparison of peers in their context. It improves the understanding of country performance and supports peer-learning. In this way, benchmarking eGovernment contributes to a continuous improvement cycle.

## 5.2 A new explorative framework for eGovernment maturity

This exercise started with drafting a new, explorative framework that represents an experimental approach, which aims for a better understanding of the meaning of a country performance, and to make suggestions for improvement that are derived from countries with a similar context but better performance.

The first step in this new, explorative framework was to identify four absolute indicators to measure eGovernment maturity<sup>42</sup> in accordance with the Action Plan objectives. Figure 16 presents the relationship between the eGovernment Action Plan policy priority areas and these indicators.

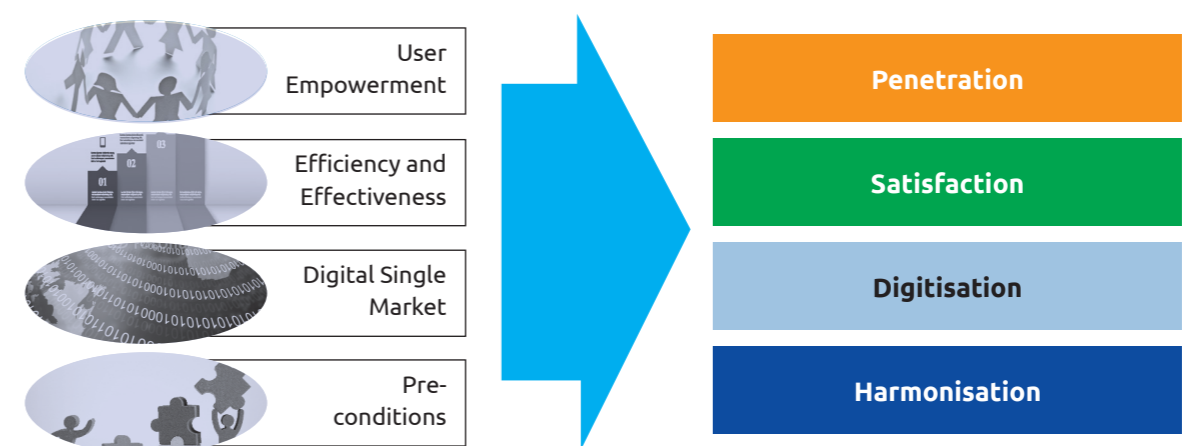


Figure 16: eGovernment maturity indicators

<sup>42</sup> The analysis does not include Switzerland, Republic of Serbia and Turkey because data is missing on these countries in different datasets.

This Chapter will reveal:

- An experimental point of view on measuring a country's eGovernment maturity;
- four absolute indicators that are a baseline for an efficient government that is able to implement innovation and reap benefits from that;
- a clustering of countries in terms of socio-economic and cultural factors that influence absolute performance;
- an overview of how the results of this clustering analysis could be used by countries to improve their eGovernment strategy and identification of the most suitable path towards eGovernment maturity.

They are:

- *Penetration* represents the usage of online eGovernment services;
- *Digitisation* measures the efficiency and effectiveness of a Public Administration's internal procedures;
- *Harmonisation* is a proxy for the ability of a Public Administration to coordinate innovation actions, homogenising the supply of eGovernment services in order to reduce usage barriers, to exploit economies of scale and to foster a digital single market<sup>43</sup>.
- *User satisfaction* with online services should be analysed in terms of both overall evaluation of the experience and fulfilment of expectations and objectives, in order to understand on the one hand the Public Administration's ability to meet citizen's need for the implementation of attractive services, and on the other hand to figure out the different reasons for the lack of penetration.

It is possible to define the implications for eGovernment strategies by assessing the performance scores against these dimensions. Comparing the different dimensions makes it possible, in particular, to identify different scenarios and to understand what specific actions could be taken in order to improve eGovernment maturity. The following paragraphs plot the countries in the different scenarios that arise when comparing these dimensions, and provide general recommendations.

### 5.2.1 Penetration versus satisfaction: delivering on user's needs?

It is possible to identify four scenarios when comparing penetration with user's satisfaction:

- **Discovering eGovernment:** A lower level of satisfaction and a lower level of penetration might be a sign of an eGovernment which is still to be discovered to any large extent; significant efforts are needed to achieve eGovernment maturity, more structured policies and innovation plans need to be deployed without overlooking a citizen-centric approach.
- **Challenged eGovernment:** A lower level of satisfaction with a higher level of penetration might be the result of an eGovernment, which is challenged in providing citizens with services compliant with their needs; future actions should involve a more citizen-centric approach.
- **Hidden eGovernment:** a higher level of satisfaction with a lower level of penetration might prove the Government's ability to offer quality services, but the government should look into what is causing the lack of usage in

order to exploit its investment in digitising Public Administration services.

- **Market-Oriented eGovernment:** A higher level of both penetration and satisfaction might show an ability to meet user's needs in a market-oriented approach, where citizens use online services and appreciate them.

Figure 17 shows the assessment of each country in these four scenarios.

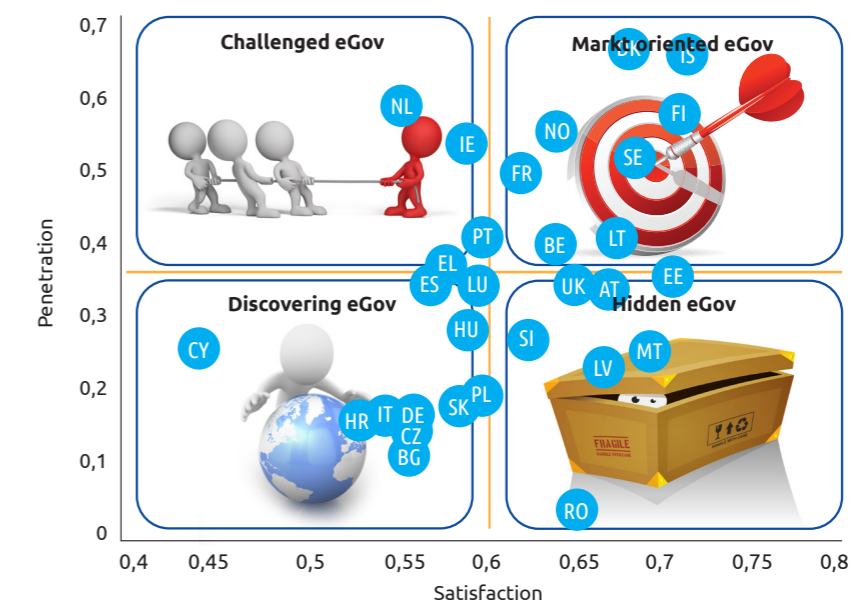


Figure 17: Assessment of penetration and satisfaction

<sup>43</sup> More details on this indicator are in the background report of this study, in particular paragraph 7.2.3.



**5.2.2 Penetration versus digitisation: exploiting ICT for higher efficiency?**

In order to understand a country's ability to exploit ICT to increase the efficiency of its processes, we compare penetration with digitisation. Four scenarios are possible:

- **Non-consolidated eGovernment:** a lower level of digitisation and a lower level of penetration characterise an eGovernment which does not yet utilise ICT opportunities, but is aiming to benefit from ICT in the future.
- **Unexploited eGovernment:** a lower level of digitisation combined with a higher level of penetration could mean that the Public Administration has mainly digitised the front end. Digitising the back offices is still ongoing. Thus, these countries are achieving a lower level of efficiency in managing their resources. There is room to exploit the advantages of high online use of eGovernment services.
- **Expandable eGovernment:** a higher level of digitisation together with a lower level of penetration may suggest a scenario where the innovation

process has been carried out efficiently, but it is urgent to expand the number of online users that is currently preventing the administration from reaping the potential advantages.

- **Fruitful eGovernment:** a high level of both digitisation and penetration indicates a successful process of innovation, where public organisations have achieved an efficient and effective way of working.

Figure 18 shows the assessment of each country in these four scenarios.

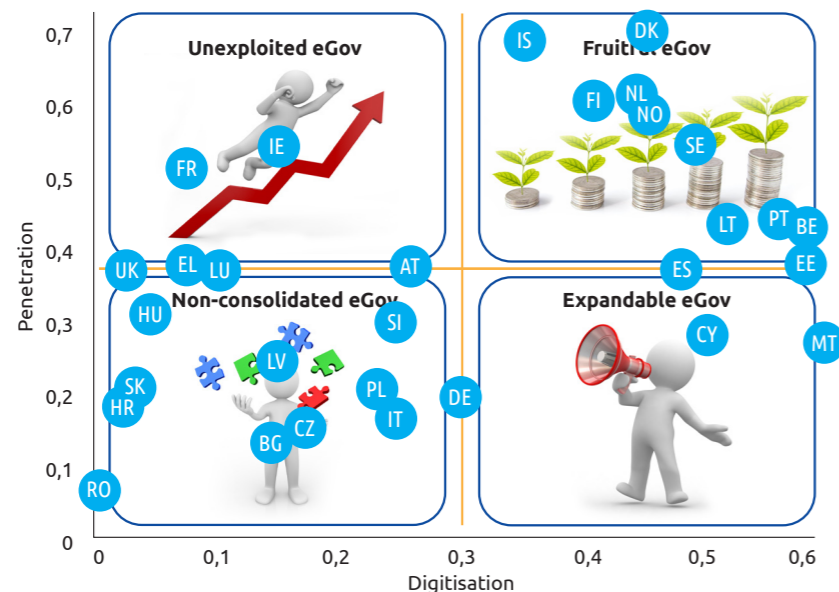


Figure 18: Assessment of penetration and digitisation

**5.2.3 Satisfaction versus digitisation: leading innovation in the right direction?**

Comparing satisfaction with the digitisation process makes it possible to represent a country's ability to lead the internal innovation process without overlooking citizens' needs, managing the internal versus external equilibrium. Four scenarios are identified:

- **Early eGovernment:** a low level of digitisation and satisfaction illustrates the difficulties for a Public Administration to develop eGovernment services that fulfil user's needs and at the same time generate a higher level of efficiency in digitising its internal processes. For these governments, it is important to understand if the contributory factors are exogenous or endogenous.
- **Narrow eGovernment:** a low level of digitisation and a high level of satisfaction reveals a perception on the part of citizens that the quality of online services is high, but the extent to which these online services are supported by internal process digitisation is limited and consequently leaves

room for governments to improve on the latter and to harvest benefits.

- **Growing eGovernment:** a high level of digitisation combined with a low level of satisfaction shows an eGovernment with a strong focus on digitising internal processes but where there is so far no strong correlation with user's needs. Growing the satisfaction of users will lead to the next scenario...
- **Fulfilling eGovernment:** a high level of both digitisation and satisfaction represents eGovernment fulfilment, where the digitisation process serves as an example for others and the services on offer correspond to user's needs.

Figure 19 shows the assessment of each country in these four scenarios.

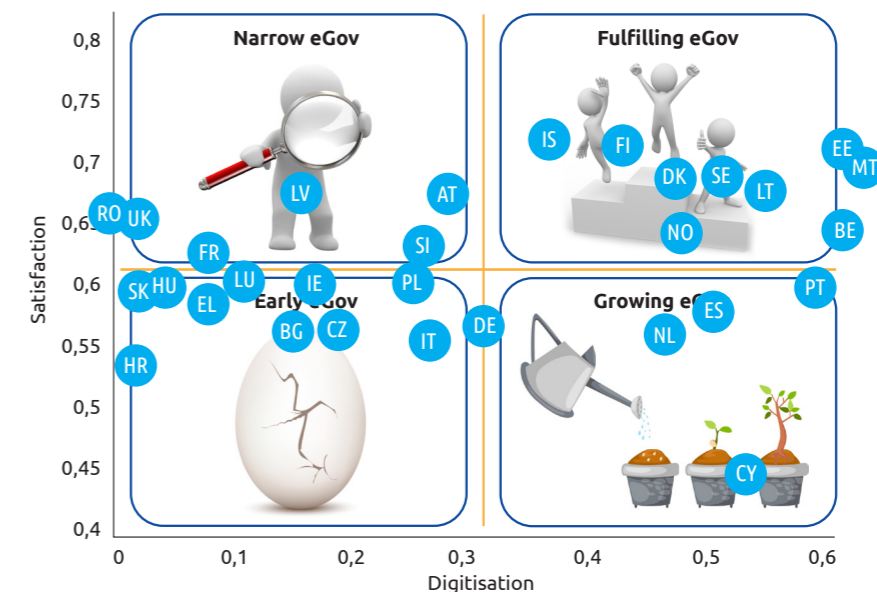


Figure 19: Assessment of satisfaction and digitisation

5.3 Clustering countries in five maturity groups

The assessment makes it possible to determine eGovernment maturity within countries and to identify different clusters of countries with similar eGovernment maturity performance. Five clusters have been identified, as shown in Figure 20.

**Neophytes Cluster:** scores very low on both penetration and digitisation, resulting in weak eGovernment that insufficiently exploits ICT opportunities and is dependent on significant efforts, which are essential to move towards eGovernment maturity.

**High Potential Cluster:** characterised by a wide contrast between the level of digitisation (low) and the level of penetration (medium-high). This cluster is getting things right, but the lower level of digitisation implies that Public Administration processes could increase in efficiency and cost savings could be realised if the necessary action were to be initiated. It also shows that despite the efforts required, citizens are confident of the eGovernment potential and use online services.

**Progressive Cluster:** characterised by a low level of penetration, yet a medium level of digitisation. This means that

countries in this cluster have been working on a digital approach, but there are some factors that constrain full distribution of satisfying eGovernment services. The Progressive Cluster should focus on removing those barriers. Policies and innovation plans should specifically address and support deployment of a citizen-centric approach to further increase use of eGovernment services.

**Builders Cluster:** characterised by the highest level of digitisation, but a medium-low level of penetration. This suggests a scenario where the innovation process has been carried out efficiently, but online interactions with government are nonetheless not yet common practice for citizens in these countries. Satisfaction is higher than in three other clusters (all but the Mature cluster). This means that in these countries the Public Administration is doing well, with a structured approach to innovation. However, the lack of penetration prevents government from completely exploiting the advantages of digitisation. These countries have to understand what causes the relatively lower level of usage, in order to identify the most suitable actions to carry out. A multi-channel strategy could be an option.

**Mature Cluster:** has the highest level of penetration and a high level of digitisation, displaying a successful process of in-

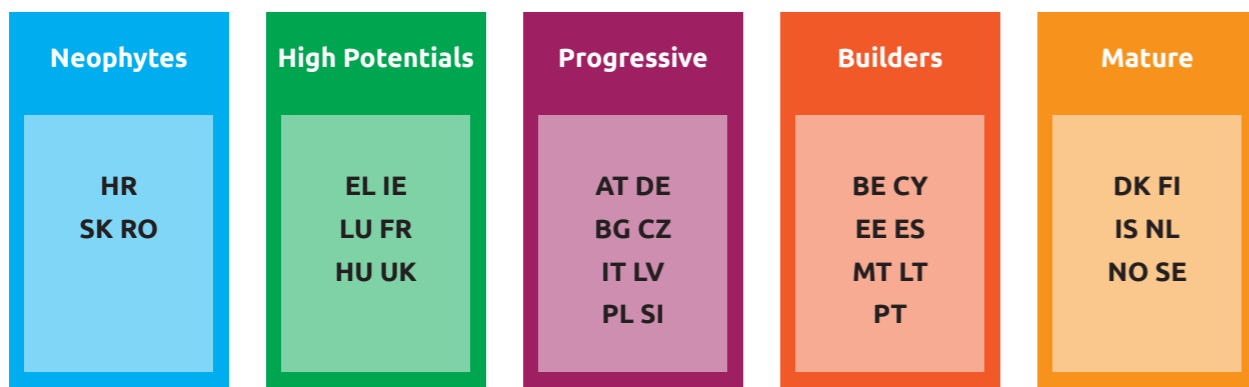


Figure 20: Clusters of countries with similar eGovernment Maturity

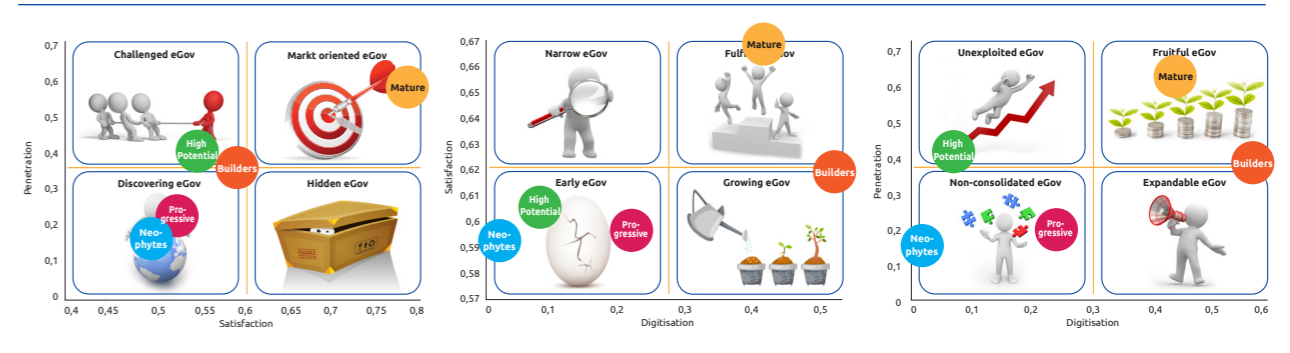


Figure 21: Clusters' assessment

novation, making it possible to exploit the opportunities offered by ICT. The Mature Cluster also achieves quite a high level of satisfaction, showing a market-oriented approach that succeeds in meeting users' needs. Use of eGovernment services and online interaction with governments in these countries might be the most mature in Europe, but are not close to 100%. Similarly, there is still more that can be done to digitise the internal processes and harmonise both between government tiers as well as across borders.

Figure 21 shows the assessment of each cluster in the maturity scenarios identified.

5.4 The impact of context-specific factors on the maturity performance

In addition to having an absolute view on performance and maturity, it is important to understand which factors can influence an eGovernment strategy and hence

the achievement of the objectives. We grouped these factors in three categories:

- eGovernment supply: in terms of the distribution of eGovernment services; online services availability refers to investments and efforts in innovation, dissemination and quality of services.
- eGovernment demand: in terms of citizens' willingness to use online services; factors that enable citizens in using the online channel are eReadiness, Awareness and Attitude of citizens.
- Environment: in terms of readiness of the background; some exogenous factors that are considered are socio-demographic data, ICT Readiness and Governance structure.

Based on these factors, it is possible to identify five groups of countries with a homogeneous context, or rather groups of countries in which the factors that influence eGovernment maturity score a similar value. These groups are shown in Table 2.

Group	Countries							
Group 1	Latvia	Slovenia	Luxembourg	Iceland	Cyprus	Estonia	Lithuania	Malta
Group 2	Poland	Germany	Italy	France	United Kingdom	Spain		
Group 3	Netherlands	Belgium	Austria					
Group 4	Romania	Czech Republic	Greece	Hungary	Portugal	Bulgaria	Croatia	Slovakia
Group 5	Sweden	Ireland	Denmark	Finland	Norway			

Table 2: Groups of countries with homogeneous context

**Group 1** is composed of countries with smaller populations that are relatively young, highly educated and of medium income (measured by GDP per capita); the level of centralisation of services in these countries is high.

**Group 2** is composed of the countries with the largest populations, and those populations are relatively older and have a level of education in line with the European Union average; the maturity of infrastructures and the take-up of the internet are also in line with the EU average.

**Group 3** is composed of high income countries with relatively large populations that are highly urbanised, highly skilled in ICT, and more inclined to use e-commerce and e-banking services; the ICT infrastructure is highly developed; the level of centralisation is low.

**Group 4** is composed of lower income countries with populations that are less urbanised and have a relatively lower level of education level and fewer digital skills; the infrastructures are not as highly developed in this group of countries; these countries also face higher perceived levels of public sector corruption.

**Group 5** is composed of high income countries with small populations that are highly educated and very much inclined to use e-commerce and banking services; the infrastructures are very well developed; the level of centralisation of services is high; these countries face low perceived levels of public sector corruption.

**5.5 Comparing peers to understand and improve eGovernment performance**

Having categorised countries in terms of both absolute performance and their relative context, it is possible to analyse peers. The cross-analysis puts the individual performance of a country in its context. The result of mapping absolute performance clusters with clusters of countries with a similar context is presented visually in Figure 22. The purpose is to compare peers and to identify specific policy recommendations for each country that could support policy makers in moving forward.

The cross-country analysis allows for a better understanding of how context-specific variables impact the performance of countries, and in particular the relevance of the degree of penetration and digitisation as satisfaction levels are quite similar across countries. In what follows, the result of

this analysis is summarised taking the context groups as starting point. In an extensive description in the Background Report, the analysis starts from the perspective of performance clusters.

In **Group 1** Latvia and Slovenia face a gap in Digitisation and Penetration. It is likely that some structural factors affect these countries, such as an ageing population that lives in mostly rural areas, with low digital skills and households with limited access to the internet. Additionally, these countries perform less well in the corruption index compared to other countries, which could imply a greater resistance to change. On the other hand, people do seem to be interested in interacting online with the public sector, as is highlighted not only by e-channel preferences but also by the relatively good levels of e-commerce and e-banking usage. In addition, when services are available online, people seem to appreciate them (so-called high fulfilment of expectations). Therefore, Latvia especially should primarily focus on increasing the supply of services (to improve the present moderate level of availability) and on communicating these actions (to reduce the present lack of awareness). The communication should focus not only on increasing awareness of the services, but more generally on promoting the use of technology and the internet (digital literacy). However, the perceived higher level of corruption in the public sector could be a limitation for these countries in achieving performance similar to their benchmarking countries, such as Iceland and Estonia.

Luxembourg also has room to increase its level of Digitisation in comparison with its benchmark countries (e.g. Estonia). A likely element influencing the lower level of Digitisation is the coordination between institutions in these countries. It could be that their strategy so far has focused on putting services online and making them available for citizens, but might have been less attentive to the efficiency gains from

digitising internal processes. Investing in solving these issues could lead not only to savings in the management of the public administration, but also to an increase in the quality of services for citizens. The latter is demonstrated by results achieved by other countries that have taken similar steps. Further digitisation of internal processes, for instance through cross-agency sharing, could lead to further simplification and even automation of services.

Malta, Cyprus, Estonia and Lithuania represent the Countries to learn from in group 1, but also have learning goals for themselves. These countries are almost equal in the sense that all have similarly low scores on skills and computer literacy. Even e-banking use turns out to be low – except for Estonia. Communication activities are required to make people aware that eGovernment services exist and could meet their needs, especially in Estonia, where the lack of awareness is relatively high and the perceived benefits are low, even though high quality eGovernment services are available.

In **Group 2** the benchmarking country is Spain. ‘In fact, for Germany, other factors like broadband penetration and digital skills would lead us to expect higher levels of Digitisation. However, in federal countries like Germany (or Austria), eGovernment policies have to be implemented largely through coordination mechanisms between national, regional and local public authorities rather than simply being forced top-down by national authorities. Progress is then more difficult to achieve as coordination adds another layer to the complexity of the implementation of eGovernment services.’ The principal factor that seems to have a negative impact on the performance in the Penetration index is a relatively older population, who might be less eager to use the internet for interactions with government. In this case, an adequate multichannel strategy with a clear focus on increasing digital literacy and awareness could be the way forward.

*“The cross-analysis puts the individual performance of a country in its context.”*

	Neophytes	High Potentials	Progressive	Builders	Mature
<b>Group 1</b>		LU	SI LV	CY EE LT MT	IS
<b>Group 2</b>		FR UK	DE IT PL	ES	
<b>Group 3</b>			AT	BE	NL
<b>Group 4</b>	HR RO SK	EL HU	BG CZ	PT	
<b>Group 5</b>		IE			DK FI NO SE

Figure 22: Mapping of countries based on both performance and context factors



In Italy, the lower level of Digitisation could be affected by:

- a lower level of digital skills in public administrations compared to the situation, for example, in Spain;
- an inadequate capacity of institutions to coordinate innovation efforts;
- a high perceived level of corruption that is the source of a resistance to change initiatives aimed at digitising processes and thus their transparency.

eGovernment usage in Italy seems to be influenced by people's socio-demographic characteristics when compared to the benchmarks (i.e. UK and France): the population is older, is more likely to live in rural areas, with relatively lower levels of education and digital skills. On top of that Italy faces a lack of trust in internet use for complex interactions, a high level of corruption compared to the benchmark countries, and a higher lack of awareness of e-services – despite online services being generally well available and acceptable quality standards. Therefore, it could be appropriate to implement a suitable communication strategy to promote the availability and use of digital services. The communication initiatives should overcome the fragmented nature of the institutional levels, and following a multi-channel strategy, should make services available to that portion of population who are still not ready to interact online.

Compared to the benchmark, contextual factors in Poland that limit Digitisation may be the availability of digital skills and the difficulty of coordinating the efforts of the public bodies, although these factors are not likely to jeopardise the effectiveness of an appropriate eGovernment strategy. Similar considerations are valid to Italy, but Poland has a relatively younger population, higher educational and digital skills levels, and a lower level of corruption.

France and the UK could increase their level of Digitisation in comparison with their

benchmark country (Spain). The sole element that seems to influence their lower Digitisation score is weaker coordination between institutions. Investments in this could lead not only to higher savings in the management of the public administration, but also to an increase in the quality of services to citizens – which is high on the agenda in both countries.

In Spain, people are more inclined to use e-channels than in France, but there is still a relatively low level of Penetration. A low level of Penetration could derive from:

- Inadequate or ineffective communication: the aim should be to introduce services and to promote their reliability (reputation, to tackle lack of trust);
- Lack of infrastructure and skills: which implies the necessity for increasing broadband coverage, on the one hand, and the digital skills of the population, on the other, through training and computer literacy.

The Netherlands is the benchmark for **Group 3**. In Austria there is a higher percentage of the population living in rural areas, with a slightly lower level of education and lower access to the internet from home. This could affect the use of online services such as e-banking, which are much less widely used than in the Netherlands. On the other hand, the public administration in Austria seems to be more effective at coordinating its efforts than other countries (that have achieved much better performances). To make up lost ground quickly, points that could bring Austria close to its benchmark would be to rely on this asset and on an appropriate communication strategy to promote the usage of the existing services.

Belgium resembles the Netherlands in contextual factors. The latter has higher penetration levels, and so for Belgium the challenge is to tackle possible usage barriers. Belgium also has a lower level of centralisation of public services and hence should compensate by continuing

to focus its actions from the agreement between the federal, regional, community and local authorities to stimulate eGovernment at different institutional levels.

Portugal represents the benchmark for **group 4**. Portugal itself could look at those countries that have reached better performances in terms of Penetration and therefore belong to High Potential or Mature clusters. From the point of view of service quality and availability of eGovernment services, Portugal is as good as other countries that score higher on Penetration; hence, the usage of eGovernment services seems to be influenced by more structural factors, such as a low level of computer skills of the population. These weaknesses imply scarce willingness to interact online, as a low level of e-banking usage and of internet access seem to confirm. Some proposals could include raising public awareness on the use of ICT and increasing digital literacy, alongside a multi-channel strategy to exploit the potential that Portugal has.

In Greece and in Hungary the problem is the low level of Digitisation. In addition to the weak coordination between institutions in these countries, Digitisation initiatives must also take into account a higher level of perceived corruption. This could be a factor of resistance to the transparency induced by the automation of processes. Additionally Greece is faced with a level of digital skills of the population that is lower than in a relatively comparable country such as Hungary.

All the Countries belonging to the Neophytes Cluster, are in group 4. In these Countries both Penetration and Digitisation are low. Portugal is the benchmark for these countries, since it has similar characteristics, although the Neophytes must face a higher perceived level of corruption and therefore a greater resistance to the spread of eGovernment. On the other hand, these countries can count on

a higher spread of mobile broadband than Portugal and could leverage this advantage to improve their performances in Penetration more rapidly.

Countries in **Group 5** are located in the best environment for innovation initiatives to succeed. Hence, almost all these countries belong to the Mature Cluster: broadband is widespread, household internet access is high, and people are used to interacting online in different life events. This means that the population generally has high expectations of eGovernment service delivery. Thus, even if many services are online, people might still feel let down relative to their expectations. eGovernment policies in these countries contribute to the objective of improving efficiency and effectiveness through digitisation of processes, while maximising the advantages for users. Having said this, there are certainly still challenges for these countries to take up. In order to increase Penetration, they could focus on further improving the online user experience, and, if use and satisfaction for certain services is high, even consider mandatory use. Improvements could also be made in back office digitisation in order to increase efficiency in the management of public services and to build a more sustainable eGovernment.

In Ireland digital skills are lower than in comparable countries (the Nordics). This seems to be one of the major issues preventing it attaining the level of the benchmark countries .

#### 5.6 Considerations

The framework described above represents a new approach, proposing an innovative point of view, which can be useful in order to understand the meaning of a country's performance gap and to suggest a possible way of overcoming this gap.

It aims to improve understanding of eGovernment performance, and derive lessons

*“The framework described represents a new approach, proposing an innovative point of view.”*

# Charting a path forward

for countries to learn by looking at their peers. Of course, there are elements that could further improve the value of the analysis – where statistics are missing or not complete for Europe. There is no one approach that fits all and each country will have to develop an eGovernment strategy that fits its national context. Nevertheless, the previous sections provide valuable insights and demonstrates that peer learning can be a valuable instrument for improvement. It also makes another approach to benchmarking possible – one that is closer to benchlearning – where relative performance reveals ‘fairer’ insights. Each country can compare themselves to and try to learn from countries where the context is similar, but which are performing better. This could help them to understand which level of maturity could be targeted as the next step, and support the development of relevant and feasible eGovernment objectives and related actions for getting there.

This does not mean, however, that there are no commonalities, and that it would be impossible to have a joined-up European strategy. Europe as a platform offers countries the opportunity to share and learn, and tackle shared issues together. There is also some logic to eGovernment development – and it is clear at least that there are two major phenomena that everyone must confront: a shared digital infrastructure and highly user-friendly services. These elements are at the basis of the next chapter, which aims to chart a path forward towards smarter government and a Digital Single Market.

*“The challenge ahead is to transform Europe’s “physical” internal market into a digital one.”*

*Vice President Andrus Ansip<sup>44</sup>*

44 20 January 2015 at a debate organised by the European Internet Foundation.  
[http://europa.eu/rapid/press-release\\_SPEECH-15-3542\\_en.htm](http://europa.eu/rapid/press-release_SPEECH-15-3542_en.htm)

# A maturity path for Public Sector Innovation

Technology is advancing at the speed of light. The view that we are at the start of the second machine age is gaining followers. **Technology can help achieve better, faster and cheaper services.**

**Better:** quality services designed around user's needs, suitable for devices people use, simplified and personalised as much as possible to make services intuitive and easy to use – for anyone, not just the tech-savvy.

**Faster:** data processing and automation of services which reduce obligations and cut the number of steps in the user journey, as well as reducing the time required to process information and deliver products/services to the users. Online services save time compared to face-to-face visits and increase flexibility.

**Cheaper:** business cases in Denmark and the United Kingdom, as well as many studies, have shown the cost savings that can be achieved by digitisation – savings for both the public authorities as well as the businesses and citizens involved.

Digitisation is inevitable, including for governments, and there are not so many efficient options for achieving it. Still as we have experienced over the past years of collaboration with many government representatives, 'Digital by default' remains a disputed concept in public sector discussions. It often comes with sentiments and perceptions. Discussion based on sentiments are not very useful, so perhaps some clarity as to what it really means and what precedes the stage of digital by default is valuable. In essence it means two things:

- for citizens and businesses: mandatory use of online services (with safety nets for vulnerable groups);
- for governments: shared digitised operations.

Reaching that final stage is easier said than done. It will require quite some steps to get there, and a great deal of effort.

**But the key point is that, once these steps have been accomplished, making services digitally mandatory will not be such a big step anymore.** If a shared digital infrastructure makes it possible to work digitally across government tiers, domains and borders, and if the services provided are highly personalised, freed from red tape and intuitive – people will have started using them already and will not want to go back. The step to making the digital channel the only channel would then primarily involve planning, monitoring and creating a 'social safety net' for groups that lack the skills or means to go online.

In any stage of development, it is essential to address the skills required by users, practitioners and civil servants, as well as by the leaders who should steer this digital transformation.

Building on our experiences with a decade of benchmarking eGovernment, our thought leadership on Digital Transformation, and by studying existing research, this section sketches a maturity model that pictures the way forward – a model that helps governments on their path to satisfying user needs and saving costs, a path that could futureproof public services and contribute to realising a Digital Single Market in Europe.

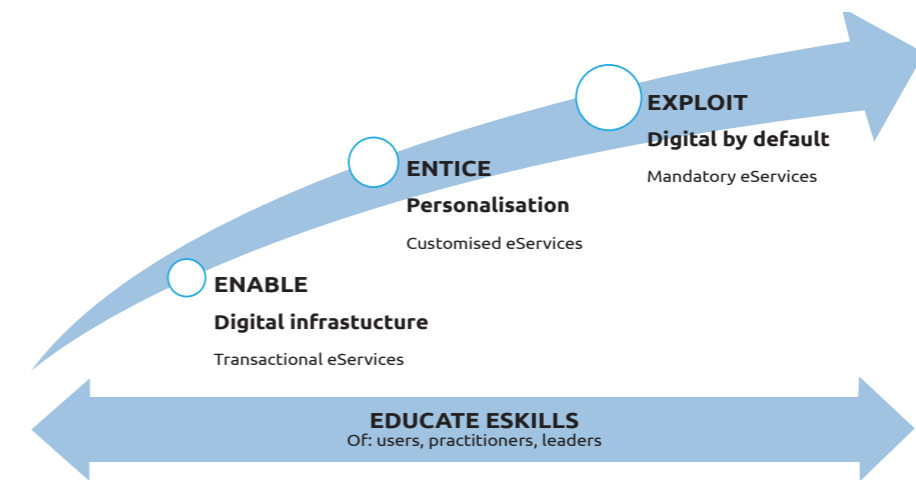


Figure 23: A maturity model for public sector innovation

## 6.1 Enable: a shared digital infrastructure as the basis

The first stage of the model includes realisation of the foundational infrastructure that is required for any further development.

The digital infrastructure includes many of the building blocks that are addressed within for instance the Large Scale Pilots such as e-SENS, PEPPOL, e-CODEX, SPOCS and STORK – and that are part of this eGovernment benchmark<sup>45</sup>.

Building blocks, such as electronic identity (eID), that enable online authentication of persons and companies, will boost cross-border and national online services. eID is the pre-requisite for any form of personalisation, and hence the new eIDAS regulation is very welcome<sup>35</sup>.

Authentic sources constitute another building block that encompasses registers of personal and much other data, and that would allow re-use of that data for other

service processes, delivering on the principle of 'once-only registration'.

Personal mailbox functionalities are part of this development too, allowing safe communication and document exchange between public administrations, and citizens and businesses.

But this stage is not just a matter of realising these building blocks. It already implies another way of working. From silos to joined-up government. Interoperable. Public entities need to enter into a completely new collaboration stage in which silos are required to share information between their information systems as part of a deep back-office connection<sup>46</sup>. Hence a 'shared digital infrastructure'. This will be the biggest challenge – not the technology as such.

This builds on the idea of 'Government as a platform'<sup>47</sup>, which is for instance the ambition of the UK, where the business model of government is progressively based on

*“It is not a matter of realising building blocks. It implies another way of working.”*

45 <https://ec.europa.eu/digital-agenda/en/large-scale-pilot-projects>

46 Study on eGovernment and the Reduction of Administrative Burden, DGCONNECT, 2014. See: <http://ec.europa.eu/digital-agenda/en/news/final-report-study-egovernment-and-reduction-administrative-burden-smart-20120061>

47 Tim O'Reilly, 2010, see: [http://chimera.labs.oreilly.com/books/1234000000774/ch02.html#government\\_as\\_a\\_platform](http://chimera.labs.oreilly.com/books/1234000000774/ch02.html#government_as_a_platform) and UK's ambitions: <https://gds.blog.gov.uk/2015/03/29/government-as-a-platform-the-next-phase-of-digital-transformation/>



shared capabilities, enabled by utility technology and web-based infrastructure. This will then open up opportunities for innovation and investment by citizens, public, private, and third sectors alike - unleashing unprecedented innovation, efficiency, and savings<sup>48</sup>.

### 6.2 Entice: from customer services to customised services

The shared digital infrastructure enables new ways of delivering public services. And new public services. Personalised, and attuned to user's needs. Services that entice users to go online, and are so good it keeps them there.

Smartphones and mobile devices are assuming a central position in everyday life and this makes them suitable for authentication and identification, and increased personalisation. Mobile phone signatures are commonplace in, for instance, Austria, Denmark and Estonia<sup>49</sup>.

In this stage, governments can focus on providing high quality and very easy to use online services. This is possible as a result of the shared digital infrastructure that has realised a joined-up and integrated government, which means that it can in turn exhibit a single face and provide an effective one-stop-shop to users. Cross-agency, online, life events become reality. Different personas will be guided when going online to reach their goal effectively – bypassing information that is not relevant for that user. Forms will be pre-filled as much as possible, or data will even be used to reduce number of obligations. Personal mailboxes or MyPages will be further optimised. Data and customer behaviour

analytics will allow governments to switch between “pushing” pro-active services it “knows” individual users want or need, and empowering users to reactively “pull” what they “want”<sup>50</sup>.

Personalisation implies that all the unnecessary steps in the customer journey have been removed. Forms and other requirements are simplified. Customer journeys are made as simple as possible, services are automatically delivered when/where possible and red tape has been cut. This actually works: as is shown in Figure 24, on the next page, where the number of process steps in the life event of starting-up a business is correlated with the user centricity obtained in that life event. The fewer the steps in the journey, the higher the user centricity score.

**The key challenge at this stage is creating trust.** Privacy and security continue to be barriers to uptake<sup>51</sup>. How can we build the same level of trust in a digital transaction as is currently achieved in a paper or face-to-face transaction? If this can be resolved – the next step towards mandatory online services – is just a small one.

**Opening up public data is another important way to build trust, and at the same time a major opportunity to increase the quality of daily life.** There is more data out there than ever before<sup>52</sup> and there are more effective tools for sharing and analysing it. This creates new service-delivery possibilities for government through the use of data that government agencies themselves collect and generate. It also encourages public-private collaboration and boosts the economy.

48 What is Government as a Platform and how do we achieve it? Mark Thompson. See: <http://www.computerweekly.com/opinion/What-is-government-as-a-platform-and-how-do-we-achieve-it>

49 A responsive design principle has been introduced in Denmark making it adaptable to mobile devices. Using the Danish digital signature NemID on mobile devices is possible since 1 July 2014.

50 Study on eGovernment and the Reduction of Administrative Burden, DGCONNECT, 2014. See: <http://ec.europa.eu/digital-agenda/en/news/final-report-study-egovernment-and-reduction-administrative-burden-smart-20120061>

51 <https://ec.europa.eu/digital-agenda/en/blog/eid-its-all-about-trust-security-and-convenience>

52 The volume of data is rapidly growing: it is expected that by 2020 there will be more than 16 zettabytes of useful data (16 Trillion GB)2, which implies growth of 236% per year from 2013 to 2020. European Big Data Value Strategic Research & Innovation Agenda, July 2014. See: [http://ec.europa.eu/information\\_society/newsroom/cf/dae/document.cfm?doc\\_id=7151](http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=7151)

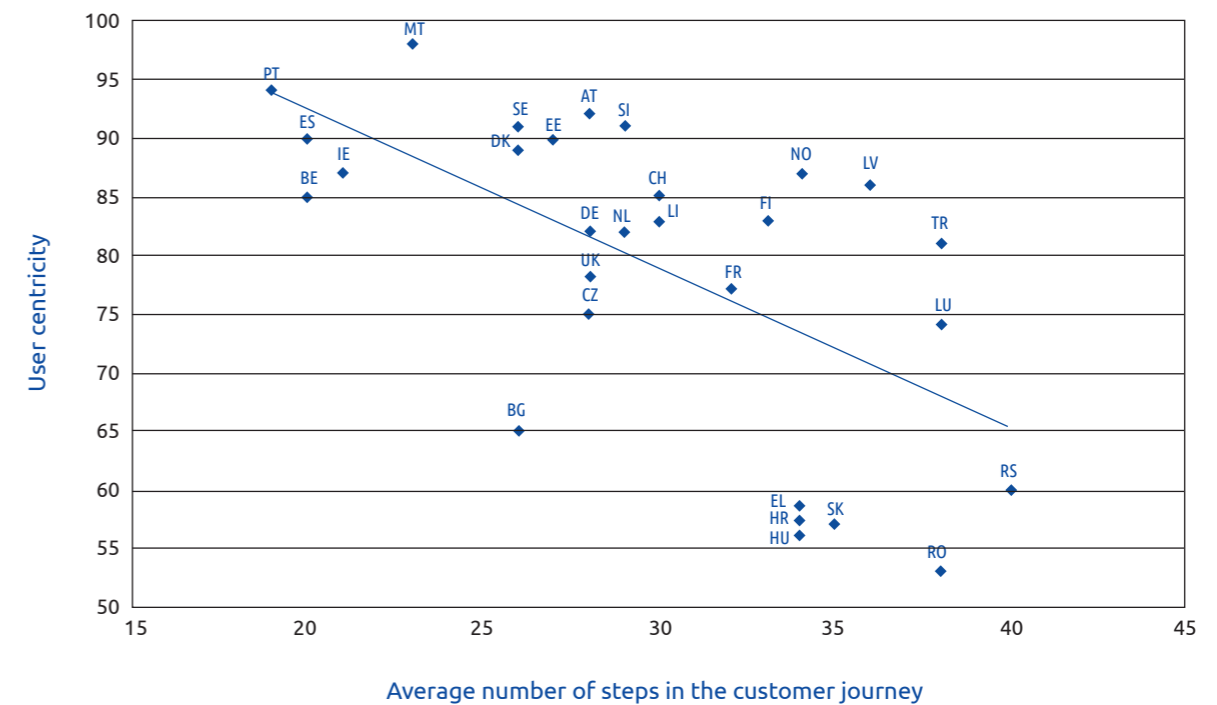


Figure 24: Correlation of the number of service steps in the life event of Starting up a Business and user centricity level

The direct impact of Open Data on the EU-27 economy was estimated at EUR 32 billion in 2010, with an estimated annual growth rate of 7%<sup>53</sup>. In 2013 in the United Kingdom<sup>54</sup>, one of the leading governments in the field of Open Data and one where the economic benefit has always been strongly on the agenda, an independent review “conservatively” estimated the direct economic benefits of public sector information at around £1.8bn a year, with an overall impact including direct and indirect benefits (such as time saved by access to real-time travel data) of around £6.8bn.

Besides providing economic benefits, Open Data can fulfil a public desire to make government more responsive, transparent and effective in serving citizens – an impulse driven by tight budgets and declining citizens’ trust in government<sup>55</sup>.

### 6.3 Exploit: towards mandatory online services

We have argued that when government is completely joined-up, and able to share between tiers and domains, and services are at the highest satisfaction level, the step to making the online channel mandatory is only a small one. This is in line with the UK government definition: “By digital by default, we mean digital services that are so straightforward and convenient that all those who can use them will choose to do so whilst those who can’t are not excluded”.

Reaching this stage would imply that most people are by then convinced of the quality and experience of online public services, and that the group of ‘non-believers’ has diminished. In 2012, a staggering 38% of European internet users was not willing to

53 [http://www.capgemi-consulting.com/sites/default/files/resource/pdf/opendata\\_pov\\_6feb.pdf](http://www.capgemi-consulting.com/sites/default/files/resource/pdf/opendata_pov_6feb.pdf)

54 World Bank report. See: <http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf>

55 <http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf>

“The key challenge at this stage is creating trust.”

“There is more data out there than ever before and there are more effective tools for sharing and analysing it.”

use the online channel to apply for certain services. Monitoring this group will provide the proof of the posited assumption. It will be necessary to have a plan for those who are digitally disadvantaged and not able to go online. Denmark's municipal citizen centres or libraries where digital-savvy assistants/intermediaries help others to perform online services are an example.

What is relevant in this stage is exploitation of what has been acquired in the preceding stages. Building the business case and revealing quantitative and qualitative benefits is a key element. This would lead the approach to rolling out mandatory services, and selecting which come in the first set, the second batch and so on.

There is, of course, a distinction to be made between business and citizen services. Making business services 'digital by default' is easier and better accepted. It is also done more often if one looks at the landscaping that was performed as part of this study (see Figure 25 below<sup>56</sup>). The Figure

also reveals that students are apparently a segment of users that could be directed to mandatory use of online services, whereas this is less likely for the unemployed.

#### 6.4 Educate, educate, educate

The various stages of public sector innovation described above can only grow to full stature if the digital divide is bridged, sufficient knowledge and competence is available to build it, and committed and capable leaders steer this change. This paragraph could also have been called 'digital skills, digital skills, digital skills'. Either way, there are three levels:

- Digital skills of users: almost 20% of Europeans have never used the internet. Estimates show that around 40% of people in the EU workforce do not have adequate digital skills and 14% have no digital skills at all. In the words of Vice-president Ansip: 'It is a real cause for concern. Europeans need the right skills to take part in the digital economy and get the full benefits from the Digital Single Market that we plan to build'.

- Digital skills of practitioners and civil servants: governments must invest in the capacity and capabilities of civil servants as they are the catalysts of innovation. This includes building the culture, incentives and norms to facilitate new ways of working<sup>57</sup>. At the same time, the demand for digitally competent professionals across all economic sectors continues to grow and is outstripping supply. Due to differences in demands and skills, and despite high unemployment - especially among the young - Europe could face a shortage of up to 900,000 skilled ICT workers by 2020.
- Digital skills of leaders: a key lever for a successful digital journey is committed leadership. Research<sup>58</sup> has shown that successful digital transformation did not happen bottom-up, but was steered at executive level: setting direction, building momentum and ensuring the organisation followed through. This is also a case of leading by example. The public sector could move more activities online, reorganise and streamline their administrations, adopt new technologies and solutions, equip workers with the right skills, and include more IT-savvy people in government, including in high positions.

The Grand Coalition for Digital Jobs<sup>59</sup> has produced some very valuable achievements, for instance - but many more are needed. Without people able to use online services, ICT professionals (also within government!) to deliver on the potential of technology, and committed 'e-Leaders' - Digital Transformation will remain a *fata morgana* in a Digital Desert instead of the Fertile Oasis it can be.

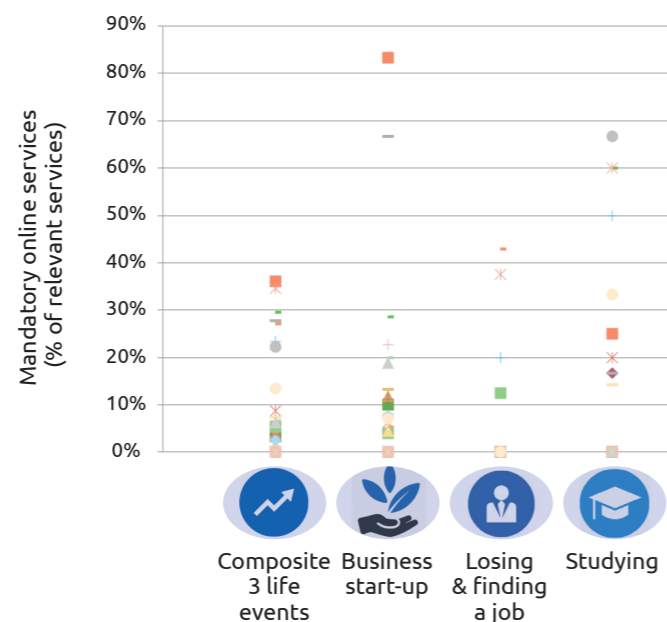


Figure 25: Number of mandatory online public services, in three life events, for EU28+.

56 More details can be found in the background report.

57 The Innovation Imperative: a call to action. OECD, 2014.

See: <http://www.oecd.org/innovating-the-public-sector/innovation-imperative-call-to-action.pdf>

58 'Leading Digital. Turning technology into business transformation.', G. Westerman, D. Bonnet, A. McAfee, HBR press, 2014.

59 <http://ec.europa.eu/digital-agenda/en/digital-jobs-0>

*"It will be necessary to have a plan for those who are digitally disadvantaged and not able to go online".*

## List of country acronyms

Country Acronyms (in alphabetical order)		
1	AT	Austria
2	BE	Belgium
3	BG	Bulgaria
4	CH	Switzerland
5	CY	Cyprus
6	CZ	Czech Republic
7	DE	Germany
8	DK	Denmark
9	EE	Estonia
10	EL	Greece
11	ES	Spain
12	FI	Finland
13	FR	France
14	HR	Croatia
15	HU	Hungary
16	IE	Ireland
17	IS	Iceland
18	IT	Italy
19	LT	Lithuania
20	LU	Luxembourg
21	LV	Latvia
22	MT	Malta
23	NL	Netherlands
24	NO	Norway
25	PL	Poland
26	PT	Portugal
27	RO	Romania
28	RS	Serbia
29	SE	Sweden
30	SI	Slovenia
31	SK	Slovakia
32	TR	Turkey
33	UK	United Kingdom
	EU28+	Cluster of all listed countries in this list



### European Commission

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 'An assessment of digital public service delivery in Europe'  
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