European Commission

eGovernment Benchmark 2019

Empowering Europeans through trusted digital public services

INSIGHT REPORT

A study prepared for the European Commission DG Communications Networks, Content & Technology by:

Capgemini sogeti Part of Capgemini IDC Analyze the Future POLITECNICO DI MILANO

Digital Single Market

This study was carried out for the European Commission by
Capgemini, IDC, Sogeti, and Politecnico di Milano

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Executive summary

Digital technologies increasingly place new demands and expectations on the public sector. Realising the full potential these technologies hold is the key challenge for governmental organisations. In eGovernment, that potential is on the one hand in optimising the supply of online public services in line with user's needs, and on the other hand in increasing the usage of those services.

The eGovernment Benchmark is a yearly monitoring instrument of the EC to provide insight into the use of information and communications technologies (ICT) in the public sector. The measurement evaluates the maturity of online public services in terms of user centricity, transparency, and use of key enablers. It also brings the dimension of cross-border service delivery, which is a truly European metric.

The European front-runners in eGovernment are Malta, Estonia and Austria. These countries score highest in terms of overall maturity. Latvia, Lithuania and Finland follow close behind. In general, countries in the southeast of Europe score below the EU28+ average of 65%. There is a gap between the leaders and laggards in eGovernment in all four Top-level benchmarks of 42 p.p. Though this gap is sizeable, it has been narrowing in the last few years.

If we have a closer look at the Top-level benchmarks, which are the foundation of the overall maturity, we see that:

- The User centricity top-level benchmark scores highest, with 85% for the EU28+ average. The User centricity benchmark is made up of the Online availability, Usability and Mobile friendliness indicators. There is most room for improvement for Mobile friendliness, which scores 68% for the EU28+ average.
- The top-level Transparency benchmark scores 62% for the EU28+ average, with a low score on the Service delivery indicator (55%) and a higher score on the Public organisations indicator (72%).
- The Cross-border mobility top-level benchmark scores lowest of the four top-level benchmarks (53% for the EU28+ average). The scores of citizen cross-border mobility are considerably lower than for businesses, with 48% vs 63%.
- The Key enablers Top-level benchmark stands at 58% (EU28+ average). The eID and Authentic sources indicators score 54% and 55%, the eDocument and Digital Post indicators score a higher (65% and 63%).

The results are also analysed from the user-journey perspective. The following findings are presented:

- In general, it is easy to find services on the main website of governmental institutions, and users can nearly always find general information on services online.
- However, when we look at the description of the service process, this is more often clearly described for business services than for citizen services. Users need more information on duration, response deadlines and progress when online and planning for their interactions with government.
- There is still room for improvement in the Online availability of services as two-thirds is available online.
- Users accessing eGovernment services through mobile devices encounter barriers in one out of three websites as two-thirds is available on mobile friendly websites.
- Unfortunately, digital security is not satisfactory, and public websites are vulnerable.
- A positive aspect is the regular possibility to use a single national online identifier, which enables secure and trustworthy authentication of citizens and businesses.
- Basic support functionalities are well established, and smarter support functionalities are on the rise, allowing users to put forward their questions while on the search.
- Pre-filling forms with information that is already known by the authorities is done in a small majority of the services. There is a potential to save more time of users if more information is pre-filled.

- Access to personal data is well arranged in general, but insights in how personal data is used leaves ample room for improvement.
- Authorities offer the possibility to provide feedback and to file complaints.
- Communication with the authorities could further be improved by making digital post-boxes mainstream, thereby saving time and paper.

A benchlearning exercise shows that progress in eGovernment is correlated with other factors such as citizens' preferences and skills, public policies and digital context characteristics. Performance is measured through two performance indicators (referred as absolute indicators): Penetration and Digitisation. Penetration describes the extent to which the online channel is used for government services, while Digitisation reflects the extent to which the back- and front offices of Public administration are digitised. The benchlearning approach goes beyond the simple assessment of countries' performance and investigate, using statistical tools, how exogenous factors, referred in this document as relative indicators, influence countries' performances. Six relative indicators were selected, grouped in three categories: User characteristics (Digital skills and ICT Usage), Government characteristics (Quality of government services and Openness) and Digital context characteristics (Connectivity and Digital in private sector). Correlation analysis shows that Penetration has the strongest correlation with Digital Skills, ICT usage and Quality of government services, whereas Digitisation with Quality of government services and Connectivity.

Amongst the different factors influencing usage, trust in government is increasingly important. An advancing digital economy and society impacts the routines of people, and this can only work if people trust the organisation that is accountable for that change. As the benchlearning exercise suggests, citizens are more likely to use online tools and public services when they assume that the public service delivery will be of high quality. One possible explanation is that citizens might only be willing to share personal data online when they trust their government to provide a high quality and therefore secure online service. The results also show that in both areas - transparency of personal data and cyber-security of public websites - there is a lot of ground to be won still, even amongst the frontrunners in eGovernment. The way forward in eGovernment services is building digital public services that people trust and will therefore use as it makes their interaction with government easier.

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Introduction

1 Introduction

High-paced societal developments place new demands and expectations on the public sector, fuelled by quickly evolving technologies and tools. Realising the full potential these technologies hold is the key challenge for governmental organisations which requires new ways of organising, digitising interactions with citizens and businesses, optimising user experience and optimising internal processes to open new organisational models and partnerships. Spanning these efforts across national borders under a joint eGovernment agenda is crucial in realising the Digital Single Market. The Tallinn Declaration, signed in October 2017, emphasises Europe's vision on eGovernment: *'the overall vision remains to strive to be open, efficient and inclusive, providing borderless, interoperable, personalised, user-friendly, end-to-end digital public services to all citizens and businesses - at all levels of public administration*[1].

For over a decade, the eGovernment Benchmark has been a yearly monitoring instrument of the European Commission to provide insight into the use of information and communications technologies (ICT) in the public sector. It is an internationally recognised Benchmark in the field of eGovernment services of Member States. The eGovernment Benchmark framework corresponds with the key policy priorities in the eGovernment Action Plan and the Tallinn Declaration[1] and brings insights on the state-of-play of eGovernment in 36 European countries. The measurement evaluates the maturity of online public services in terms of User centricity, Transparency, and use of Key enablers. It also brings the dimension of Cross-border service delivery, which is a truly European metric. The 36 countries include the European Union Member States, Iceland, Norway, Montenegro, Republic of Serbia, Switzerland, Turkey as well as newly included Albania and North Macedonia. This group of countries is referred to as 'Europe' and 'EU28+' throughout the report.

The results on the state-of-play on eGovernment will represent the baseline against which the progress and effectiveness of measures under the new eGovernment Action Plan 2016-2020[2] and Tallinn Declaration[1] will be assessed. The monitoring of the digital transformation of government is a key element in assessing the progress towards completing the Digital Single Market as well as the pursuit of a more "citizen-centric Europe".

[1] Tallinn Ministerial Declaration on eGovernment, online available: http://ec.europa.eu/newsroom/document.cfm?doc_id=47559

[2] European Commission (2016). The EU eGovernment Action Plan 2016-2020. Accelerating the digital transformation of government. Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52016DC0179

What has been measured and how?

What has been measured and how?

2

The eGovernment Benchmark evaluates the priority areas of the eGovernment Action Plan 2016-2020. Progress on priority areas is measured by one or more indicators, comprised in four so-called Top-level benchmarks:

- **User centricity**: indicates the extent to which a service is provided online, its mobile friendliness and usability of the service (in terms of available online support and feedback mechanisms)
- **Transparency**: indicates the extent to which governments are transparent about the process of service delivery, the responsibilities and performance of public organisations and the personal data processed in public services.
- **Cross-border mobility**: indicates the extent to which users of public services from another European country can use the online services.
- **Key enablers**: indicates the extent to which technical and organisational pre-conditions for eGovernment service provision are in place, such as electronic identification and authentic sources.

The data to assess these indicators are collected by Mystery Shoppers. Mystery Shoppers are citizens of each of the observed countries who are trained and briefed to observe, experience, and measure a (public service) process. Mystery Shoppers act as prospective users and follow a detailed, objective and standardised evaluation checklist. Mystery Shopping was the method of choice for the assessment of all Top-level benchmarks under review, except for the assessments of Mobile Friendliness and Cyber-security that use automated open tools.

After the Mystery Shopping exercise, results are validated by representatives from the EU28+ countries. This is a thorough collaborative process. The countries are involved at the start and at the end of the evaluation: at the start to validate the sample of websites to be assessed and to identify key characteristics of the services under assessment; at the end to validate the research results in collaboration with the responsible organisations in a country and to possibly correct erroneous findings.

The eGovernment Benchmark spans a set of eight life events. Each life event consists of a user journey representing common public services that citizens or businesses will go through. Four life events are measured each year. Figure 2.1 provides an overview of the eight life events and the corresponding measurement years.

This two-year cycle allows countries to follow up on the results and implement improvements after each measurement. With the adoption of the EU eGovernment Action Plan 2016-2020 and in line with its objectives, the measurement has undergone a constructive method update in 2016. This hinders full comparisons with the series before 2016, however for several indicators this is still possible as presented further below. In general, this report presents the biennial results: the average achieved over the past two years of measurement as this biennial average covers the domains of all eight life events. Where possible, historical comparisons are provided for single indicators to illustrate trends in eGovernment development.

	Data collected in 2018 (2016, 2014 and 2012)	Data collected in 2017 (and 2015 and 2013)
Business life events	Business start-up	Regular business operations
Citizen life events	Losing and finding a job Studying Family life (as of 2016)	Starting a small claims procedure Moving Owning and driving a car

Figure 2.1 Overview of life events under assessment

Overall eGovernment performance in Europe

Overall eGovernment performance in Europe

3.1 Current state-of-play and progress

When observing the European state-of-play on eGovernment we find that in terms of overall maturity Malta, Estonia and Austria are showing Europe the way. These countries demonstrate top scores in each of the four components of the eGovernment benchmark. The countries that are approaching the frontrunners are Latvia, Lithuania and Finland. The heatmap in Figure 3.1 reveals that especially countries in the southeast of Europe score below the EU average.

The gap between the frontrunners and laggards is narrowing and is now 42 percentage points (p.p..) compared to the gap of 50 p.p. or more measured over the time sequence 2012-2015, as shown in Figure 3.2. The gap is nevertheless still substantial at 42 p.p. It would require continuous attention and focus of the EU and the respective countries to advance. The gap between frontrunners and laggards is visible across the four Top-level benchmarks, as shown in Figure 3.3. The gaps are most substantial in Key enablers with 71 p.p. and Cross-border mobility with 50 p.p. The pace with which countries are advancing is shown in Figure 3.4, where the current maturity level is compared against the progress over the last two years. For all the figures shown in this report results are shown for the EU28+ countries, unless indicated differently.

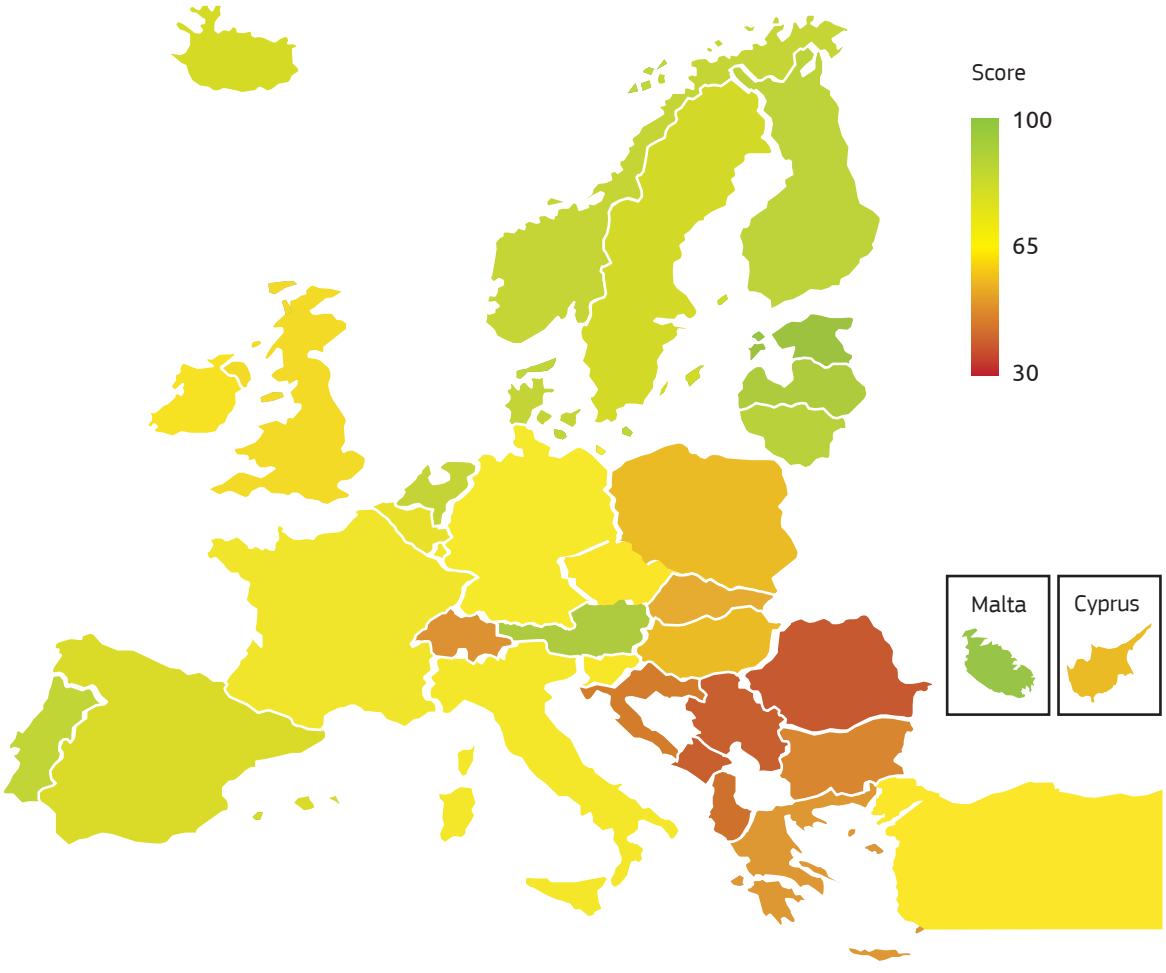


Figure 3.1: Overall eGovernment Benchmark scores (2018 biennial averages)

3

Insights into current eGovernment performance and growth

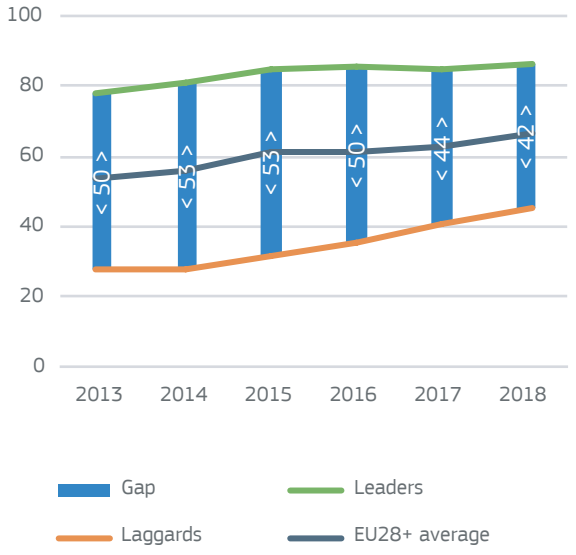


Figure 3.2 Progress on eGovernment across Europe[3]

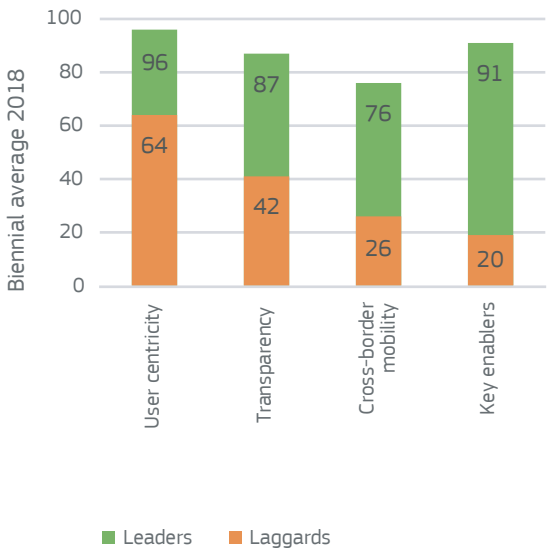


Figure 3.3 Leaders vs laggards on Top-level benchmarks

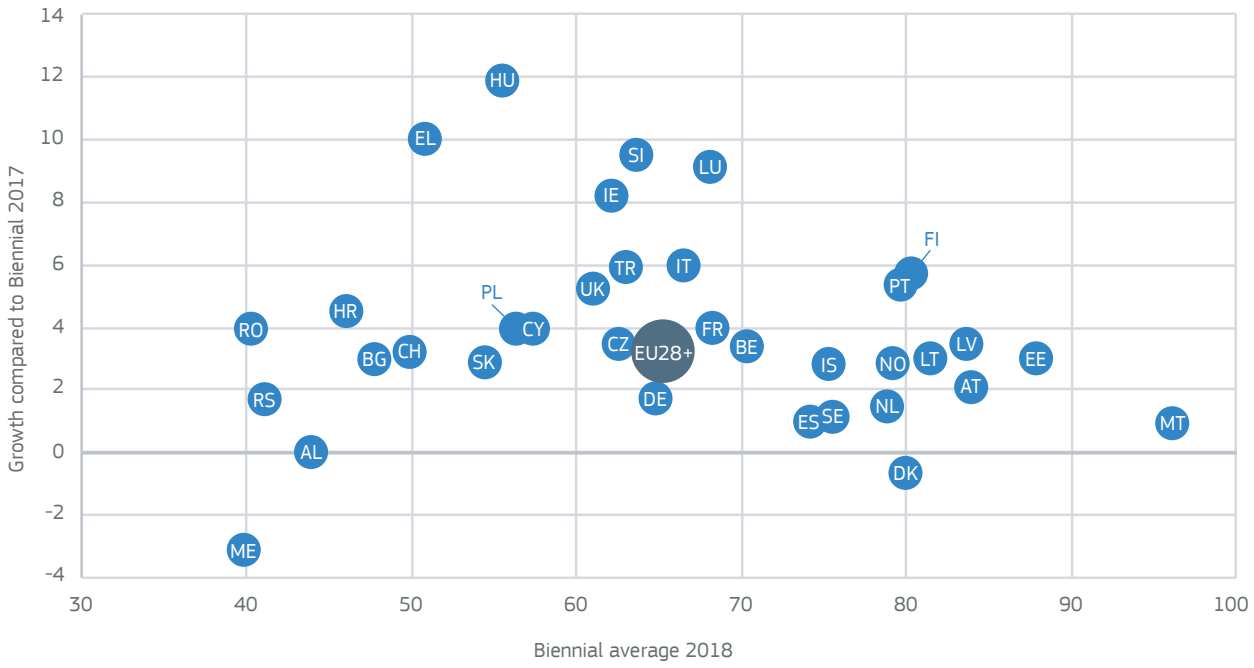


Figure 3.4 Growth vs absolute performance (biennial average 2018 vs 2017)

[3] Leaders and Laggards represent average of top and bottom five countries with regards to respective biennial average; MK and AL are excluded from this analysis

3.2 Key insights from the four top-level measures of eGovernment

3.2.1 Countries can create more value by improving Cross-border mobility

The previous chapter showed that the overall level of eGovernment has improved and that the laggards are closing the gap to the leaders. The average of the four Top-level benchmarks for the EU28+ currently stands at 65%. This score is mainly supported by the User centricity average, which stands at 85%, showing the fruits of the EU28+ efforts in providing available, usable and mobile friendly services. The average Cross-border mobility score is the lowest of the four at 53%, implying that European citizens are not yet able to make use of eGovernment services in another country. The averages for Key enablers and Transparency sit in the middle, 58% and 62% respectively.

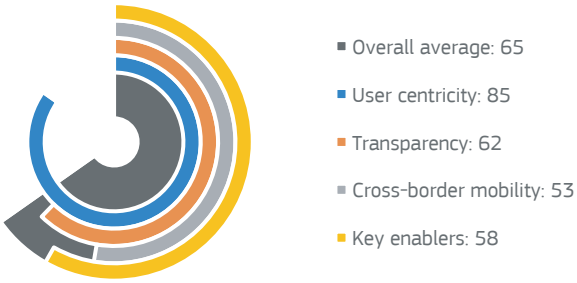


Figure 3.5 Average Top-level Benchmarks (2018 biennial average)

3.2.2 Top-level benchmarks

3.2.2.1 Improving mobile friendliness is important to raising User centricity

The User centricity benchmark is made up of the Online availability, Usability and Mobile friendliness indicators, whose scores and the average are shown in Figure 3.6. Note that User Centricity is calculated as a weighted average of the indicators: Online availability represents 2/3rd, Usability 2/9th and Mobile friendliness 1/9th. Over these three indicators, especially Malta, Finland and Austria score high, with averages of 95% and above.

For the Online availability indicator, which reflects the extent to which services are available online, the EU28+ average stands at 85. The top three countries are Malta, Portugal and Estonia, all with scores of 98% and above. This means that these countries have their services either automated (i.e. not requiring user's initiation or interaction) or fully available online to a high degree. The Usability average of 90% indicates that the services that are available online are also usable to a high degree. This goes especially for Malta, Spain, the Netherlands, and Turkey, who all score 100% on this indicator. Practically, the main governmental websites provide clear support, information and interaction to their end users. The Mobile friendliness average of 68% indicates that roughly seven out of ten services included in the eGovernment sample are provided in a mobile friendly way. The leaders in this respect are the Netherlands, Finland and Norway, who score either 90% or 89% points on this indicator.

The methodologies to assess the Online availability and Mobile friendliness have not been changed, allowing for direct comparison over time. The biennial averages of the methodological stable indicators are shown in Figure 3.10. Online availability has been improving constantly and steadily, from 72% in 2013 to 85% in 2018. The Mobile friendliness of eGovernment services has developed on a faster pace, in a shorter time, with the first biennial average of 33% in 2015 it has risen to 68% in 2018.

3.2.2.2 Public organisations lift the overall Transparency to a higher level

The Transparency benchmark is made up of three equal indicators measuring the transparency of: service delivery, public organisation, and personal data as displayed in Figure 3.7. These indicators together average out at a 62%. The top three countries in this benchmark are: Malta (96%), Lithuania (90%) and Estonia (88%).

The Transparency of service delivery has the lowest average of the Transparency benchmark, at 55%. This indicator assesses the extent to which users are informed on how the services work; public institutions are transparent on what is expected of the users, and on what the users can expect of the institutions (e.g. timeline and

notifications) The leaders on this indicator attain average scores of over 88%. The Transparency of public organisations indicator averages at 72% across the EU28+, showing that administrations are relatively transparent on how the public institutions work, their mission, structure and relevant documents. The leaders all score above 91%. Transparency of personal data assesses how users are empowered to interact with their data and informed on how their data is used by the public administration. The three leaders all score 85% or higher, where the EU28+ average stands at 60.

Comparing the Transparency of service delivery over time provides proof of constant efforts by public administrations to improve in this field. Figure 3.10 shows that the biennial average has improved from 39% in 2013 to 55% in 2018.

3.2.2.3 Cross-border mobility for citizens is held back by cross-border eID, for now

For several life events, a selection of services is evaluated on their Cross-border mobility. Cross-border mobility reflects to which extent public services are available to citizens from outside the country. The relevant life events are Studying (evaluated in 2018), Moving (2017), Owning and driving a Car (2017) and Starting a small claims procedure (2017) – the Citizen life events, and Business start-up (2018) and Regular business operations (2017) – the Business life events. The split between citizen and business life events is especially relevant due to the differences in scores, as shown in Figure 3.8.

The Cross-border mobility includes four indicators, Online availability, Usability, eID and eDocuments. These indicators measure if services are available online, if they are usable and if key enablers like eID and eDocuments work for people from abroad. Please note that the evaluations for the indicators are not directly comparable to their national counterpart, e.g. the national Usability evaluation includes seven scoring items where the cross-border evaluation includes three. Overall, the averages for the citizen and business life events are 48% and 63%, led by Malta, Finland and Sweden, and the United Kingdom, Malta and Norway, respectively. Regarding the citizens life events, Online availability scores are highest in Malta, Sweden and Estonia, with scores over 85%. Cross-border Usability is fully mature in Estonia, Finland, Malta and Slovenia, all scoring 100%. Cross-border eID is most mature in Malta, Slovenia and Finland scoring 19% to 45%. With respect to eDocuments Malta, Finland, Hungary and Austria are most mature scoring 67% and higher.

Regarding the Business life events, Denmark, Ireland and Norway all score 97% and higher for Online availability. Cyprus, Germany, Greece, Finland, France, Croatia, Italy, Latvia, Malta, Norway, Portugal and the United Kingdom all score 100% regarding Usability. Albania, Malta and Estonia score over 66% for cross-border eID. For cross-border eDocuments, Albania, Cyprus, Malta, Portugal, Sweden and the United Kingdom score 100%.

An important note to the low scores of Cross-border citizen eID is that change is afoot in this field due to the implementation of eIDAS regulation[4]. This regulation sets out a European framework on how to allow interoperability of identification systems across the EU.

3.2.2.4 Uptake of Key enablers across the EU28+ can be improved

The Key enablers Top-level benchmark assesses the uptake of four building-block technologies that help improve the ease-of-use, trustworthiness, and efficiency of eGovernment services. These building-block technologies are assessed by their own indicators: eID, eDocuments, Authentic sources and Digital post. Each indicator has an equal weight in the average score, which stands at 58% as shown in Figure 3.9. The top three countries for this benchmark are Malta, Estonia and Lithuania, with average scores of 100%, 92% and 89%.

The eID indicator average score is 54%, with Malta, Lithuania and Latvia having the top three scores, at 86 or higher. This entails that they have implemented national eID systems that allow

[4] eIDAS regulation, available online at: https://ec.europa.eu/digital-single-market/en/policies/trust-services-and-eidentification

users to operate across public administrations in a wide array of their services. The eDocuments average of 65% is supported by the high scores of Malta, Estonia and Denmark, who score over 93%. These countries' services allow users to upload and download documents in a secure manner, improving efficiency and trust. The Authentic sources indicator, which reflects the extent with which information is pre-filled by public institutions, averages at 55%. The leaders in Authentic sources are Malta, Estonia and Lithuania who all score 88% or above. The fourth indicator, Digital post, has an EU28+ average score of 63%. The methods to evaluate Authentic sources has been similar over the years, with results presented in Figure 3.10. This indicator appears the most stubborn of the historically stable indicators to improve significantly, as it has moved from 48% in 2013 to 55% in 2018. The uptake of Digital post technologies is highest in Austria, Denmark, Estonia, Hungary and Malta, who provide their citizens the choice to interact with their government through a digital post-box instead of via paper, and as such attain a score

Insights into eGovernment performance on the Top-level benchmarks

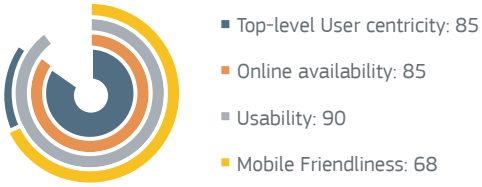


Figure 3.6 User centricity Top-level- and sub-indicator averages

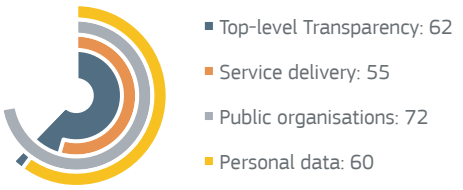


Figure 3.7 Transparency Top-level- and sub-indicator averages

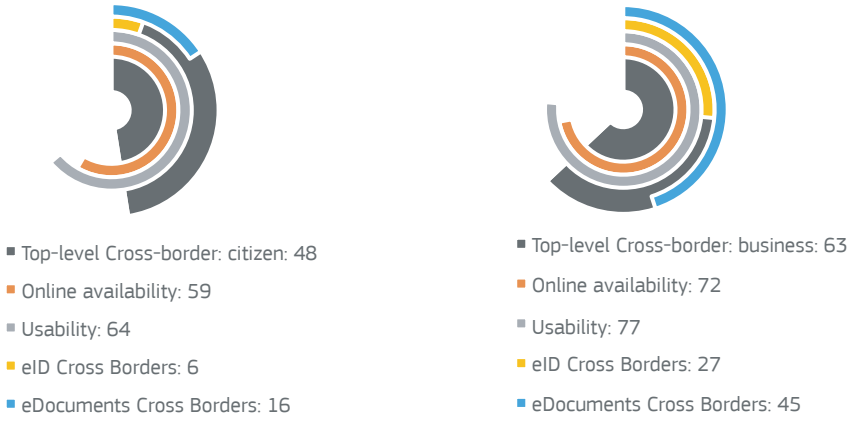


Figure 3.8 Cross-border mobility for citizens and businesses Top-level- and sub-indicator averages

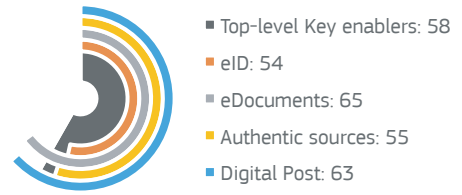


Figure 3.9 Key enablers Top-level- and sub-indicator averages

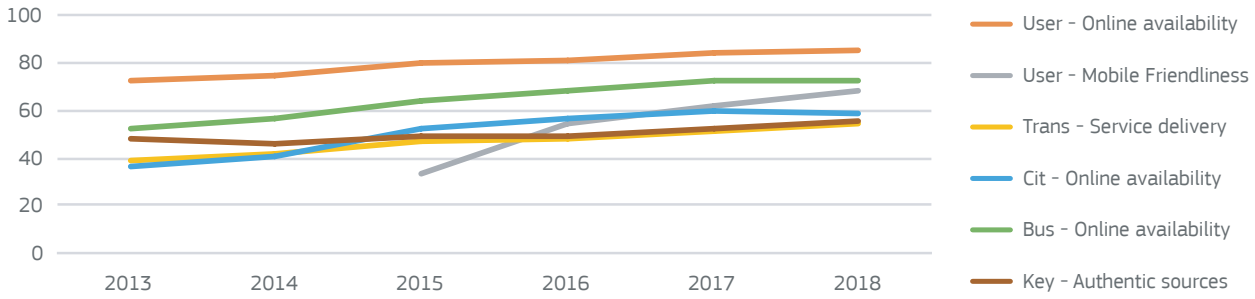


Figure 3.10 Overview of historical indicators and their biennial average scores

3.3 Securing online public services

For all the value eGovernment can provide, it brings with it risks in terms of cybersecurity that need to be mitigated. Having cybersecurity in order in the current day requires robust structures in the back-end, and up to date technologies on the front-end. The URLs included in the Mystery shopping have been tested using two openly available security testing tools: one developed by the Dutch national government; internet.nl[5], and one developed by Mozilla; the Observatory[6]. The test results and how they are scored is described in ANNEX A. The results on these tests are not necessarily conclusive or exhaustive; a positive result is not a guarantee for a secure website and a negative result not a guarantee for an insecure website. However, such false negatives are not likely to occur very often.

Figure 3.11 provides the test results from the Internet.nl and Mozilla tools, which still show ample room for improvement. The items that form part of the Internet.nl assessment are all passed by only 9-11% of the URLs, showing that only a small minority has the three items in order. The results from the Mozilla tool show more varied results as some items are passed positively by over 50% of the websites, whilst others are passed by 17% or less.

From the perspective of individual URLs, no website passed all the tests posed by the two tools. Figure 3.12 displays the number of tests individual websites fail. Most URLs (22%) fail 9 of the 14 tests, 36% of websites fail more tests, 43% less. 10 websites only fail 1 of the tests, while 29 fail only 2. On the other side, 478 websites fail all tests.

[5] The tool is an initiative of the Dutch Internet Standards Platform: www.internet.nl
[6] Mozilla security Tool: https://observatory.mozilla.org/

These results show that personal information is at risk, which is also shown in practice, as governmental websites are the source of a large amount of identity leaks and that number of leaks is growing. In a recent study by 4IQ, "Government Agencies" was the largest growing exposed industry in 2018, increasing 291% from 2017[7].

Insights into eGovernment security performance

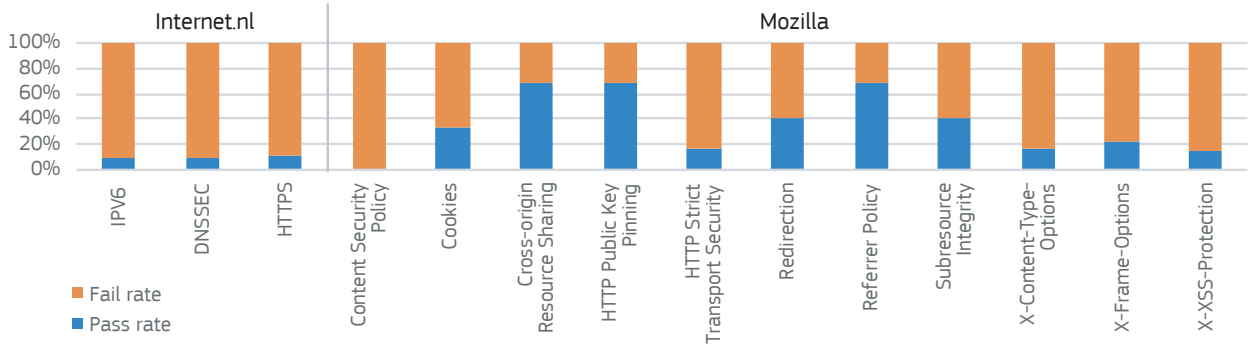


Figure 3.11 Percentage of public websites passing the Internet.nl and Mozilla security tests

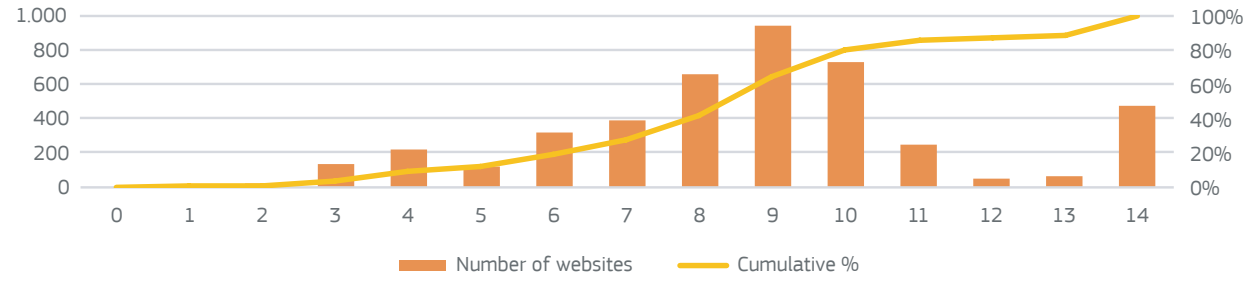


Figure 3.12 Number of Security tests failed by individual websites (2018 sample)

3.4 User centricity and uptake of Key enablers have improved

The set of life events evaluated in 2018 have been assessed in 2016 using the same methodology, this allows for comparison between the two. Figure 3.13 shows the comparison of the Top-level benchmarks' average scores and their share. Services have improved across the board, especially those Family related, as the overall averages of each life event has higher scores and Family improved with 10 percentage points (p.p.). The improved uptake of Key enablers has the largest share in the growth.

[7] 4iQ Identity Breach Report 2019 'Identities in the Wild: The Long Tail of Small Breaches' available online at: https://4iq.com/2019-identity-breach-report/

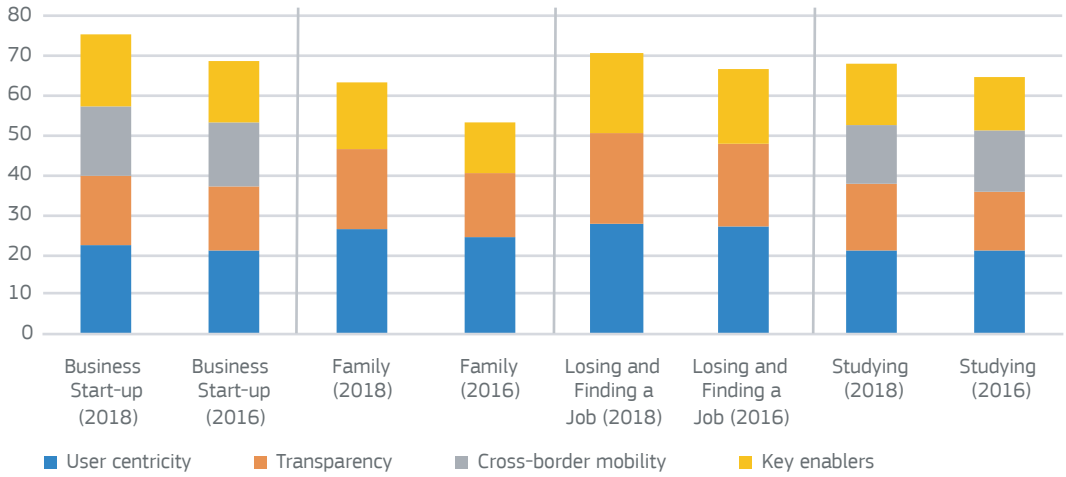


Figure 3.13 Life event scores and build-up by Top-level benchmark[8]

3.5 Digital Economy and Society Index (DESI)

The eGovernment services that this benchmark evaluates do no stand on their own in European developments; they form an essential part of the digital transformation, impacting citizens and businesses across the continent. This is also the reason that insights and results from the eGovernment Benchmark are part of the EU's Digital Economy and Society Index (DESI). The DESI is the main tool by which the performance of Europe and its Member States is measured in the realm of digitisation on 44 separate indicators across five dimensions: Connectivity, Human Capital, Use of internet, Integration of digital technology and Digital public services.

eGovernment finds it place within the fifth dimension, Digital public services. Three indicators of the Digital public services dimension link to the eGovernment Benchmark results:

- **Pre-filled forms**: This indicator captures the degree to which data that is already known to the public administration is pre-filled in forms that are offered to the user[9]. It is linked to the biennial average for the Authentic sources indicator of the eGovernment Benchmark.
- **Online service completion**: This indicator captures the degree to which the various steps in dealing with the public administration can be done completely online[9]. It links to the biennial average for the Online availability indicator of the eGovernment Benchmark.
- **Digital public services for businesses**: This indicator captures the extent to which public services for businesses are interoperable and cross-border[9]. It is calculated as the average of the national and cross-border online availability for basic services within the business-related life events of the last two years.

The following sections will provide more details on the performance of the EU Member States on the three indicators.

Figure 3.14 shows the results on the Online service completion indicator. The average score for the EU Member States is 88%, with Malta as a leader with 100%, followed by Portugal with 99% and Estonia with 98%. The countries with the lowest scores are Croatia with 64%, Romania with 66% and Bulgaria with 75%.

[8] The Family and Losing and finding a job life events do not have a Cross-border component, hence the relative shares of the three benchmarks is larger.

[9] DESI, more information available online at: https://ec.europa.eu/digital-single-market/en/desi

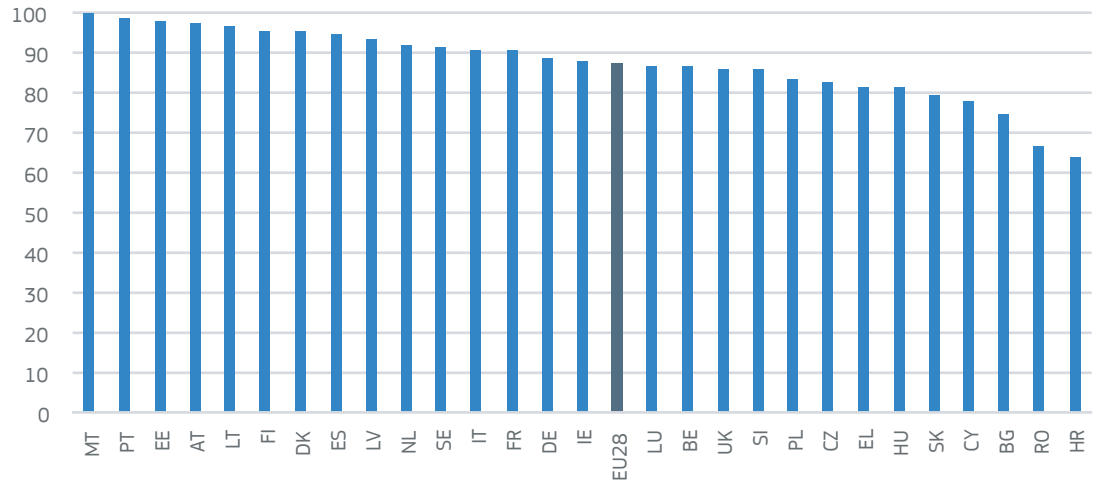


Figure 3.14 Online service completion (biennial average 2018)

Figure 3.15 displays the scores for the Digital public services for businesses indicator combining the results of Online availability for basic services, both nationally and across borders. The Member States' average stands at 85. The best performing countries are Denmark, the United Kingdom and Ireland with scores of 100%, 99% and 99%, respectively. The position of these three countries is especially interesting as they are ranked lower in the Online service completion indicator.

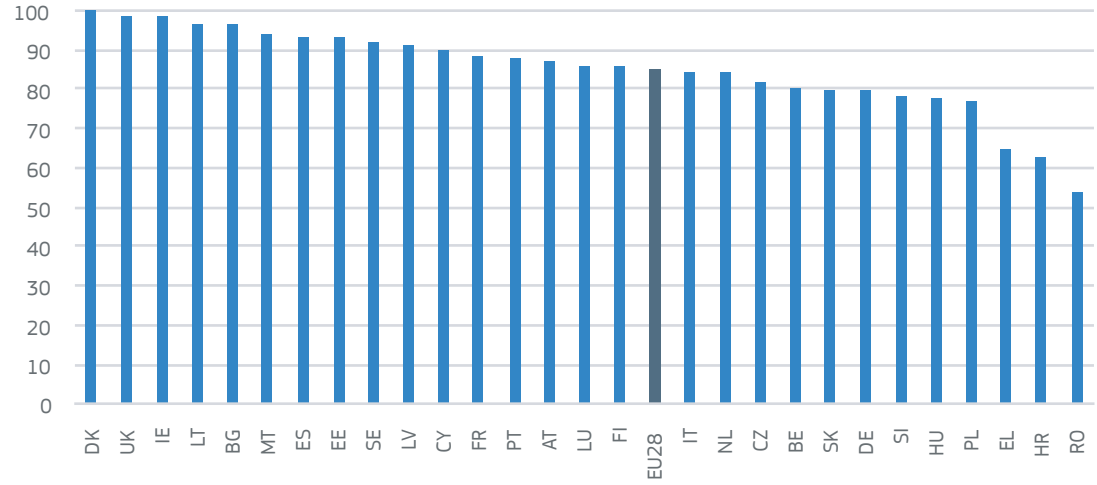


Figure 3.15 Digital public services for businesses (biennial average 2018)

In Figure 3.16, the data for the Pre-filled forms indicator is displayed, with an EU28 average of 58. The best performing countries are Malta, Estonia and Latvia with 100%, 89% and 88%, respectively, which are significantly above average. The bottom three countries are Romania, the United Kingdom and Greece with scores of 10%, 18% and 23%, respectively.

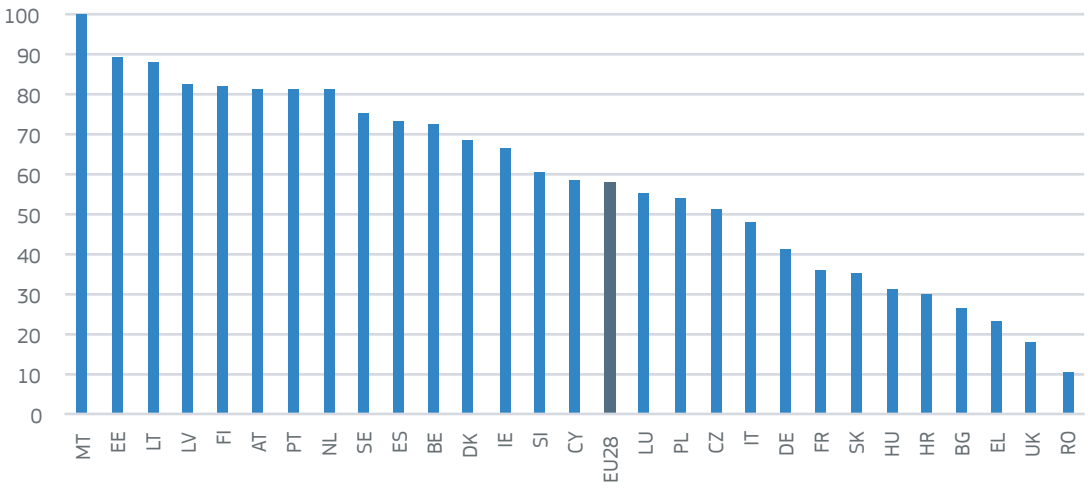


Figure 3.16 Pre-filled forms (biennial average 2018)

Revealing the eGovernment user journey of European citizens

Revealing the eGovernment user journey of European citizens

This chapter provides an alternative view on the benchmark results. Whereas the measurement framework connects indicators to policy priorities, the following analysis relates indicators, and specific elements within, to the individual steps in the end-to-end service process; a citizen's user journey. Similar to the life events approach, which allows detecting gaps in online service delivery within a certain domain, a user-journey aims to detect gaps in the overall user experience. This is done mostly from a supply-side perspective.

The user journey is depicted by the following elements:

- **eGovernment in the right place**: eGovernment services are provided by a multitude of administrations. Users expect them to be accessible through a few familiar, trusted and centralized websites.
- **Get informed online**: citizens and businesses living in the digital world expect at least general information about public services online.
- **Learn how the services work**: prospective eGovernment users want to know what to expect from public administrations and what is expected from them before and during the services.
- **Perform the service online**: Users want to be able to perform the service digitally, on mobile devices or on desktops, or not need to perform the service at all to get the result.
- **Rely on secure eGovernment**: eGovernment users want to trust and depend on secure authentication methods and the security of eGovernment websites in general. Having a national identifier (eID) that works across multiple administrations and services increases ease-of-use for the user.
- **Call for support**: users want to have a good availability of clear support functionalities. This gives citizens and businesses the confidence to perform the services correctly.
- **Save time**: eGovernment users would benefit from public administrations that put the collected data to use, reaping the benefits of the Once-only principle.
- **Understand how their data is used**: citizens would like to understand how their data is used. The eGovernment transformation requires public administrations to implement data privacy and veracity within their organisations. *Allowing citizens and businesses insight into how their data is used, whilst enabling them to improve the accuracy of data improves trust in public administrations and the value provided by eGovernment.*
- **Provide feedback**: users expect to provide feedback. Collecting feedback from the eGovernment users is essential to improve the quality and functionality.
- **Avoid paper where possible**: users would benefit from having the option to centralise communication with public administrations in a single 'digital post-box'.

These steps within the user journey can be evaluated using a combination of sources provided by the eGovernment Benchmark assessment; sub-indicators, individual questions and the automated analyses.

4.1 eGovernment services are available through a selection of centralised websites

Our findings show that when services and information are available online, it is easy to find on one of the main websites of the governmental institutions. This has a multitude of benefits, as services are easier to find when there is only a handful of websites for users to start looking. Additionally, services are more recognisable.

4.2 Users can nearly always find general information on services online

Users always want to find some basic information on a service, even if they cannot obtain the service online yet. Our results show that users can nearly always find general information on services online. Providing basic information on services digitally is the first step to bring the potential value eGovernment holds to fruition.

4.3 Procedures aimed at businesses are more clear than those aimed at citizens

Users that want to know how the service process works will find more information for the

businesses related services than those aimed at citizens. Transparency on how services work is low in the Starting a small claims procedure, Family life and Moving related services and somewhat higher for entrepreneurs. Providing transparency in this field will improve the expectations users have on what they need to do, and what they can expect from their public administrations.

4.4 There is still room for improvement in the online availability of services

Two thirds of services allow users to perform transactions and interactions fully online. One benefit of fully online services is that they are available anytime and anywhere, improving flexibility and user satisfaction. The level of online availability of services is relatively similar across life events, though it is especially well developed for services related to Studying and Regular business operations.

However, although the majority of services is available online, the main mode of access is still through a laptop or desktop PC, as one third of services is not available on mobile friendly websites. Improving the access from mobile devices would elevate the user friendliness and overall experience of eGovernment, given the fact that mobile internet usage has been rising sharply.

4.5 Digital security is not on the required level

Unfortunately, the digital security of individual services is often subpar. The vulnerabilities in the websites need to be removed to prevent fraud, leaks of personal information, and to improve trust in eGovernment. A positive aspect is the regular possibility to use a single national online identifier. National eIDs allow users to easily perform services across institutions, and they allow government to concentrate their efforts in securing the authentication and improve the ability to share data amongst institutions. These security efforts are also of grave importance with relation to national eID programs. Secure and trustworthy authentication of citizens and businesses is a cornerstone in eGovernment and national eID systems are an optimal solution to provide a high level of security.

4.6 Basic support is available across the EU, smarter solutions are on the rise

Users of eGovernment can rely on basic support functionalities such as FAQs; the eGovernment Benchmark shows that FAQs are available in nearly all EU28+ countries (over 90%). These relatively simple solutions can help eGovernment users on their way. The digital nature of eGovernment services opens the possibility to implement smarter and more specific support functionalities, such as live-chat support and examples on how to navigate and operate within the digital environment. These smarter support functions are available on the majority of governmental portals. Providing sufficient digital support is essential to replace and possibly surpass the support that is available with traditional person-to-person services. Support is especially important to ensure the inclusivity of eGovernment, making sure that less digitally skilled citizens are able to perform the services with confidence.

4.7 More time could be saved by pre-filling information

Users' time is saved in half of the eGovernment services. The Authentic sources assessment shows that a small majority of relevant services (55%) pre-fills information for the eGovernment users. These services are provided by public administrations that make use of the data that is already known to them, or other administrations with which they communicate. This lowers the amount of information that is required from citizens and businesses to fulfil their services. There is still ample room for administrations to improve the implementation and lower the administrative burden, within the current legislative frameworks.

4.8 Insight into personal data usage is sub-par though access is well arranged

Citizens and businesses have digital access to their data kept by public administrations but

4

gaining insight into how their data is used is rare. The eGovernment Benchmark evaluates several aspects of personal data: the level of insight into one's personal data, the ability to alter it, and the level to which information on the usage of personal data is available.

The results show that public administrations generally provide insight into one's personal data. The administrations are ranked in one of four categories. The plurality of administrations (44%) has the information available on-demand, digitally. 27% of administrations actively inform citizens and businesses on their personal data, 20% provide information on how to access the information through traditional channels, while 9% either have no information or provide no access.

The eGovernment Benchmark results show that two-thirds of public administrations allow citizens and businesses to modify their personal data. Especially businesses and entrepreneurs are able to modify their data online. Over 80% of business-related administrations allow their users to edit personal information, where multiple citizen-related life events score below 60%. When citizens and businesses are given control of their data directly, they can help improve its quality.

Most public administrations have no monitoring or information available that provides insight into how people's personal data is used, as 42% of administrations do not provide any insight into personal data usage. Both governments and citizens reap the benefits when transparency on data usage is improved as it builds trust and allows citizens to hold administrations accountable.

4.9 Administrations are open to feedback and accepting of complaints

Users are welcome to provide feedback and are able to lodge complaints regarding eGovernment. Across administrations, 88% of administrations implemented open feedback channels. Lodging a complaint is also possible to a high degree, as, on average, 82% of administrations evaluated in all life events have complaint procedures available. Especially the public administrations within the Regular business operations are open to complaints. Being able to provide general feedback and lodge a formal complaint helps to improve the quality of eGovernment and makes users feel they are being heard.

4.10 Making digital post-boxes mainstream will save time and paper

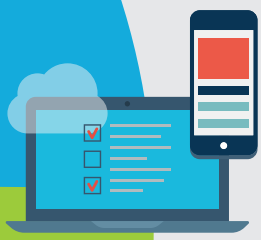
Citizens and businesses have the option to communicate fully digitally with their governments in a small majority of countries. Having the option to centralise one's communication adds clarity and makes it possible to access, send and receive messages to/ from public administrations anywhere and anytime. This adds value to a multitude of other services within the eGovernment landscape.

eGovernment
User Journey

How eGovernment provides digital benefits across the full service experience

Find the right service

Users are very happy to find their service on a few familiar websites **10**



Get informed about the service online

Users are happy that information is digital **9**

Digitally fulfill the service

Users are glad to find most services online **7**

Users are also glad that most services are mobile friendly **7**

Know the service processes

Users are looking for more information on how services work **6**

Save time and effort

Users are looking to save more time and effort, as more information can be prefilled **6**

Log in to eGovernment

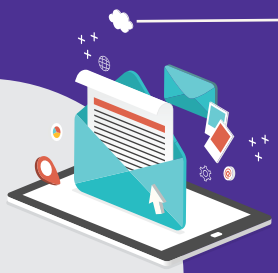
Users are glad that they can use their single electronic identifier across administrations **7**

Score definition 9

Functionality available in 9 out of 10 relevant websites across the EU

Call for support

Users are happy that FAQs are available 9



Users are looking for more advanced support e.g. demo's and chats 6

Govern personal data

Users are glad that they can access their personal data 7

Users are wishing they could get insight into how and why their data is used 3

Improve eGovernment

Users are happy that administrations ask them for feedback 9

Users are hoping websites would be more secure 4

Use a digital postbox

Users are looking to communicate with administrations through a digital postbox 6

Drivers for eGovernment performance: a benchlearning perspective

Drivers for eGovernment performance: a benchlearning perspective

In this chapter, a Benchlearning exercise is presented to add on the insights from the eGovernment Benchmark exercise. The benchlearning exercise enhances the eGovernment benchmark data with data form additional sources to gain insights into the factors that might influence innovation and the key characteristics that affect eGovernment performances.

To this end, two *absolute* indicators of eGovernment performances are defined:
Penetration and **Digitisation**. **Penetration** reflects the degree to which the online channel is used for government services and is determined using Eurostat data. **Digitisation** captures the degree of digitisation of the back- and front-office of Public Administration. It is determined using the data from the eGovernment benchmark indicators.

The context and characteristics of a country will influence its eGovernment policies and strategies. Here, three types of characteristics are taken into account, which we refer to as the *relative* indicators of a country:

- **User characteristics**: these characteristics include elements that enable citizens to use online channels, such as citizens' level of digital knowledge and the overall level of ICT usage, i.e. the variety of activities performed by citizens that are already online.
- **Government characteristics**: The Governance structure determines the coverage of eGovernment services, investments, and efforts made in innovation practices. These characteristics include the quality of governments' actions, and the openness of data and information.
- **Digital context characteristics**: these characteristics cover some of the external elements that may influence broader eGovernment application: the deployment of broadband infrastructure and its quality, the digitisation of businesses, and their implementation of online sales channels.

To describe these characteristics various data sources are used besides the eGovernment benchmark data collection.

Three types of countries can be identified when we compare absolute and relative indicators:

- **Underperforming countries**: Countries that perform below expectations, compared to countries with similar characteristics.
- **Average countries**: Countries that perform according to expectation, in line with the European trends of performance.
- **Outperforming countries**: Countries that perform above expectations, compared to countries with similar characteristics.

Key Insights

- There is a wide diversity in the country scores on Penetration. The European average for this indicator is 57%, but six countries score above 80% (Sweden, Finland, Estonia, Denmark, Netherland and the United Kingdom) and two countries score below 30% (Italy and Greece).
- The country results on the Digitisation indicator show less diversity. The European average stands at 68%. The highest score is achieved by Malta (94%), while Bulgaria, Croatia, Greece and Romania have most room for improvement, with scores below 50%.
- In general, it seems that countries that do well in Digitisation also do well in Penetration, and the other way around.

Figure 5.1 summarises the analysis. If a country's Digitisation or Performance does not match the expected value based on its environmental characteristics (i.e. relative indicators) this is indicated by an arrow. If the arrow faces upward or to the right the country scores above expectation, if the arrow faces downward or to the left the country scores below expectation.

5

Figure 5.1 Absolute and relative performances

Depending on the Digitisation and Penetration indicator scores the countries can be grouped into one of four scenarios:

- **Non-consolidated eGovernment**: this scenario combines lower levels of Digitisation with lower levels of Penetration.
- **Unexploited eGovernment**: this scenario combines lower levels of Digitisation combined with higher levels of Penetration.
- **Expandable eGovernment**: this scenario combines higher levels of Digitisation with lower levels of Penetration.
- **Fruitful eGovernment**: this scenario combines high levels of both Digitisation and Penetration.

Countries with a level of Penetration and Digitisation lower than expected might learn from countries with similar environmental characteristics but better performances in these absolute indicators.

Estonia, Latvia and Lithuania are outperforming countries in both Digitisation and Penetration, as shown by the upward and rightward arrows. Denmark, Spain and France are outperforming in Penetration, while perform on average on Digitisation. The United Kingdom and Romania are outperforming on Penetration, but underperforming in Digitisation, looking at its level of relative indicators. Austria and Portugal are outperforming in Digitisation and show average performance on Penetration. Malta is outperforming on Digitisation but underperforming in Penetration. Bulgaria, Cyprus, Finland, the Netherlands, Poland and Sweden perform in line with relative indicators, i.e. they match expectations based on their characteristics. Belgium, Czech Republic, Greece, Italy, Luxembourg and Slovenia are underperforming in Penetration given their country characteristics, while they perform according to expectations in terms of Digitisation. Looking at Digitisation instead, Croatia, Ireland and Slovakia are underperforming, while they are performing in line with Penetration averages. Germany and Hungary are the only countries showing a relative performance below the European trend, both in Penetration and in Digitisation.

5

Multiple, complex and sometimes interacting factors contribute to the digitisation process. Our analysis shows that progress in eGovernment is correlated with other factors such as citizens' preferences and skills, public policies and digital context characteristics.

When we consider the Penetration indicator, we see that the correlation is strongest with the relative indicators for Digital Skills, ICT usage and Quality. In general, it seems that countries with a high usage of eGovernment services are the countries with skilful citizens and a large number of daily internet users. Unfortunately, we cannot make causal statements based on the benchlearning exercise. However, our results provide some indications that it might be worthwhile to invest in awareness-raising and educational activities when it comes to increasing the use of online public services. The Quality indicator also provides some hints as what might be done to improve on eGovernment. For instance, results suggest that citizens are more likely to use online tools and public services when they assume that public service delivery will be of high quality. One possible explanation is that citizens might only be willing to share personal data online when they trust their government to provide a high quality and therefore secure online service.

When we consider the Digitisation indicator, we see that the correlation is strongest with the relative indicators for Quality and Connectivity. It seems that countries that score well on the quality of online public services often have a high level of deployment and a well-developed broadband infrastructure. This again provides an indication as to how eGovernment could be improved. It might be worthwhile to create fast broadband, making it faster to process service requests and to share data.

A big advantage of the benchlearning exercise is the possibility to compare countries with similar characteristics and context. In this way, best practices can be identified in countries that are similar, making it easier to translate best practices to the own context. In the same way, the benchlearning exercise might indicate which similar countries might have interesting policies that could be used as an example.

Conclusions and recommendations for the way forward in the light of the principles in the Tallinn Declaration

Conclusions and recommendations for the way forward in the light of the principles in the Tallinn Declaration

Monitoring an ambitious European digital agenda. The European Commission and Member States agreed on a comprehensive and ambitious digital agenda to drive eGovernment forward for Europeans[10] and making it easier for citizens and businesses to interact digitally with government. The eGovernment Benchmark, complemented by other studies and monitors, is an instrument to assess the current state-of-play and to identify trends related to these policy priorities.

Performance on the rise and countries closing gap. It is important for Europe to advance as a whole, by granting every European similar levels of digital experiences and rights while enabling efficient and effective investments in eGovernment, which forms the essence of a Digital Single Market. In the previous period of measuring eGovernment performance (2012-2015), the gap between eGovernment leaders and those countries further behind had grown to 53 percentage points (p.p.). It is very positive to see that the recent evaluations reveal this gap has decreased to 42 p.p., indicating that the average level of eGovernment performance in Europe is rising, with those countries lagging behind raising their game substantially.

Tallinn principles bringing to life what's next for eGovernment. European countries have committed themselves[11] to take steps forward to advance eGovernment in their countries by following five key principles. From the eGovernment benchmark results some clear trends can be concluded regarding these principles (although the measurement does not cover each principle entirely; other measurements and studies could complement this view). From this observation, the following conclusions and recommendations address these principles in its combination.

Key principles of the Tallinn declaration

- Digital by default, inclusiveness and accessibility
- Once only
- Trustworthiness and security
- Openness and Transparency
- Interoperability by default

Continuous investment in skills and accessibility to ensure inclusive digital society and to avoid stagnation in use of eGovernment

The eGovernment Benchmark reveals that information about public services and how they work, is increasingly online available. Europe shows a steady growth of 2 p.p. annually (EU28+). At the same time, statistics reveal that also the use of those services is on the rise with now on average two out of three European internet users having used an online service. This is positive news in general and builds the business case for digital service delivery. However, the percentage of people with basic digital skills has barely moved since 2016, and over 40% of Europeans are not capable of using those services. Hence, there is a risk that online use of eGovernment services will stagnate, but moreover it is important to ensure an inclusive society where everyone is able to participate. Continuous investment from governments to increase the readiness of citizens and businesses is essential when moving forward, and requires dedicated implementation of the European Skills Agenda[12].

The coming years will also see the implementation of the Web Accessibility Directive, making it mandatory for public websites to adhere to common standards that make it possible for

[10] Tallinn Declaration on eGovernment, available online: http://ec.europa.eu/newsroom/document.cfm?doc_id=47559 and The eGovernment Action plan 2016-2020, available online: http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=15268

[11] Countries of the European Union (EU) and the European Free Trade Area (EFTA)

[12] European skills agenda, available online at: https://ec.europa.eu/social/main.jsp?catId=1223

approximately 80 million Europeans with visual disabilities to engage in online services. It would be important to see quick take-up of these requirements across Europe, which will benefit the user experience of all users in general.

Increase user centricity by adhering even more to design and delivery principles of digital public services

The ministers in charge of policy and coordination of digital public services committed themselves to design and deliver eGovernment services, which are guided by a set of principles of user-centricity. From our evaluation, we conclude that the overall user journey is improving, but more opportunities exist - also on the short term - to implement improvements. User centricity will help to provide seamless experiences and allow users to achieve their goals online.

Balance re-use of data with increased transparency and control over that data to raise trust

One of the principles concerns 'once-only', aimed at asking users only once for their data and then re-using the data to pre-fill forms and/or to automate certain steps in the user journey. It contributes to a reduction of burden and increase of efficiency. While the results show that public entities increasingly manage to pre-fill forms, and various examples across Europe reveal that governments are steadily becoming more capable at re-using data, it becomes important to remain focused on building trust in government (the third principle of the Tallinn Declaration). As Estonian research has shown, effective and efficient e-governance requires the population to trust government information systems. If this trust is lacking, then citizens simply would refuse to give their personal data to be processed by government systems, and the intended gains in efficient and effective administration and governance would be lost[13]. More control over personal data - real ownership - is a measure that is essential. As the eGovernment Benchmark results reveal, there are only very few examples demonstrating this. Europe needs to move to 'transparent by default' when in concerns personal data, allowing every citizen to be able to see who consulted and used their personal data, when, and for what purpose - and eventually allowing the user to authorise access to public entities.

Secure safe eGovernment services

The aim is to 'ensure that information security [...] needs are taken into consideration when designing public services and public administration information and communication technology (ICT) solutions, following a risk-based approach and using state-of-the-art solutions. However, the conclusion from the cyber security assessment reveals that all websites in eight life events (over 4,400 URLs) are at serious risk since hardly any URL passed all tests performed by the two tools used for the assessment; the tests evaluate basic cyber hygiene. It is fair to say that this poses a great threat and could lead to for instance situations where citizens think they are on a government website, while actually have landed in the hands of persons with wrong intentions. It is essential for public organisations to take action accordingly and secure their eGovernment websites.

eGovernment implementation requires optimisation of supply and demand.

This implies not only working on how services are delivered online and the technical requirements, it also strongly appeals to the capacity of governments to make their citizens and businesses capable, willing, and trusting to eventually increase their participation in digital public services and, above all, enabling everyone to participate. European nations are realising this, insights show that it is moving in the right direction, now what is needed is to adapt to the same pace as how technology is transforming our economy and society today.

[13] Priisalu and Ottis, Personal control of privacy and data: Estonian experience, 2017. Available: https://link.springer.com/article/10.1007/s12553-017-0195-1#Sec9

European Commission

eGovernment Benchmark 2019
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