



eGovernment Benchmark 2023 Background Report

Connecting Digital Governments

Written by Capgemini, Sogeti, IDC and Politecnico di Milano for the European Commission Directorate-General for Communications Networks, Content and Technology

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eGovernment Benchmark 2023

Background Report

Connecting Digital Governments

EUROPEAN COMMISSION

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Unit B.2 — Digital Decade Coordination

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1. Introducing the eGovernment Benchmark

“Technology will continue to play an increasingly important role in our societies and in our lives”

Margrethe Vestager, Executive Vice-President for a Europe Fit for the Digital Age



1 Introducing the eGovernment Benchmark

1.1 A Deep-Dive into eGovernment Technologies and Policy Domains

As highlighted in the eGovernment Benchmark Insight Report, digital government plays a vital role in providing public services to citizens and businesses. This is especially true in times of social and economic disruption, such as during the COVID-19 pandemic or the recent cost of living crisis.

This **eGovernment Benchmark Background Report** offers a detailed analysis of government digitalisation in Europe. The report identifies technological advancements and delivers a clear means to understand and stimulate sectoral developments. Concrete examples, best practices, and success stories from various countries are presented throughout the report. Country rankings and service overviews are included to guide readers to the leading countries and specific services for further inspiration. Overall, this report aims to help professionals in various disciplines of eGovernment gain a clearer understanding of:

The extent to and way in which different **technologies** are being implemented in government services:

Chapter 2 presents findings for specific technologies, such as for mobile technologies, personal data solutions, electronic identification, and so on. These findings are particularly relevant for policymakers responsible for digital affairs across various government branches, as well as innovation scholars, software developers, business analysts, and solution integrators who analyse, build, and implement digital government applications and services.

To what extent and how specific **government domains** evolve:

Chapters 3–6 dive into this year's life events of *Business Start-up, Career, Family and Studying*. Findings are particularly relevant for domain experts and policy makers in the field of economic affairs, employment services, social affairs and higher education.

A **collection of good practices** from all participating countries is listed in the Appendix.

Whereas the Insight Report mainly marks European trends, this Background Report takes a closer look at national perspectives. Concrete examples, best practices and success stories from various countries are presented throughout the report. Country rankings and service overviews are given to guide readers to the leading countries and specific services for further inspiration.

1.2 Analysing Digital Government Through the Eyes of Citizens and Entrepreneurs

The **eGovernment Benchmark** compares how governments deliver public services through digital channels across Europe. It has become an internationally recognised study that examines how online platforms for citizens, businesses, tourists, and expat communities continue to change and improve. The report has been used extensively by a wide range of eGovernment professionals and public authorities. It serves both as a source of inspiration for digital strategy and a practical companion for government digitalisation.

35 countries participated in the study (see Figure 1.1).

These countries are the 27 European Union Member States, European Free Trade Association countries¹ and the European Union candidate countries². Throughout the report, these countries are referred to as ‘Europe’ or the ‘EU27+’.

This study evaluates online public services on four key dimensions, which in turn comprise 14 underlying indicators. These indicators are further broken down into 48 survey questions. These survey questions are used in weighted formulae to calculate maturity scores for countries along four key dimensions that assess a country’s digital maturity regarding digital services. The data collection also includes survey questions for pilot indicators that are not yet incorporated into the benchmarking methodology, meaning that findings for these so-called pilot indicators are not weighted into dimension scores nor included in the overall country maturity score.

Under the eGovernment Benchmark, a mature digital government exhibits:

- **User Centricity** – To what extent are services provided online? How mobile friendly are they? And what online support and feedback mechanisms are in place?
- **Transparency** – Are public administrations clear about how their services are delivered? Are they transparent about policy making and digital service design, as well as the way people’s personal data is being processed?
- **Key Enablers** – What technological enablers are in place for the delivery of eGovernment services?
- **Cross-Border Services** – How easily are citizens from abroad able to access and use the online services?

To provide a comprehensive overview of how countries are performing in eGovernment, 95 services, across nine **life events** were analysed. Life events are government domains, referring to a sequence of digital services that the average citizen or business is likely to require. The study covers 2,852 public administrations: 1,188 central, 426 regional and 1,238 local government bodies.

The assessment takes place annually. Data on the *Business Start-up*, *Career*, *Studying* and *Family* life events is collected in even years. In odd years the life events assessed are *Regular Business Operations*, *Health*, *Moving*, *Transport* and *Starting a Small Claims Procedure*. This report presents the findings for data collected in 2022 and 2021.

To evaluate these life events, well-trained Mystery Shoppers – citizens from the participating countries – visited and evaluated 15,083 websites: 8,973 websites and 815 portals from their own governments, as well as 4,470 cross-border websites and 825 portals from other European countries. Automated open tools were used to complement the Mystery Shoppers to assess *Mobile Friendliness*, *Findability*, *Accessibility Foundations* and *Web security*. Moreover, since the 2022 data collection a Usability pilot indicator was added to the Benchmark framework. This indicator consists of both questions for mystery shoppers as well as an automated tool measuring the speed and performance of websites.

A full description of the method and a list of all evaluated services can be found in the separately published eGovernment Benchmark Method Paper. All eGovernment Benchmark research data is openly available, free of charge and provided in a machine-readable format. The Commission’s webpage also presents the data collected in previous measurements.

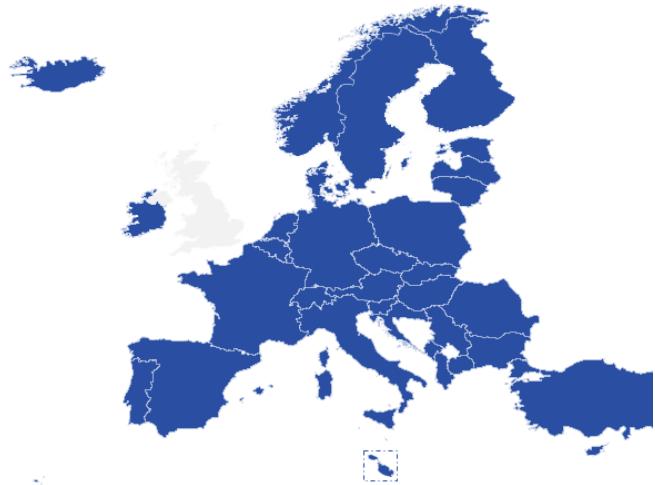


Figure 1.1: Map of participating countries

¹ Iceland, Norway, and Switzerland. Liechtenstein is not part of the evaluation.

² Albania, the Republic of North Macedonia, Montenegro, Serbia and Türkiye.

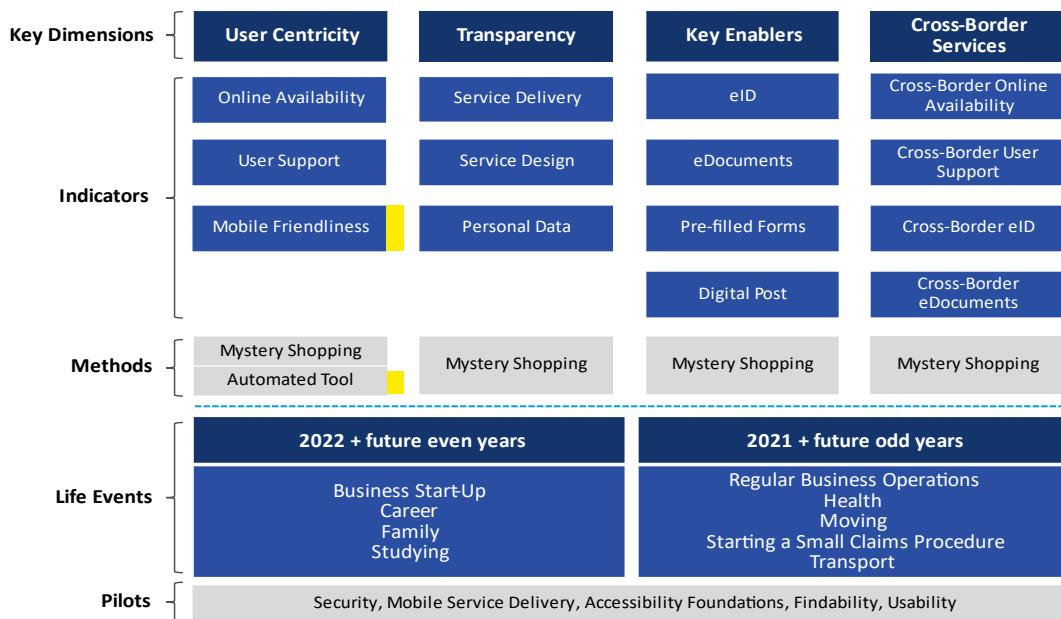


Figure 1.2 eGovernment Benchmark method framework

The Mystery Shopping Exercise briefly

- Mystery Shoppers are responsible for collecting the eGovernment Benchmark data by visiting and evaluating government websites.
 - Mystery Shoppers are users of government services themselves, which provides a certain level of validity and involvement in the measurement: how they experience the eGovernment services is a valid real-life user experience.
 - The Mystery Shoppers are selected via the research network of the four parties in the consortium behind the eGovernment Benchmark.
 - All Mystery Shoppers are briefed and clearly instructed to minimise subjectivity. Additionally, they assess the life events using specific personas. This standardises possible differences in personal situations.
 - In principle, every country is evaluated by two Mystery Shoppers and their results are compared. Inconsistencies are re-evaluated by the research team to achieve a high level of reliability. For cross-border services, all participating countries are assessed by two Mystery Shoppers from another country.
 - Every Mystery Shopper is a country national owning a national eID (if any).
 - The questionnaire that the Mystery Shoppers fill in is a formatted and standardised Excel file.
- After completion of the Mystery Shopping exercise, results are sent for validation to the EU27+ country representatives. This is an intense collaborative process. The representatives are involved at the start and at the end of the evaluation: at the start to validate the sample and key characteristics of the services under assessment; at the end to validate the research results and to correct potential obvious erroneous findings in collaboration with the responsible organisations in a country.

2. Synthesis of Key Dimensions and Most Important Scores

“Europe’s goals for the digital decade are not only to create cutting-edge products and services, but also to foster a transformation that benefits citizens, workers and consumers alike”

Didier Reynders, Commissioner for Justice



2 Synthesis of Key Dimensions and Most Important Scores

This chapter summarises the results of the eGovernment Benchmark on the four key dimensions of *User Centricity*, *Transparency*, *Key Enablers* and *Cross-Border Services*. The first section describes the overall maturity of eGovernment in Europe and the subsequent sections address each of the key dimensions in turn.

2.1 Overall digital maturity

In this section the results of the eGovernment Benchmark are discussed. The overall maturity score is based on the four key dimensions of *User Centricity*, *Transparency*, *Key Enablers* and *Cross-border Services*. Figure 2.2 shows the overall digital maturity scores of the participating countries for the 2022/2021 data collection. Malta has the most mature digital government scoring 96 points, followed by Estonia with 92 points. After Estonia, there's a cluster of six high performing countries: Luxembourg (89), Iceland (88), Finland (86), the Netherlands (85), Lithuania (85), and Denmark (85). Figure 2.2 also shows the digital maturity scores of each country for 2022/2021 and 2021/2020 (data for the 9 life events are collected over two years and are therefore summarised as biennial averages). Compared to previous year's score, the largest strides were made by Türkiye with an increase of 10 points, by Greece and Serbia with an 8 point increase, and Poland with an increase of 7 points.

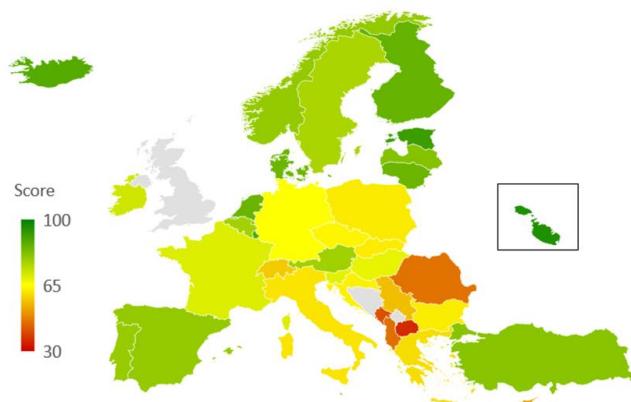


Figure 2.1 Overall maturity of the participating countries

Figure 2.3 shows the scores of the key dimensions for each life event. *User Centricity* is the most mature key dimension with a score of 90. This demonstrates that European countries do endeavour to make digital services available for their citizens and businesses. The *Key Enablers* dimension scores 71 points. While countries progressively strive to provide the opportunities for electronic identification and pre-filling online forms with personal information, this is still not yet the norm. The key dimension of *Transparency* scores 62 points. Countries could provide more and better insights to users about how they design and deliver services, in what ways they use users' data, and how users can participate in the design processes of the services. Lastly, *Cross-border Services* lags behind the other key dimensions with a score of 57 points. While the European Commission has spearheaded several initiatives (such as SDG³) to improve cross-border service delivery across Europe, countries do not provide the same level of service delivery to cross-border users as they do to national users.

Entrepreneurs enjoy substantially more mature digital services than do citizens. Services in the business-related life events (*Business Start-up* and *Regular Business Operations*) are more user-centric, more transparent, and better facilitated with regards to cross-border services than the services aimed at citizens. Moreover, key enablers such as eID authentication are already in place for many services intended for entrepreneurs.

³ https://single-market-economy.ec.europa.eu/single-market/single-digital-gateway_en

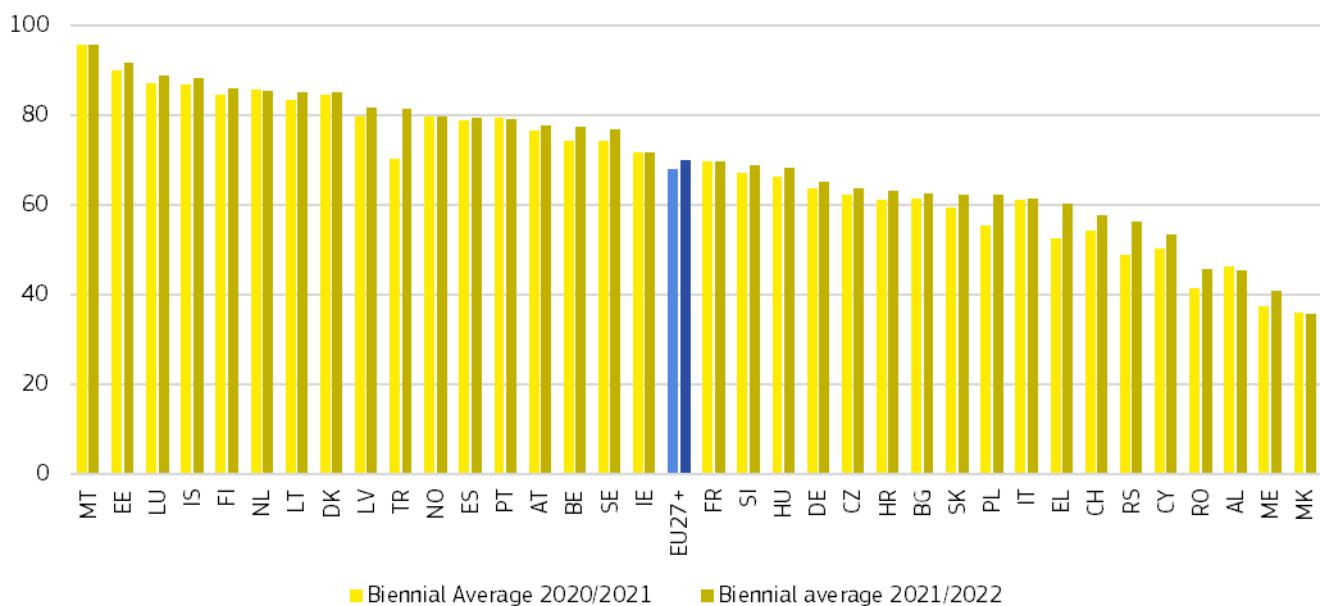


Figure 2.2 Overall eGovernment maturity of European countries and the biennial averages for 2021/2020 and 2022/2021

While the scores for the business-related life events are similarly high, there are large differences between key dimensions of citizen-related life events. For example, both business-related life events score 91 points or higher for user centricity. This contrasts with the citizen life events of *Career* and *Health*, which score a dissimilar 91 and 83 points, respectively, for user centricity. Citizen-related life events also have lower and more varied scores for transparency compared to the business-related life events. For example, *Career* scores highest with a score of 68 points, while the life events *Transport* (52 points), *Health* (51 points) and *Justice* (50 points) score lower and can benefit from more transparent services. The scores for the dimension Key enablers also vary across citizen-related life events. While citizens seeking help with their *Career* (79 points) or *Moving* (75 points) can often use their eID or upload eDocuments, the services related to *Family* (66 points) and *Justice* (51 points) score lower and can still be developed more.

The highest scoring citizen-related life event on the cross-border services key dimension is for *Studying* which scores 67 points. This life event likely scores highest because students often seek international opportunities to continue their studies or wish to fund their current studies abroad using grants. On the other hand, the life events *Justice* (41 points) and *Health* (44 points) score lowest for cross-border services. Yet again, these scores for cross-border services for citizen-related life events are all lower than for business-related life events.

For the four life events measured in 2022, the largest improvement can be made in the *Family* domain since most local and regional government authorities still require a physical interaction with authorities, for instance when requesting birth or marriage certificates.

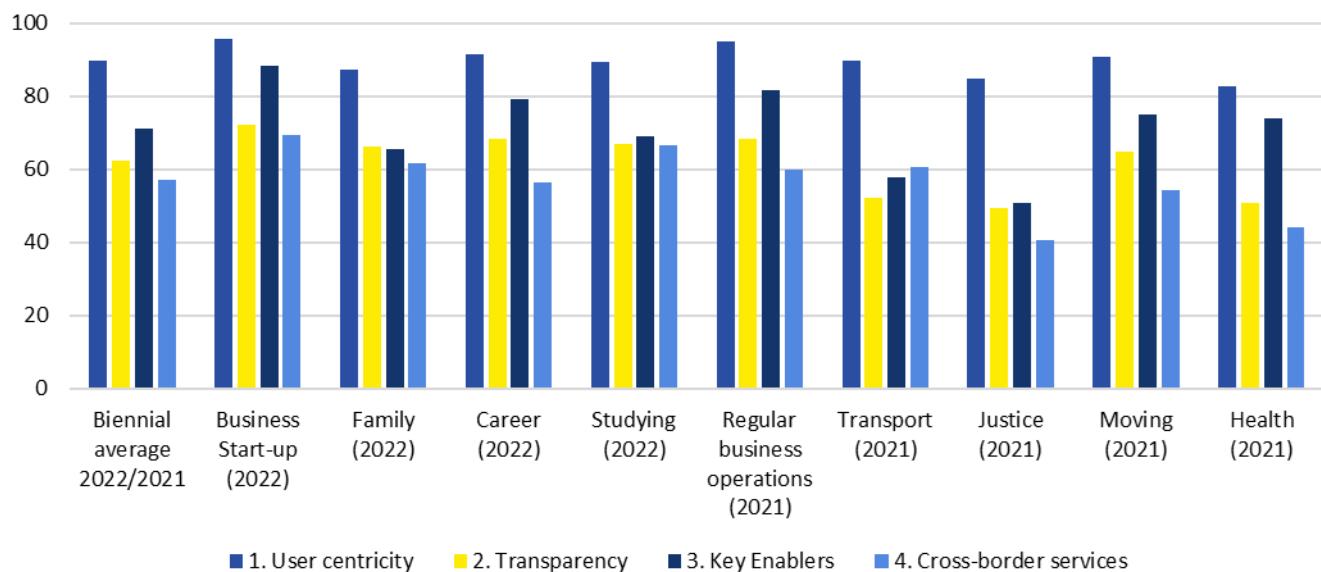


Figure 2.3 Key dimension scores per life event for 2021 and 2022 and the corresponding biennial average for 2022/2021

2.2 User Centricity

User Centricity assesses the extent to which governments deliver and design services with the users' needs in mind. The key dimension consists of three underlying indicators, namely *Online Availability*, *Mobile Friendliness* and *User Support*. *Online Availability* measures the extent to which government services are delivered online. *Mobile Friendliness* assesses whether government websites are compatible with mobile devices. Lastly, *User Support*, assesses whether government portals provide sufficient help to users.

Figure 2.4 shows the biennial averages for 2021/2022 and 2021/2020 for the EU27+ countries across the three indicators of *User Centricity*. All indicators score close around 90, showing that European governments understand the importance of user-centric digital services. All these indicators have increased by 1 point from the biennial average of last year. *Mobile Friendliness* is the most mature indicator at 93, which means that more than nine out of ten European government websites are designed to be easily used on mobile devices. *User Support* and *Online Availability* also obtain high Europe-wide scores of 92 and 88 respectively.

Figure 2.5 shows the biennial scores for *User Centricity* for all participating countries for the years 2022/2021 and 2021/2020. Malta has the most user-centric eGovernment, scoring perfectly for this dimension. Twenty-four countries score more than 90 points for this key dimension and ten countries score over 95 (Malta, Finland, Türkiye, Denmark, Spain, Iceland, The Netherlands, Estonia, Luxembourg, and Portugal). The greatest improvements from user centricity compared to previous year can be observed in Spain (+8 points) and Türkiye (+6 points).

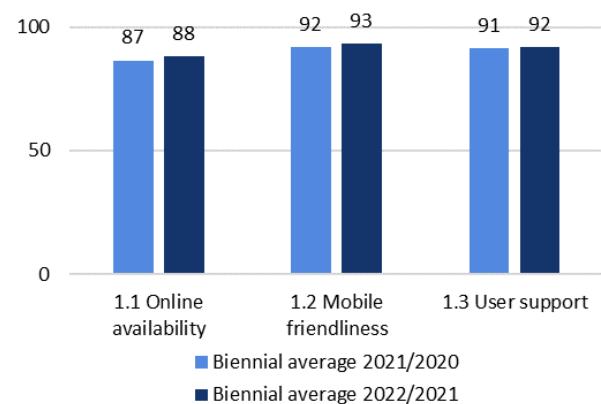


Figure 2.4 Biennial averages of User Centricity indicators for 2022/2021 and 2021/2020

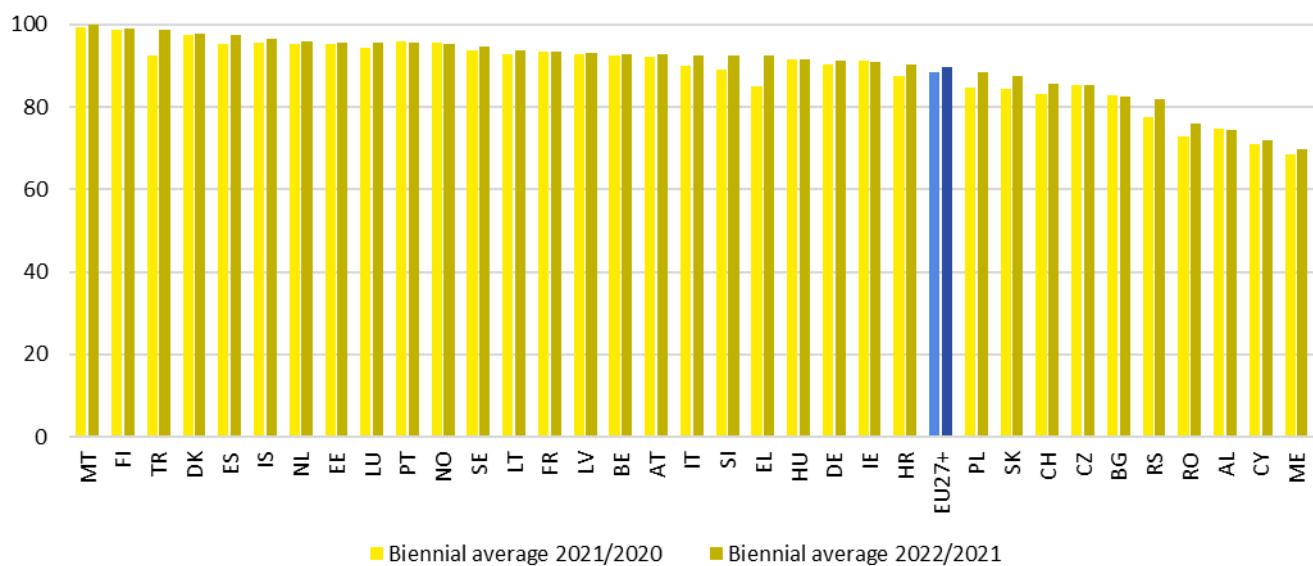


Figure 2.5 Biennial average scores for the key dimension of User Centricity for the years 2022/2021 and 2021/2020 per country

Online Availability

The indicator *Online Availability* evaluates how services are made available online to citizens and businesses. The indicator assesses whether information about the service is online, whether the actual service can be completed online and whether the service can be reached via one of the main government portals. The biennial average for this indicator is 88. Three levels of online availability can be defined:

- Information about the service is not available online and the service cannot be completed online.
- Information about the service is available online, but the service cannot be completed online.
- The service can be completed online. Figure 2.6 shows the extent to which government services are made available online across Europe. Currently, on average, more than eight out of ten services can be completed online (84%) within Europe⁴. Furthermore, governments offer information online for 98% of services. This means that in most cases when a service cannot be completed online, users can at least find information on how to obtain the service via traditional channels. This also means that there is still 2% of services for which a user can find no information online.

The percentage of services that are available online differs greatly between countries. Both Denmark and Malta currently have all their services digitalised allowing users to find and complete all services evaluated in this report. Other vanguards are Finland and Türkiye, where 98% of the services are available online. Only three countries have fewer than 60% of government services online.

After ensuring that services are available online governments should aim to deliver services proactively, meaning that the user does not have to apply for the service, but obtains the result of such an action automatically. By intelligently sharing and reusing personal data, governments can deliver services before the user has the need to ask for them. Consider, for instance, child allowance, which in many countries is given proactively to young parents that recently had a baby. Governments can anticipate an application for a child allowance (a government service) based on the registration of the child's birth (another government service), and therefore offer this service proactively. As it stands, only 7% of the services evaluated within the EU27+ countries are delivered proactively.

⁴ This number is based on question “A2: can the actual service be completed online?”. Note that this number is different from the Digital Decade target “100% key public services online”, which is based on the indicators Online availability and Cross-border online availability.

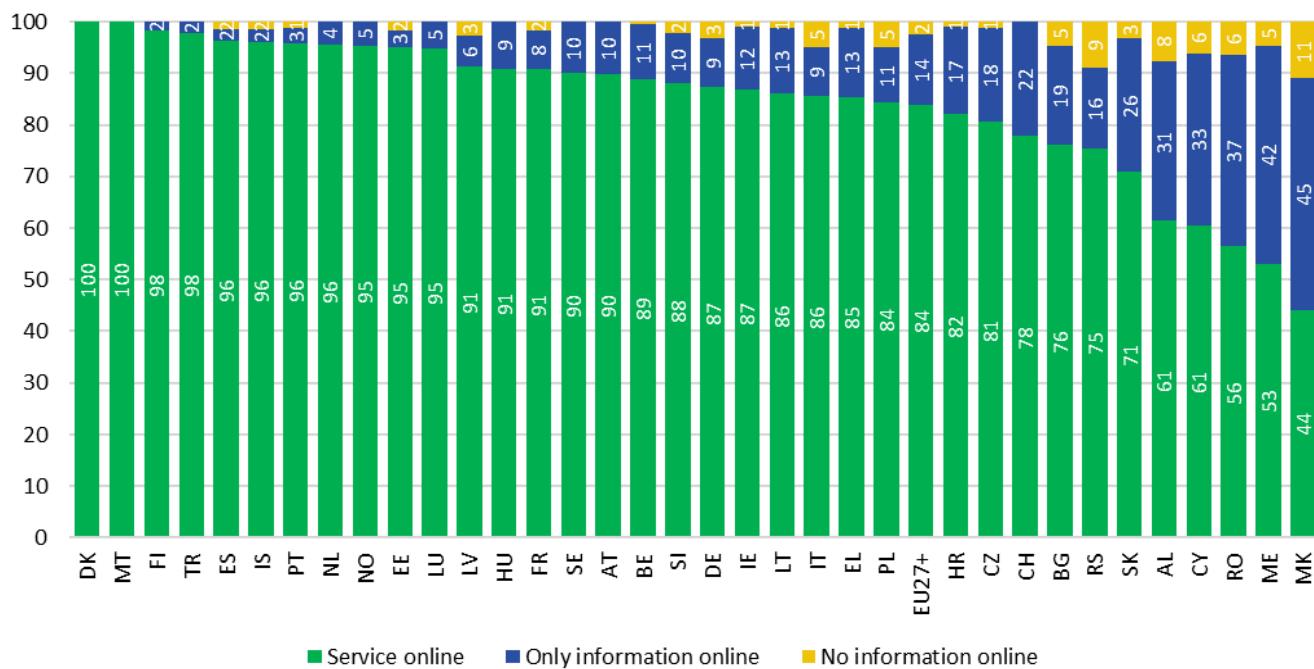


Figure 2.6 Online Availability of services across Europe

The Benchmark assesses websites from central, regional (e.g., provinces, universities, hospitals), and local (cities) governments⁵. Figure 2.7 shows that large differences for the questions comprising the *Online availability* indicator exist between these government levels. 88% of the services delivered by central governments are online, compared to 71% by regional governments and only 60% for local governments. Moreover, services delivered by regional and central governments are often delivered via government portals, whereas services delivered by local governments are often more difficult to find online.

Pilot: Usability of eGovernment Services

As user demands rise, governments continue to improve their usability levels. The Benchmark measures Usability in two ways: 1) mystery shoppers measure whether websites are easy to understand and help users with filling in online forms and 2) an automated test for speed and performance of websites.

The first part of the assessment finds that 88% of government websites have clear descriptive titles. Moreover, 80% of the websites show breadcrumbs or descriptive labels at the top of the page to navigate towards other (sub)pages. Government

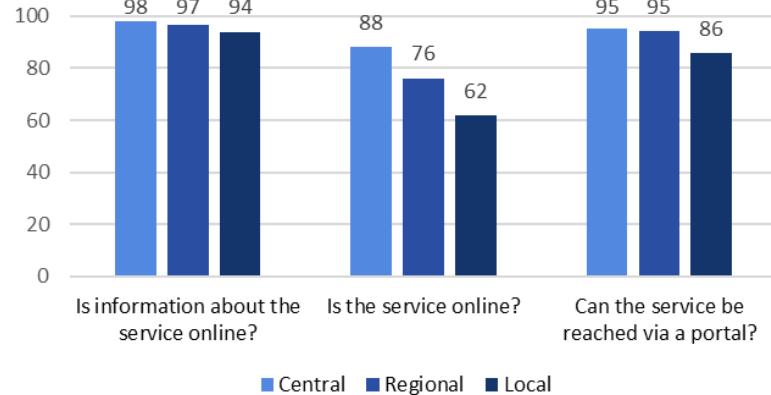


Figure 2.7 Online Availability of services per government level

⁵ Note that the Benchmark does not (and cannot) measure all local and regional service providers. The sample chosen for local and regional service providers consists of the biggest cities/regions in a country. The sample size for local and regional service providers differs between 5 and 20, depending on country population size. A one-to-one comparison between central, and local and regional service providers is further complicated by the type of services delivered by different government entities (e.g. income tax for central government entities, and obtaining a parking permit for local government entities).

could do more to help users when filling in forms. Currently, less than half (48%) of all eForms gives error messages when submitting a form and just 41% show visual aids to guide the users towards filling in information in the right format.

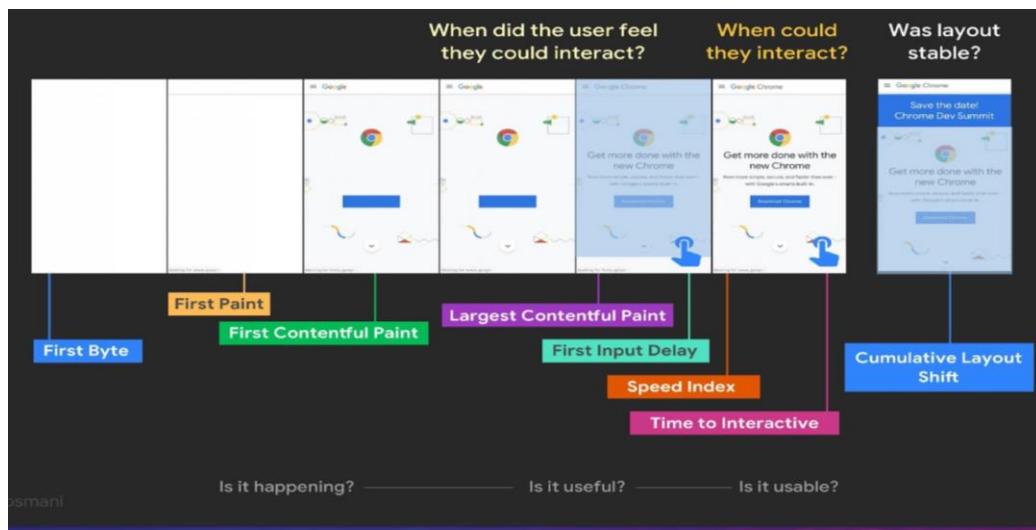


Figure 2.8 Illustration of speed and performance indicators, taken from blog by Addy Osmani

Speed and Performance is evaluated using Google's Page Speed Insights tool (<https://pagespeed.web.dev/>). This tool measures how websites perform on the the [Core Web Vitals](#), which are the most used standard for researching performance indicators for websites. Figure 2.8 shows the web vitals to provide a better understanding of what is measured. Each of the evaluated indicators has threshold value, predefined by Google, for passing the test or not.

It takes on average 0,7 seconds before the first byte has loaded on government websites, which is only slightly faster than the threshold value of 0,8 seconds. Moreover, 28% of government websites fail this test. Government websites perform well on the Time To Interactive (TTI) indicators: it takes on average less than 1,9 seconds before users can fully interact with the page, and 92% of government websites passed this test. Countries can also improve on the Cumulative Layout Shift (CLS) indicator: just 74% of websites pass this test. CLS measures how stable websites are. Lay out shifts (e.g., without warning, the text moves, and you've lost your place on the website) could lead to people mis clicking and requesting services that they do not need.

	Time To First Byte (ms)	First Contentful Paint (ms)	Largest Contentful Paint (ms)	First Input Delay (ms)	Speed index (ms)	Time to Interactive (ms)	Cumulative Layout Shift	Total blocking time (ms)
Average time	714	1312	1695	3	1892	1868	10	75
Passed test (%)	72%	93%	85%	100%	90%	92%	74%	92%

User Support

Another aspect of *User Centricity* for digital services is the digitalisation of support functionalities offered by government websites. Before the mass adoption of digital solutions users could ask for help at their local government office. Now users should be able to ask for support online. The *User Support* indicator assesses the maturity of such help functionalities on government portals. Seven features related to *User Support* were assessed for each government portal. Figure 2.9 shows the score for each of these features.

European government portals provide high quality user support across all evaluated features and score an average of 92%. All portals (100%) provide information about other channels through which to obtain government services and almost all

portals (96%) provide users with contact details for the responsible department. 95% of the government portals currently have a Frequently-Asked-Questions (FAQ) section, where users can find the answers to questions that come up most often. Complaint procedures are available on 85% of the portals, which indicates that governments can improve ways for citizens to voice their dissatisfaction with government services.

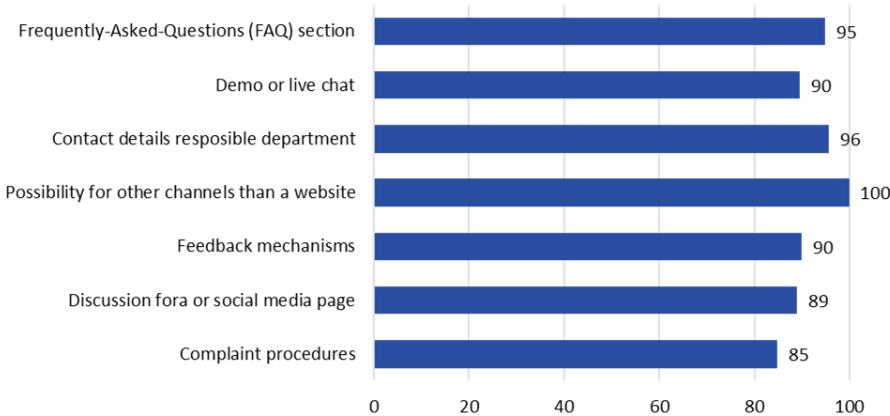


Figure 2.9 User Support indicator, scores per question

Pilot: Portal Findability

The way eGovernment users start their journeys towards finding a specific government service may vary greatly. Some may start directly on a government portal and follow the headers and links to navigate to other webpages. Other user might try to find the relevant service via internet search engines such as Google, Bing, or Yahoo!. Governments can use Search Engine Optimisation (SEO) activities to promote their websites and services to help users find relevant websites quickly and access the service they need. The SEO status of government portals was assessed with a method based on the [Moz Domain Authority Tool](#) to examine the findability of the services online.

The Domain Authority score ranges from 1 to 100 on a logarithmic scale, with higher scores corresponding to a greater ability to rank on search engine result pages. 62% of the government portals in Europe qualify as either ‘good’ or ‘excellent’, 25% as ‘average’ and only 13% as ‘below average’.

Pilot: Web Accessibility Foundations

It is paramount that public institutions ensure that all users can access and benefit from digital government solutions. This goal includes ensuring that websites meet the criteria for web accessibility. The Web Accessibility indicator is still a pilot indicator, meaning that the results are not included in the scoring of the current Benchmark.

Using the [axe browser extension](#), the URLs of government services related to the four life events evaluated in 2022 were assessed on 8 of the 50 Web Content Accessibility Guidelines (WCAG) 2.1 success criteria. The 8 selected criteria give an impression of what extent the websites are:

- **perceivable**, measured by alternative text (WCAG: 1.1.1), colour contrast (WCAG: 1.4.3).
- **operable**, measured by page/document title (WCAG: 2.4.2), link name (WCAG: 2.4.4).
- **understandable**, measured by language attribute (WCAG: 3.1.1), valid language code (WCAG: 3.1.2).
- **robust**, measured by unique IDs (WCAG: 4.1.1), aria hidden (WCAG: 4.1.2).

Figure 2.11 shows the percentage of government websites that passed each web accessibility test and Figure 2.10 shows the percentage of services that pass all eight criteria per country. Disappointingly, more than eight of ten (82%) public sector websites violate one or more the selected WCAG criteria. Only 18% of the websites passed all eight criteria. For those websites, additional manual evaluations are needed to verify full compliance. The most common reasons for websites to fail the

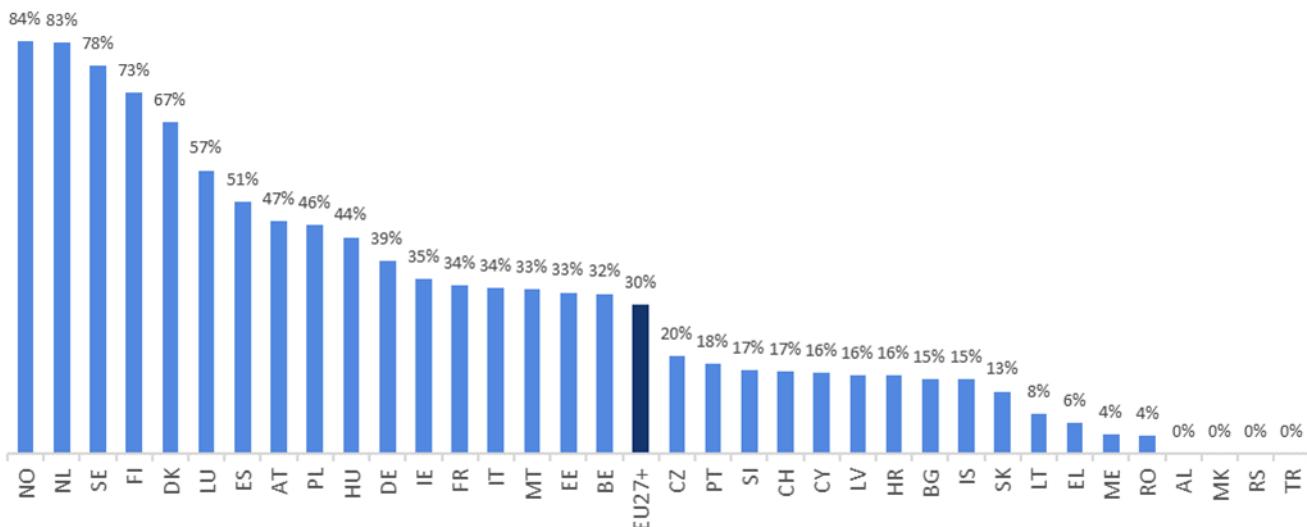


Figure 2.10 Percentage of websites of EU27+ countries that meet all eight assessed WCAG criteria

compliance checks is because alternative texts for pictures are missing and colours lack the necessary minimum contrast, criteria related to being perceivable. This harms all users, especially those with some form of visual impairment. But, for example, even mobile phone users might struggle to see their screen in bright sunlight without these accessibility features.

In general, the evaluated websites are more operable, understandable, and robust than they are perceivable. Almost all tested websites apply page and document titles to operate and navigate the website more effectively. A perfect score has been achieved for the criteria *Aria Hidden*, which measures if content is unrightfully hidden for people with disabilities (e.g. text that is not identifiable by a screen reader). Hiding such content is widely avoided meaning that the text can be extracted by software, making websites more robust and allowing assistive technology to interpret the content.

No major discrepancies are observed among life events or level of government, meaning the same patterns as discussed above hold true. However, there are differences between country scores. The EU27+ average for web accessibility is only 30%. Only seven countries score more than 50%, with Norway and the Netherlands leading with 84% and 83% of government websites adhering to the WCAG criteria, respectively. More than 18 countries fall below the EU27+ average, which itself is only 30% as only 7 countries score more than 50%. These scores underline that progress can be made with ongoing efforts. A ripple effect is needed to improve web accessibility throughout Europe and make digital government available for all.

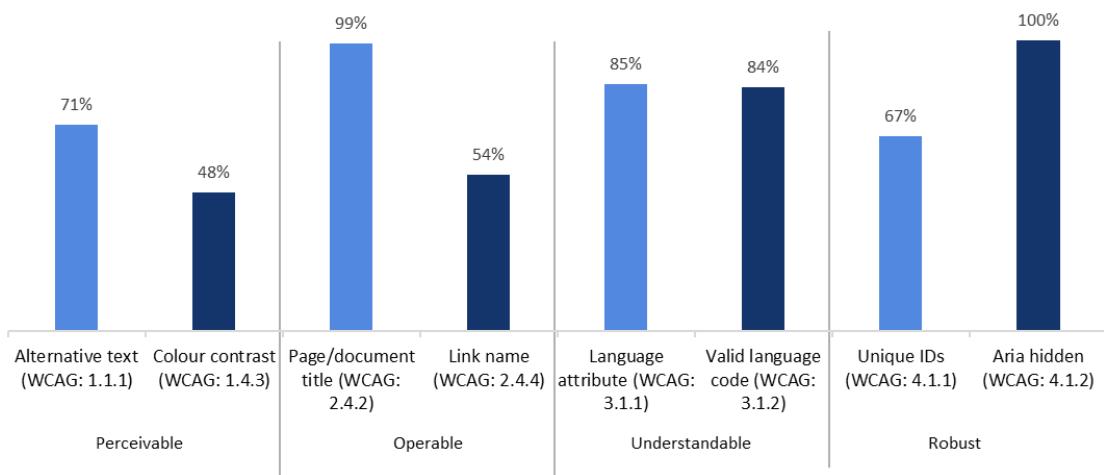


Figure 2.11 Percentage of websites that passed the selected WCAG criteria (EU27+ countries, 2022/2021)

Mobile Friendliness

The previous sections discussed that users can easily find information about government services online on their laptops and desktops. However, to fully examine the landscape of eGovernment usage, the ways in which people interact with services online using their mobile phones or tablets also needs be examined. Focusing only on computer-based interactions does not paint a complete picture of eGovernment website users. People use their smartphones to find information and obtain services at an increasing rate. The *Mobile Friendliness* indicator measures whether government websites are adaptive to mobile devices (e.g., that text remains readable, buttons become larger, etc.). Figure 2.12 shows the 2022/2021 and 2021/2020 biennial averages of this metric per country. Mobile-friendly websites are quickly becoming the norm across Europe. For over half of the countries, score over 95 for this indicator and only three countries score below 85. All Swedish, Finnish, and Belgian government websites that have been examined are mobile friendly.

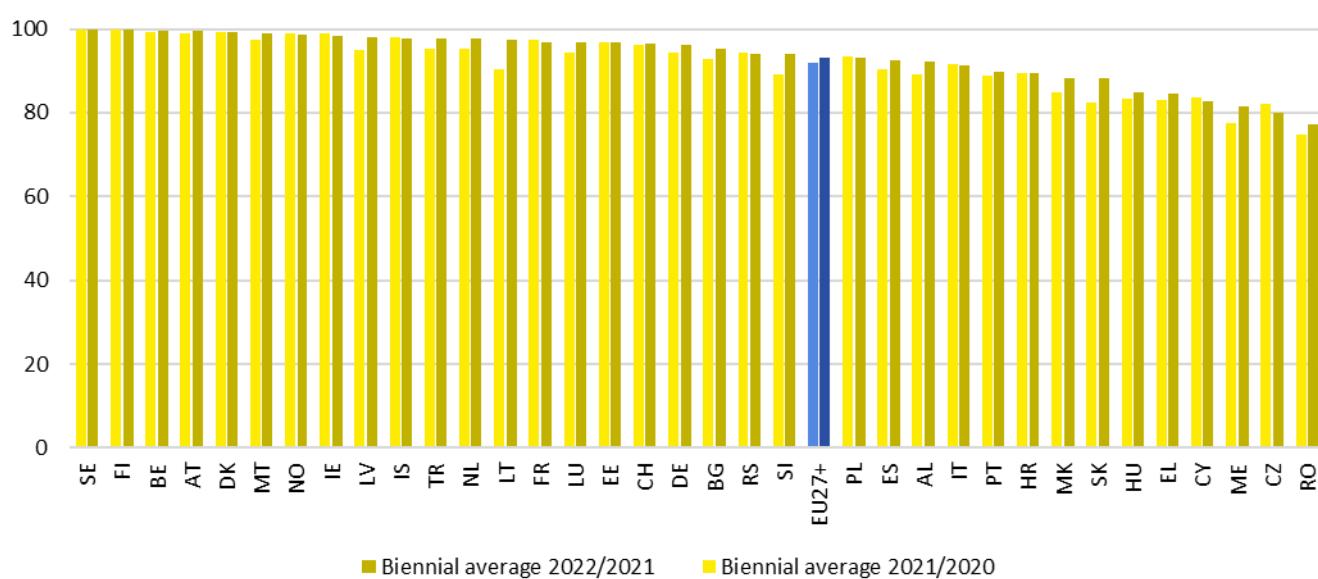


Figure 2.12 Mobile Friendliness indicator, biennial averages per country

Pilot: Mobile Service Delivery

Beyond only reading information, some users prefer using their mobile devices to complete online applications and access other government services. Are mobile apps and mobile services as functional as online services completed via a desktop device?

As a pilot assessment, 18 services from the nine life events were selected for assessment on a mobile device for their level of mobile service delivery. Mobile service delivery was compared to the performance of the same services on a desktop device. This year eight services from the life events of the 2022 data collection are compared. The *Mobile Service Delivery* indicator is currently still a pilot, meaning that its results do not count towards the overall score of the current eGovernment Benchmark.

To make information readable on mobile devices, government websites are often able to adapt static content to fit the new dimensions of the screen of the mobile device and allow for touch screen interaction. However, underlying dynamic service modules and native mobile applications do not offer the same desktop functionalities. When looking at the sample of services taken this year, only 63% of the services can be fully completed on a mobile device, compared to 82% for desktop users accessing the same services. The mobile journey is hindered due to lower eID integration (60% on mobile devices versus 70% on desktop) and fewer possibilities to upload and download eDocuments (66% on mobile devices versus 78% on desktop). The percentage of online application forms containing pre-filled personal data is similar for mobile and desktop users. Pre-filling personal information is especially useful for mobile devices, because repeatedly entering information on smaller touchscreens is inconvenient.

		
Is information about the service available online?	99%	89%
Is the actual service available online?	82%	63%
Is it possible to identify oneself online?	80%	70%
Can you use a generic electronic identifier (e.g., a national eID) to identify yourself?	70%	60%
Is it possible for the user to submit or download official documents required for the service?	78%	66%
When applying for this service is personal data pre-filled by the service provider?	66%	69%

Figure 2.13 Scored comparison between desktop and mobile users of digital services

Belgium | Mijn Burgerprofiel (My Citizen Profile) mobile app platform

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Starting a Small Claims Procedure, Studying, Family, Career

1. Good practice description

Mijn Burgerprofiel mobile app platform is the answer to the expectation of the citizen to have a single mobile application to organize all of their government-affairs. The Mijn Burgerprofiel mobile app platform allows local governments to create a custom branded mobile application that combines both local and Flemish government products and services such as documents, attestations, messages and so on. Flemish and local governments can extend the Mijn Burgerprofiel app with custom services and functionalities. By applying the look and feel of the local government the positive close relationship between the local government and its citizens is maintained and strengthened. The app keeps citizens actively informed about their affairs with the government, such as new messages, important events and actions they need to take in ongoing cases. In addition, the app also acts as a digital vault or personal wallet to safely store personal documents, such as certificates, attestations, or identity documents such as a driver license or insurance card.

2. Benefits

- 13 cities have published a localized app based on the Mijn Burgerprofiel mobile app platform. 14 cities are currently in progress of publishing an app
- The app was installed 200.000 times during the first 6 months after its initial release
- The citizens' engagement with the app was increased with the help of push notifications

3. Key success factors

- We delivered the project in less than 6 months by leveraging on existing building blocks, which enabled us to optimize our resources and accelerate the development process
- We have established a strong partnership with local governments and their service providers to facilitate collaboration and drive efficient delivery of services and features

4. More information

More information can be found in Dutch at: <https://www.vlaanderen.be/digitaal-vlaanderen/onze-oplossingen/mijn-burgerprofiel/de-mobiele-app-mijn-burgerprofiel-en-uw-gemeente-app>

2.3 Transparency

Governmental transparency promotes efficiency, accountability, and trust in public sector organisations. To evaluate the transparency of digital governments, the eGovernment Benchmark evaluates three indicators: *Transparency of Service Delivery*, *Transparency of Personal Data*, and *Transparency of Service Design*. In eGovernment, transparency is about showing users what steps (still) need to be taken when accessing or completing a service, how their own personal data is being used by the government, and whether users can participate in designing the services they want to use.

Figure 2.14 shows the *Transparency* indicators per life event collected in the past two years, with the corresponding biennial average for 2022/2021. On average, *Transparency of Personal Data* is the most mature indicator with a biennial average score of 72 points, followed by *Transparency of Service Design* at 62 points and *Transparency of Service Delivery* at 53 points. As transparency is a very important part of eGovernment services it is advised that European governments focus on improving all *Transparency* indicators.

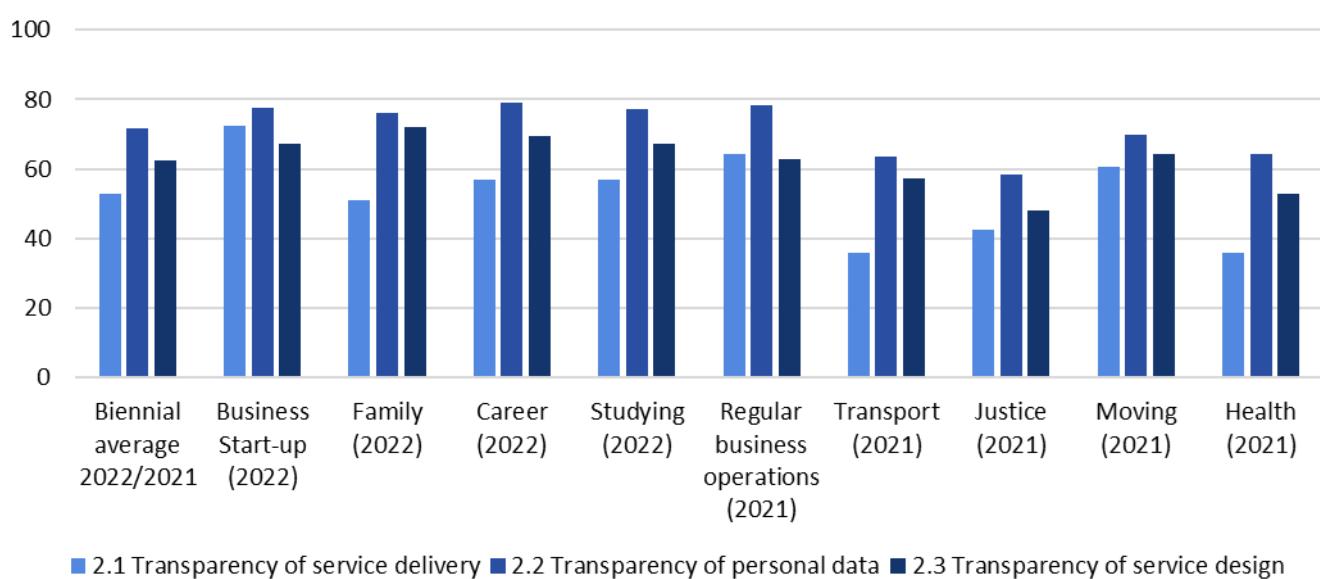


Figure 2.14 Transparency indicators per life event and the biennial averages of 2022/2021

The *Transparency of Service Delivery* indicator is particularly low for *Health* and *Transport*-related life event services, scoring only 36 points. This means that citizens often have difficulty understanding how the service will be delivered and what the next steps will be.

Services within *Family* and *Studying* life events are the most transparent when it comes to what happens to the data of citizens. The two business-related life events of *Business Start-up* and *Regular Business Operations* have similar scores. This metric is therefore one of the few areas that lack a noticeable gap between citizen- and business-related services.

Figure 2.15 shows the biennial average scores for the EU27+ countries for the *Transparency* key dimension. Malta has the most transparent digital government with a score of 98 points, followed by Iceland (94 points) and Luxembourg (90 points). Notably, large differences exist for the *Transparency* key dimension, with nine countries scoring less than 50 points. The EU27+ biennial average for *Transparency* is 62 points which shows potential for further development.

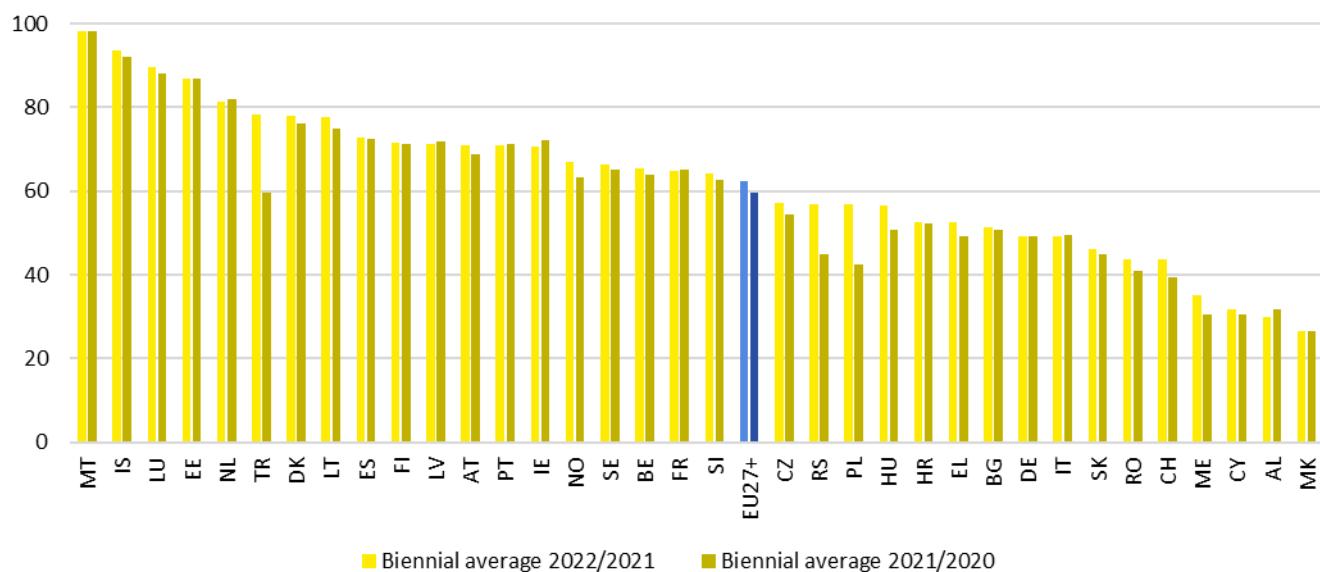


Figure 2.15 Biennial averages for the Transparency key dimension per country for the years 2022/2021 and 2021/2020

Transparency of Service Delivery

Government services can be complex and often comprise multiple steps to be completed. By improving transparency when obtaining services, the user can be helped by understanding how long the entire process will last or what steps or waiting periods they could expect. These features should be a priority for digital government. *Transparency of Service Delivery* evaluates seven features, as shown in Figure 2.16. Additionally, data were collected for two pilot indicators.

Eight out of ten services (80%) send users a delivery notice after they have requested a service. Furthermore, in six out of ten services, users can track their progress (61%) and see the delivery timelines (60%) as these are made clear by the government. Unfortunately, the other questions in this indicator reveal a less positive picture. Only little more than half (54%) of all services provide users with the option to save their work as a draft. Similarly, only 52% the services have a maximum time limit set within which the administration must deliver the service. Even fewer services give an estimation of the duration of the process of requesting the service (46%). Lastly, only slightly more than one in three services (36%) have information available about the performance of the online service (such as user satisfaction scores).

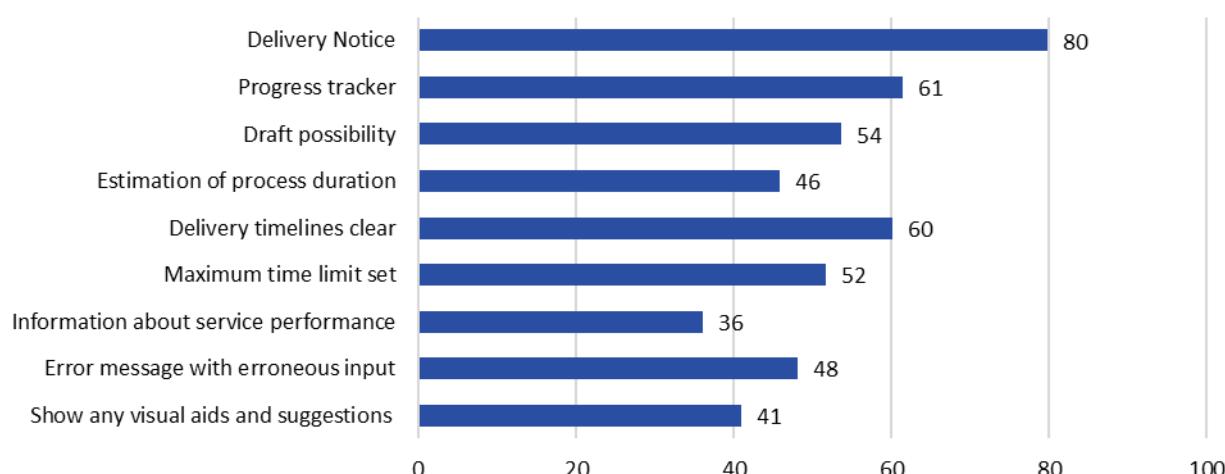


Figure 2.16 Score per question for the Transparency of Service Delivery indicator

Transparency of Personal Data

Governments often need to use personal data to deliver services to citizens and entrepreneurs. Examples of these include addresses and birth dates. Subsequently, this data can be stored by the government and used for other services. Citizens and entrepreneurs alike want to be informed about how their government uses this personal data they collect and for what purposes.

The *Transparency of Personal Data* indicator assesses to what extent users can access, modify, and monitor their personal data via the most relevant government web portals. Figure 2.17 shows that users can notify the government of incorrect personal data on 84% of all web portals. In slightly more than three out of four portals (79%), users can modify their own personal data online in the event of erroneous entries. Lastly, on more than eight out of ten portals (84%), users can access complaint procedures to inform the government about their discontent with how the government uses their data.

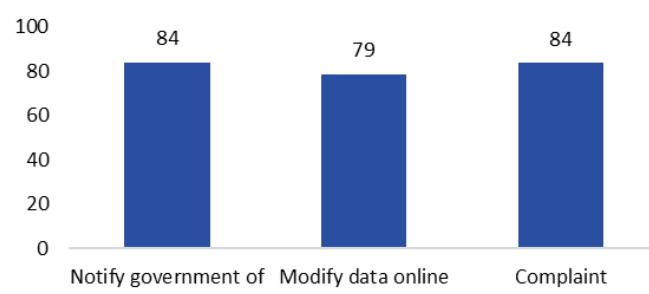


Figure 2.17 Scores per question for Transparency of Personal Data indicator

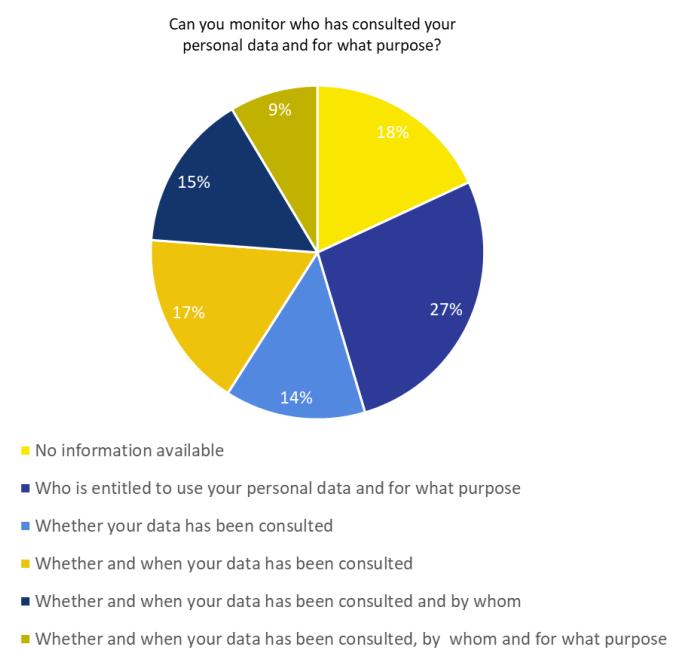
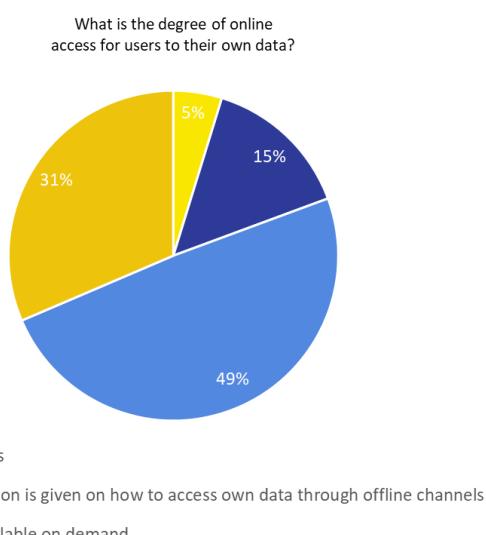


Figure 2.18 Extent to which users can access and monitor their personal data

Figure 2.18 shows the extent to which users can access their own data and see who consulted their personal data. Just 5% of government portals do not provide users with any information at all about their personal data. For a further 15% of the government portals users cannot access their personal data online but are informed about how they can access their data via traditional channels. For the remaining eight out of ten portals (80%), users can access their personal data online. Moreover, users are proactively informed about which (new) data is being held about them on 31% of the examined government portals.

A point of improvement is that users could be helped with further insights into who consults their data and for what purposes. Described from the lowest to highest standard, one in five government portals (18%) do not provide any information on who is entitled to use the collected personal data and for what purpose. In 27% of examined cases, the government portals simply offer a general explanation about who can use personal data but do not inform users about whether their data has been used. On 58% of the web portals, users are told whether their data have been consulted, while on 41% of portals users are additionally informed when their data are consulted. On 24% of the portals, users are also informed by whom their data is consulted. Lastly, on just 9% of all government portals evaluated, users can find online whether and when their data has been consulted, by whom, and for what purpose.

Transparency of Service Design

In the EU's Declaration on European Digital Rights and Principles⁶, Europe highlights participation as one of the seven key pillars for enhancing digital rights in the digital age. Citizens should be able to engage in policymaking processes online and help to design said online government services as they are the ones using them. Starting in 2020, the eGovernment Benchmark uses the Transparency of Service Design indicator as a measure of how well citizens can participate in policymaking and service design processes online. This year, 97% of all government portals provide information on key policymaking processes online, and almost six out of ten (58%) of all government portals provide information on the user's ability to participate in policymaking processes. Users are less informed about service design than about policymaking processes. 58% of government portals provide information about the process of service design (e.g., with panels, expert groups, or consultations) but only 40% of portals allow users to enrol online for such activities.

Figure 2.19 shows the biennial averages for this indicator compared to average scores of the business and citizen life events. Only small differences can be observed between the scores which shows that the service design of services is similarly transparent to both entrepreneurs and citizens, yet differences in scored dimensions are great. While most services (96%) provide information on their policy making processes, only 55% provide any information on how a user could participate in such a process. Similar disparities can be observed in how the service design process. Where 58% of the services explain how their services are designed, but only 39% provide information on how a user could take part in such procedure.

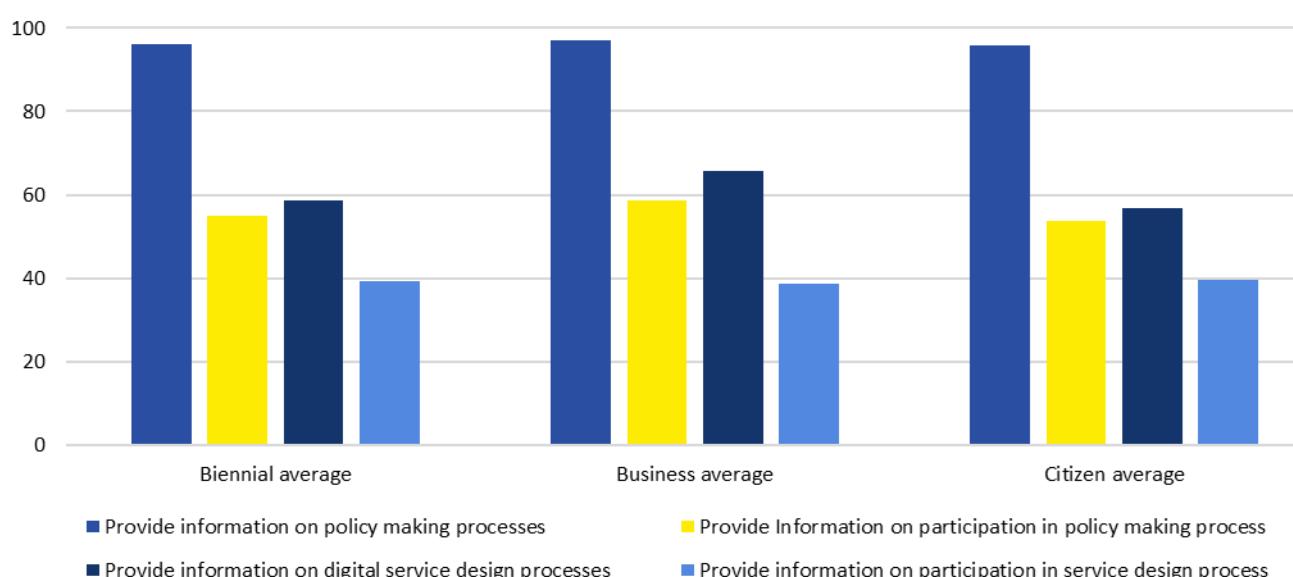


Figure 2.19 Average scores for Transparency of Design

⁶ <https://digital-strategy.ec.europa.eu/en/library/declaration-european-digital-rights-and-principles>

Ireland | Designing Our Public Services – Design Principles for Government in Ireland

Relevant Key Dimension(s)

User Centricity

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

Ireland's design principles "Designing Our Public Services", reinforces our existing design mind-set and approach and should enhance the design of our future public services in Ireland.

This is not design that is limited to aesthetic considerations – but the holistic design of service experiences & delivery, focused on the needs of people.

Designing our Public Services is an aid for public servants in continuing to put people at the forefront of service provision. These principles should serve to empower our Public Service to use powerful design tools and techniques to deliver human-centric and inclusive solutions to complex social issues.

The 10 design principles complement our existing service design approach including, the UX checklist, site guide, style guide and content guide used, for example, by gov.ie.

2. Benefits

- Increased satisfaction and engagement
- Increased accessibility
- Commonality across government
- Increased efficiencies and cost savings

Key success factors

- Successful adaption across government departments
- Increased accessibility and satisfaction
- Increased analytics, planning and quality assurance

3. More information

- Designing Our Public Services: <https://www.ops.gov.ie/designprinciples/>
- UX checklist: <https://www.gov.ie/en/publication/efad0-digital-ux-checklist/>
- A very popular example of a content guide can be seen here: <https://www.gov.ie/en/publication/ccb5e4-how-to-create-content-in-a-crisis/>

2.4 Key Enablers

Key enablers are the building blocks supporting efficient, safe, and easily accessible eGovernment services. Four indicators are examined that, when taken together, measure the maturity for a country's *Key Enablers*. These four indicators are:

- **eID** (electronic identification) which is a government-issued solution for online identification and authentication.
- **eDocuments** (electronic documents) are documents in digital form that the user needs to submit/upload to complete an eGovernment service, or that the user obtains as a proof or a result of the service (e.g., certificate, diploma, proof of registration).
- **Pre-filled Forms** are base registries used by governments to automatically validate or retrieve data relating to citizens and businesses.
- **Digital Post** refers to the option to receive communications digitally only, for example through personal mailboxes or other digital post solutions.

Figure 2.20 shows the 2022/2021 biennial average for the *Key Enablers* indicators along with the averages for citizen- and business-related life events, highlighting the differences between services intended for citizens or businesses. The indicators *eDocuments* and *Digital Post* are the most mature, with biennial averages scores of 77 points and 79 points, respectively. This means that for nearly eight out of ten services measured, users can submit or download the required *eDocuments* online to complete a service. Similarly, it means that almost eight out of ten of the measured government portals provide users with the options to only communicate digitally via a digital mailbox hosted by the government. The biennial average for the *eID* indicator is 65 points and the *Pre-filled Forms* indicator scores 66 points.

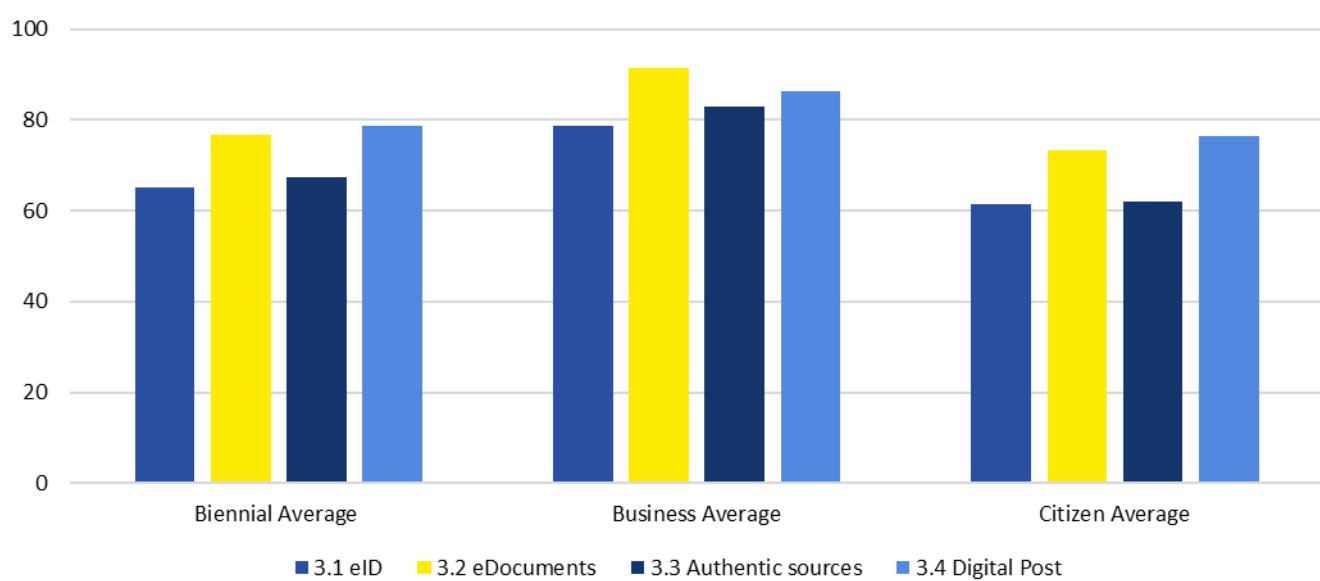


Figure 2.20 Biennial average, business life event average and citizen life event average for Key Enablers indicators

Service websites and portals for businesses have implemented key enablers more frequently than similar services and portals aimed at citizens. The biggest difference is observed in the *Pre-filled Forms* indicator which scores 83 for businesses and 62 for citizens, which means that governments prefill personal information in slightly more than eight out of ten services for businesses, but in just six out of ten services for citizens. This maturity gap is also noticeable for the *eID* and *eDocuments* indicators where the score between citizen and business-related services differs by 18 points in both cases. The smallest difference between business and citizen life events is for the *Digital Post* indicator: with a score of 86 points and 77 points, respectively. These differences in scores demonstrate that services intended for citizens have room to be further enabled by governments.

The dimension *Key Enablers* is the cumulative scoring of the four indicators discussed above. The biennial averages for this dimension for all EU27+ countries in 2022/2021 and 2021/2020 are depicted in Figure 2.21. Eight countries have a score

higher than 90 points and can be considered at the vanguard when it comes to *Key Enablers*. These countries are Lithuania, Iceland, Malta, Estonia, Denmark, Türkiye, Finland, and Norway. The average score across all countries is 71 points. In total, eleven countries are currently scoring below 60 points on this key dimension.

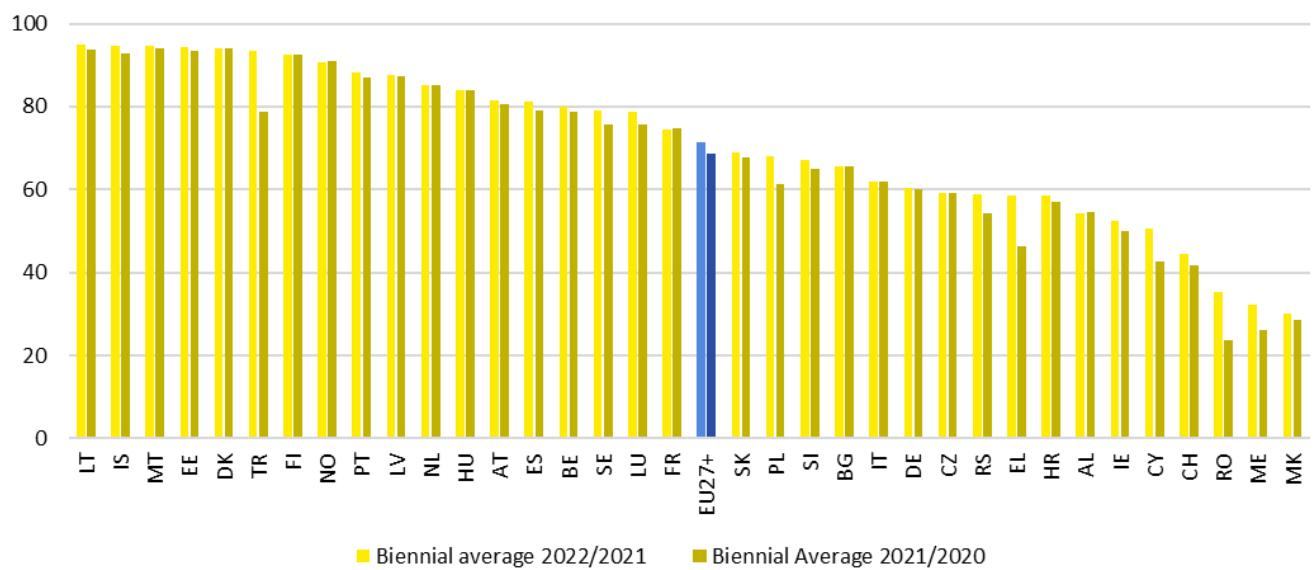


Figure 2.21 Biennial averages per country for the Key Enablers key dimension for the years 2022/2021 and 2021/2020

Electronic identification (eID)

86% of transactional services across Europe require identification, either offline or online. Electronic identification solutions (referred to as eIDs) are online passports and people can use their eID to prove who they are online. eIDs ensure safe, fast, and easy access to digital government services. With electronic identification, users no longer need to visit government service desks to prove their identity in person, nor wait for documentation that proves their identity to arrive via post. Overall, this type of identification is considered more secure than a basic username and password.

Out of the services that require identification, less than one in five (18%) require users to identify with their passport in person. On the other hand, seven out of ten services (70%) allow for online identification with eID. When logged in online, less than half of the services (49%) allow a single sign-on. Without single-sign-on functionality, users often need to re-authenticate when switching between different competent authorities' websites to access services within one life event journey.

The eID frontrunners within the EU27+ are Lithuania, Iceland, Malta, Estonia, Denmark, Türkiye, Finland, and Norway where more than 90% of the services can be accessed using the national eID.

Pilot: Website Security

Website Security is an increasingly serious concern for citizens and businesses. When users visit government websites, they must be able to trust that the websites are indeed owned by government authorities. As personal data is often needed for public services, it is essential that citizens and businesses can provide these personal details in a secure environment, without the fear of malicious third parties accessing their sensitive data. Governments are expected to protect the interests of citizens and businesses against data breaches and cybersecurity threats.

To secure public sector websites, back-end structures need to be robust, while front-end technologies must be up to date. Using the [Internet.nl](#) and [Mozilla Observatory](#) tools, government websites were assessed on 14 cybersecurity criteria. Both openly available security tools are platforms dedicated to increasing website security and reliability. Each tool has its own testing criteria to establish whether the cybersecurity criteria are being met.

Three assessment items are tested with the Internet.nl toolkit (namely, IPv6, DNSSEC and HTTPS), and eleven items were assessed with the Mozilla Observatory (namely, content security policy, cookies, cross-origin resource sharing, HTTP public

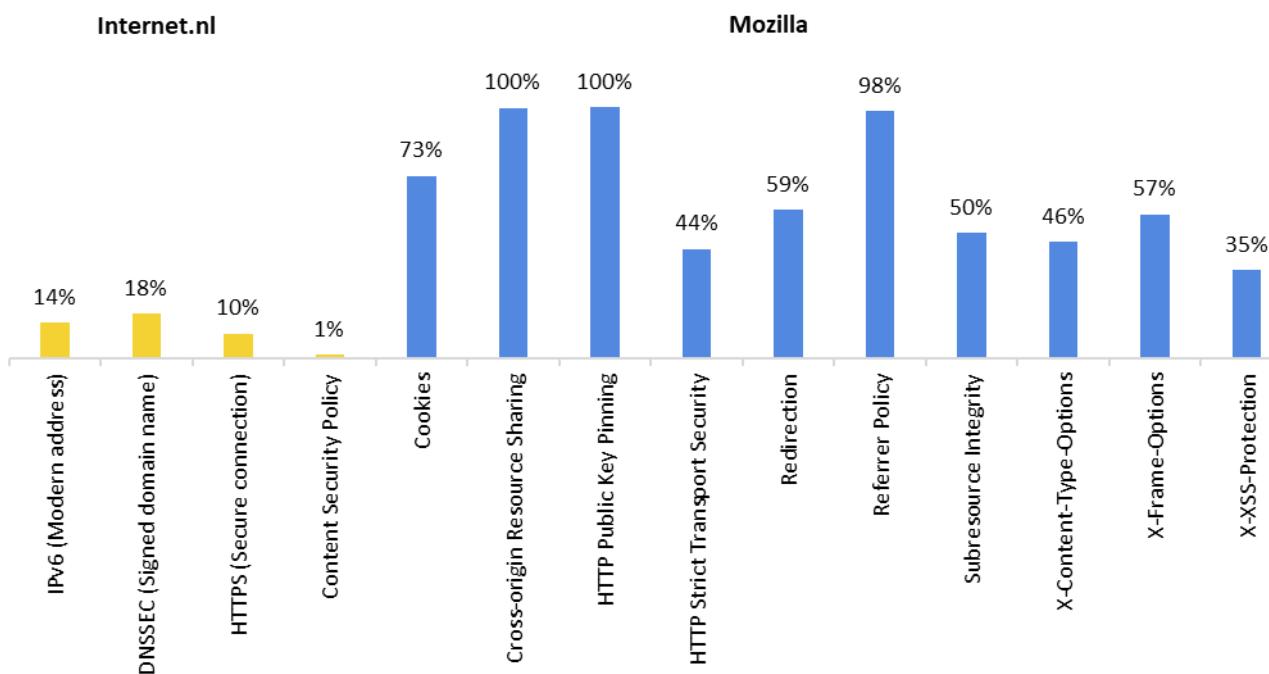


Figure 2.22 Percentage of websites that meet assessed security criteria (EU27+ countries, 2022/2021)

key pinning, HTTP strict transport security, redirection, referrer policy, sub-resource integrity, X-content-type-options, X-Frame-options, and X-XXS-protection).

1% of the websites prevent a wide range of cross-site scripting and clickjacking attacks (content security policy) and only 10% ensure a secure HTTPS connection to prevent third parties from reading or changing content sent between the user and the website. Fortunately, all websites prevent foreign sites from reading the site content and accessing private user information (cross-origin resource sharing) and protect against unauthorised issuance of certificates (HTTP public key pinning). Furthermore, almost all websites minimise privacy risks (referrer policy).

All countries have ample room to improve. However, it should be noted that these tests provide an indicative understanding, rather than attempting to assess cybersecurity conclusively or comprehensively. As such, positive results do not guarantee a completely secure website, just as negative results do not necessarily imply that a website is unsafe. False negatives are unlikely, but undetected alternative cybersecurity solutions may have been implemented that are not yet detectable with the current methods and thus lower the score.

Public administrations across Europe could take advantage of open-source testing tools and implement follow-up measures. These can include securing proper procurement to ensure security-by-design and prioritising budgets accordingly to invest more heavily in a sophisticated cybersecurity plan.

Greece | Gov.gr Wallet (Digital Wallet with Digital ID, Driving License, and more documents)

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

Gov.gr Wallet is a digital wallet app which allows citizens to issue, store, and use their digital ID and digital driving license. It also allows them to issue, store, and use the official disability card, the unemployment card, and a vehicle information card (insurance, etc) in tandem with the Athens Ring allowance card (only specific vehicles can enter downtown Athens as per environmental regulations.)

Further, Gov.gr Wallet allows the utilization of the issued cards through a consent mechanism. For instance, before a bank clerk, the citizen to verify themselves, would simply have to tell the clerk their ID number, then receive a push notification, approve the transaction, and only then, would the clerk/bank receive an official digital copy of the citizen's ID data. Another similar example is the integration with the Aegean Airlines check-in process.

2. Benefits

- Ease of use (no need to carry paper/print copies anymore)
- Streamlined issuance and use
- Domestic applicability for all possible uses of ID (travel, courts, loans, police identification, etc.)
- Almost 2 million documents issued (period: July 2022 till December 2022)
- Data ownership and control (share only when you want)

3. Key success factors

- User-centered design and experience
- Heavy use of interoperability
- Creating a "Wallet as a Platform" via the consent mechanism/integrations
- Security of transactions (everything is E2EE, OTP use, etc.)

4. More information

More information can be found at:

<https://wallet.gov.gr> &

https://en.about.aegeanair.com/media-center/press-releases/2023/aegean_digital_service/

2.5 Cross-Border Services

The *Cross-border Services* dimension assesses the availability and maturity of services to non-national citizens and international businesses relative to that of national citizens and local businesses. The dimension comprises four indicators: *Cross-border Online Availability*, *Cross-border User Support*, *Cross-border eID*, and *Cross-border eDocuments*. *Cross-border Online Availability* measures whether the service can be found and/or performed online. *Cross-border User Support* assesses the extent to which cross-border users have access to support functionalities. *Cross-border eID* checks whether cross-border users can use their national eID for authentications in another country. *Cross-border eDocuments* evaluates whether eDocuments can be used (downloaded or submitted) for online services.

Figure 2.23 shows the biennial averages for the EU27+ countries on the *Cross-border Services* key dimension for the years 2021/2022 and 2020/2021. Four countries score above 80 points in the latest biennial average (2021/2022), namely Luxembourg (91 points), Estonia (90 points), Malta (90 points), and Finland (81 points), an increase from three countries in 2020/2021. Eleven countries (down from 13) had an average score below 50 points in 2021/2022. The 2021/2022 biennial average score for the EU27+ countries is 57 points.

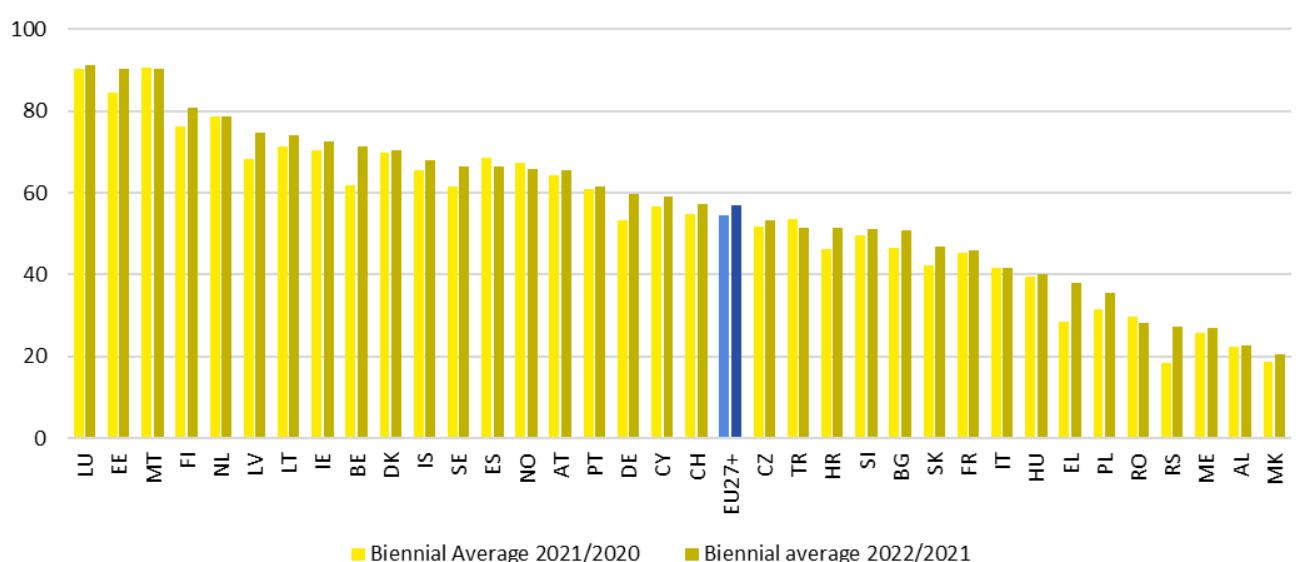


Figure 2.23 Biennial averages per country for the Cross-Border Services key dimension for the years 2022/2021 and 2021/2020

Figure 2.24 compares national versus cross-border scores on five key questions across the EU27+ to analyse how many services perform better for national or cross-border users. This is done by comparing several indicators, including *Online availability*, *User Support*, *eID*, and *eDocuments* with their cross-border counterpart. Overall, national users are better served than cross-border users. The most mature dimension for national and cross-border users is having information provided online about a service, which is provided in 98% of cases for national users and 75% of the time for cross-border users. For cross-border users this means that the information is provided in a different language than the country's national language. The dimension with the lowest maturity and the greatest disparity between national and cross-border users is the

	Is information about the service available online?	
	98%	75%
	84%	49%
	85%	57%
	70%	27%
	79%	52%

Figure 2.24 Differences in service delivery for cross-border users and national users

use of eIDs, which can on average be used by national users in 70%⁷ of cases and by cross-border users in only 27% of cases.

Cross-border Online Availability

Cross-border users understandably want to complete services online because it is more difficult for them to obtain certain services in person. Visiting a municipality office in a city or a country where one does not live can be a burden, especially for relatively common services and procedures.

Figure 2.25 shows the percentage of each country's services that are online for national users compared to cross-border users. As mentioned, less than half (49%) of all cross-border services can be completed online⁸. Moreover, for many countries, the difference between online services for nationals compared to online services for non-nationals is substantial: for just six countries (Malta, Luxembourg, Estonia, Finland, Ireland, and Cyprus) the difference in services online for national users and cross-border users is fewer than 20 p.p. When cross-border users are not able to complete a service online, the following barriers are named most often:

- Information is not available in multiple languages
- Lack of information for cross-border users
- Cross-border eIDs are not accepted to identify for the service

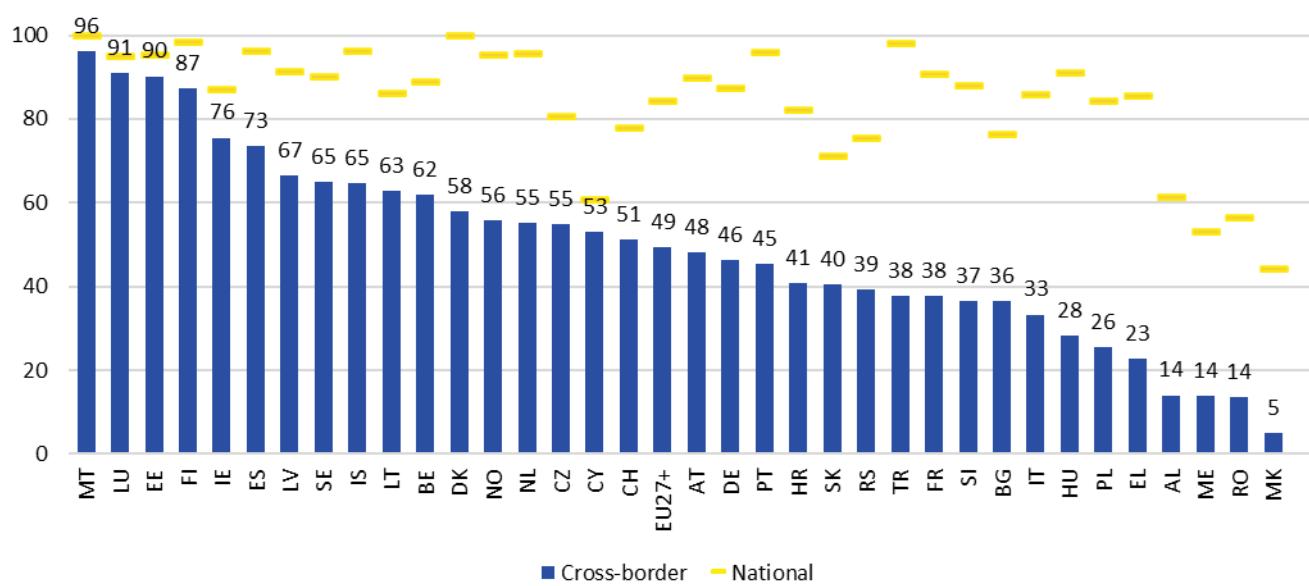


Figure 2.25 Percentage of services that can be completed online for national and cross-border users

Cross-border User Support

Users might want to voice their opinions or file a complaint when their interaction with digital services goes awry. Although many national users can easily voice their opinions online, this is not yet the case for cross-border users. As only 57% of the measured services had a method for cross-border users to share their complaints, compared to 85% for national users. By having complaint procedures for cross-border users online, governments can pinpoint procedural barriers and improve their services.

⁷ Note that the 70% is different from the 66 score of the eID indicator. For this comparison we only looked at question “F3 If it is possible to identify oneself online, do you use an official electronic identifier (e.g. a national eID solution)?”

⁸ Figure 2.25 compares question A2 (“can the actual service be completed online?”) with question G2 (“Can the actual service be completed online by a cross-border user?”).

Cross-border eID

Ideally, someone's national eID should not only give access to online services in their own country but should also provide a means of personal identification for (bordering) foreign countries, just like a physical passport. The European Commission endorses the idea of a cross-border digital identity that someone can take to other countries as a digital counterpart to a passport. In 2014 The Commission launched the eIDAS regulation on electronic identification and trust services for electronic transactions in the [European Single Market](#).

Figure 2.26 compares the adoption of eIDs in Europe for national and non-national users. For all cross-border services where authentication is required, it is possible to login with an eID from another country for only 27% of the services. Cross-border use of eID is therefore still not the norm in Europe. Only Luxembourg and Estonia provide authentication with cross-border eID for more than three out of four services. As it stands, the eID is not yet the digital passport it ought to be.

Cross-border eDocuments

European governments are often able to facilitate submitting or downloading of official documents (eDocuments) for national users. For cross-border users, this opportunity is only available for slightly more than half of the services (52%) where documents are necessary to complete a service, which is much lower than the 79% average for national users. This again shows that countries should focus on maturing their digital services also towards cross-border users.

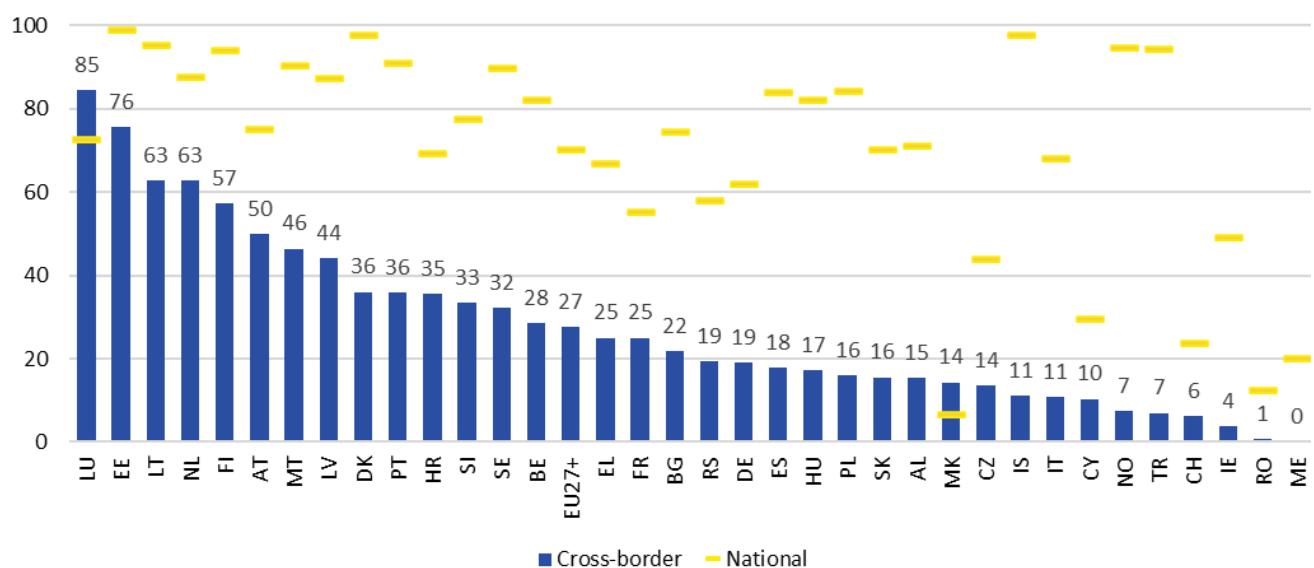


Figure 2.26 Percentage of services where authentication with eID is possible for national and cross-border users

Austria & Germany | Wirtschaftsserviceportal NRW

Relevant Key Dimension(s)

User Centricity, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Business Start-Up

1. Good practice description

After adopting the Single Digital Gateway Regulation in 2018, the European Commission and Member States have been building the YourEurope portal. by the end of 2023 YourEurope will offer access to 21 online procedures in all EU countries, supported by the Once Only Technical System (OOTS), which ensures that authentication with eID and submitting of eDocuments is seamless cross-border.

The Business Service Portal North Rhine-Westphalia (NRW) is the central digital gateway for businesses in North Rhine-Westphalia. With the concentrated approach for "open source", standardization and development of online services in a modular system, a future-proof platform solution was created with the WSP. This system can deliver client-related application data nationwide fully digitalised. All online procedures in NRW are made available to other authorities across states and levels in a micro-service architecture according to the OOTS principle.

Since 2022, North Rhine-Westphalia has been also one of the responsible authorities for the German Register Modernization Program, which deals i.e., with the implementation of the once-only principle. In 2023 NRW became responsible for the program area dealing with the connection of German online procedures and registers to the European Once-Only-Technical System (OOTS) to fulfil the requirements of the Single-Digital-Gateway Regulation. In cross-border piloting projects with other member states, such as Austria and the Netherlands, central infrastructure components like an intermediary platform and an SDG connector are being developed and tested. It is also planned to involve other member states in this cooperation.

2. Benefits

- More than 400 business-related administrative services plus basic services, e.g., start-up assistant, for joint use and subsequent use for other authorities.
- Piloting the once-only principle for retrieving evidence using newly developed SaaS components that can be made available for subsequent use nationwide and for all administrative areas on different administrative levels
- Implementation of the requirements from the Single Digital Gateway Regulation in the business area

3. Key success factors

- Concretisation and parameterisation of the technical solutions through an agile approach
- Implementation of full digitalised processes both in the frontend and via standardized interfaces specialised processes; Application data are standardized as XÖV modules
- Technical parameterisation/client capability through its microservice architecture
- Factory based process approach
- Sustainable legal framework through WiPG NRW
- Development of online services as MVP in so-called digitisation lines in an modular system

4. More information

More information can be found at: <https://service.wirtschaft.nrw/>

2.6 Conclusions considering the Digital Economy and Society Index (DESI)

The results of the eGovernment Benchmark also help score the countries on the European Commission's [Digital Economy and Society Index \(DESI\)](#). This is largely because the services under review in the eGovernment Benchmark have an impact on the daily lives of citizens and entrepreneurs and how they interact with their governments. The DESI is an important tool for the European Commission used to track digitalisation by the European Union and its Members.

Six indicators that are present in the Digital Public Service dimension are measured by the eGovernment Benchmark:

- **Digital Public Services for Citizens (DESI indicator 4a2):** this DESI indicator is based on the biennial average from the eGovernment Benchmark indicator *Online Availability* and *Cross-border Online Availability* for all citizen-related life events. The DESI indicator measures to what extent services or information concerning services for citizens are provided online and via a government portal.
- **Digital Public Services for Businesses (DESI indicator 4a3):** this DESI indicator is based on the biennial average from the eGovernment Benchmark indicators of *Online Availability* and *Cross-border Online Availability* for all business-related life events. The indicator measures to what extent services or information concerning services for businesses are provided online and via a government portal.
- **Pre-Filled Forms (DESI indicator 4a4):** this DESI indicator is based on the biennial average from the eGovernment Benchmark indicator *Pre-filled Forms*, mentioned in the *Key Enablers* sections. The indicator measures to what extent online forms are pre-filled with personal information already known by the government.
- **Transparency of Service Delivery, Design, and Personal Data (DESI indicator 4a5):** This DESI indicator is based on the biennial average of the eGovernment Benchmark key dimension *Transparency*. This key dimension is the average of the indicators *Transparency of Service Delivery*, *Transparency of Personal Data*, and *Transparency of Service Design*.
- **User Support (DESI indicator 4a6):** This DESI indicator is based on the biennial averages of the *User Support* and *Cross-border User Support* indicators of the eGovernment Benchmark. The indicator measures how much support is given on government portals when users have a question regarding a public service.
- **Mobile Friendliness (DESI indicator 4a7):** This DESI indicator is based on the biennial average score of the *Mobile friendliness* indicator and measures how many of the government websites within a country run smoothly on mobile devices, meaning that they scale their resolution, and change dimensions to accommodate mobile users.

Digital Public Services for Citizens (DESI indicator 4a2)

Figure 2.27 shows the results for the DESI Digital Public Services for Citizens indicator. The average score for the EU is 77 points. This means that most services across citizen-related life events in the eGovernment benchmark, namely, *Career*, *Studying* and *Family*, as well as *Health*, *Moving*, *Starting a Small Claims Procedure* and *Transport*, can be fully completed online with sufficient information. This also means that such information can be reached via main government portals. Malta leads Europe with a perfect score, followed by Luxembourg, Estonia and Finland exceeding the 90 point mark. In other words, nearly all the services targeting citizens can be completed online in these countries, allowing users to fulfil government requests digitally.

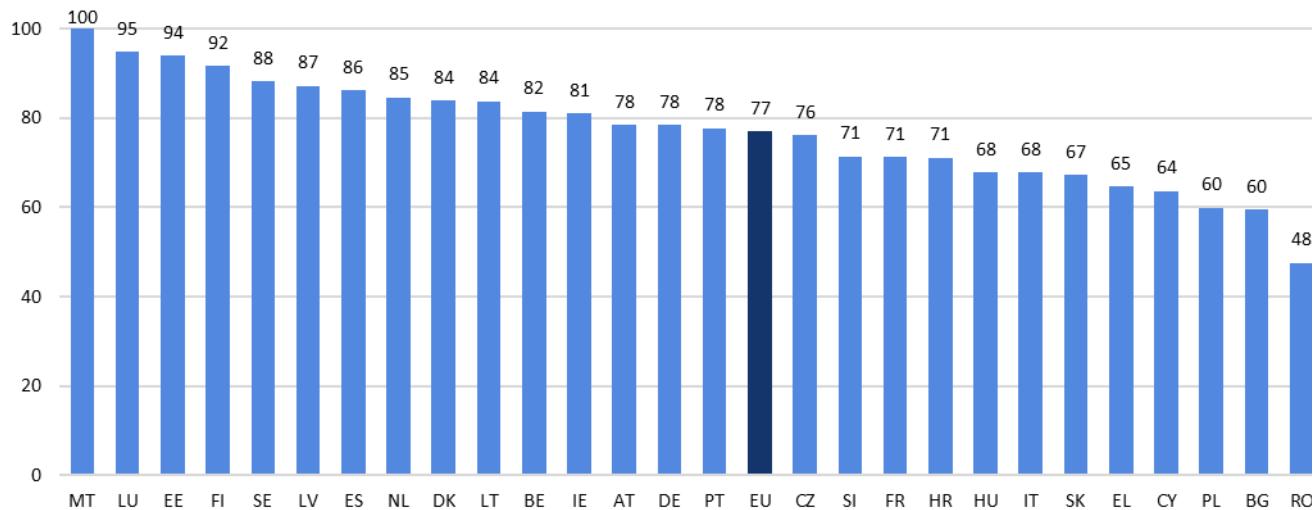


Figure 2.27 Scores per country for DESI indicator Digital Public Services for Citizens

Digital Public Services for Businesses (DESI indicator 4a3)

Figure 2.28 shows the results for the DESI Digital Public Services for Businesses indicator. The EU27 average stands at 84 points. This means that most services in for business-related life events, namely Business Start-up and Regular Business Operations, can be fully completed online with sufficient information and can be reached via main government portals. The top-performing countries in this area are Finland and Ireland, both scoring a perfect 100 points. Estonia, Malta, Luxembourg, Lithuania, and Spain all surpass the 90 point score mark. This demonstrates that services aimed at entrepreneurs are highly digitalised in these countries.

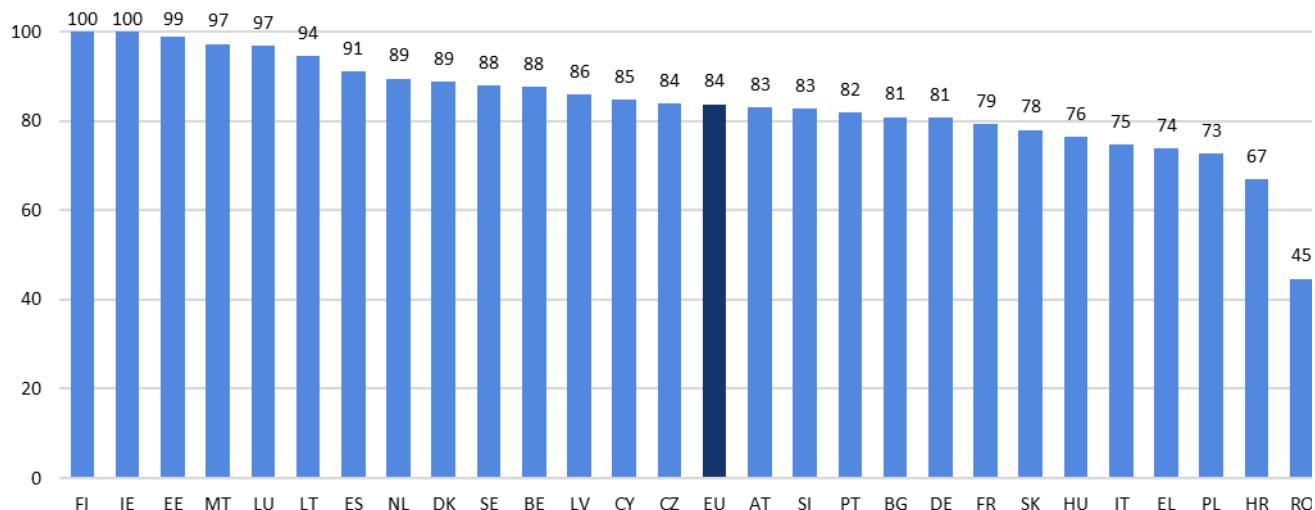


Figure 2.28 Scores per country for DESI indicator Digital Public Services for Businesses

Pre-Filled Forms (DESI indicator 4a4)

Figure 2.29 shows the scores for the DESI indicator Pre-Filled Forms. The average for the EU27 Member States is 68 points. With that nearly seven out of ten online forms that require personal information can be pre-filled with data already obtained by the government. The Netherlands, Lithuania and Finland are leading Europe with more than nine out of ten pre-filled online

forms. Ensuring citizens and businesses can make use of such pre-filled information ensures that users can complete forms faster, with less chances of errors.

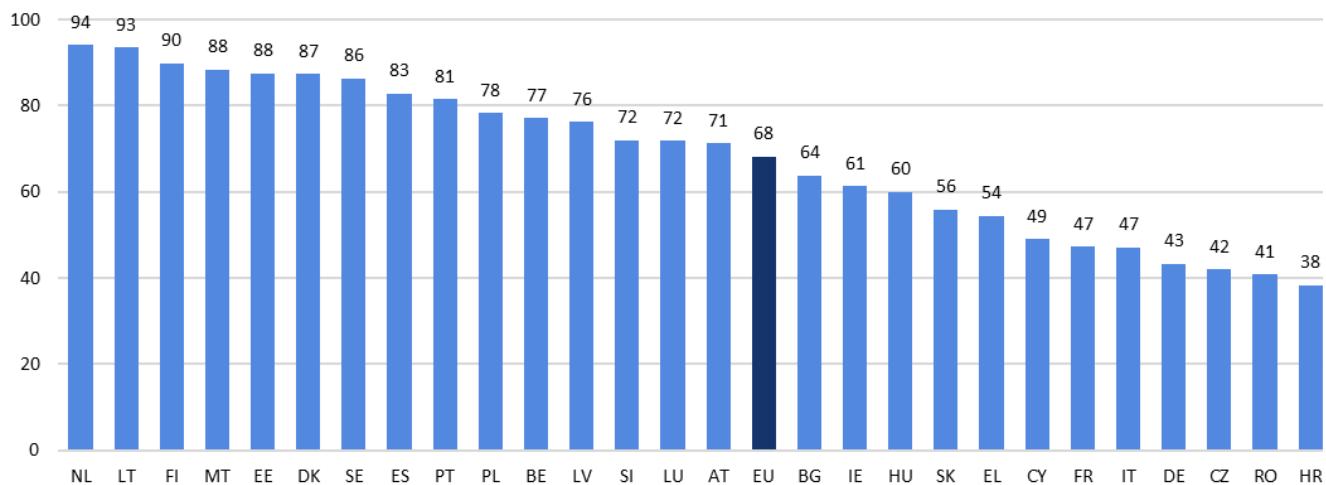


Figure 2.29 Scores per country for DESI indicator Pre-Filled Forms

Transparency of Service Delivery, Design, and Personal Data (DESI indicator 4a5)

Figure 2.30 shows the scores for the DESI indicator Transparency of Service Delivery, Design, and Personal Data. The EU27 average is 65 points, which shows that transparency is becoming an important part of providing services for governments, as transparency promotes efficiency, accountability, and trust in public sector organisations. Malta and Luxembourg are the leading countries when it comes to public transparency with a score above 90 points. More than 12 countries have a score higher than 70 points. Five countries score below 50 points, indicating that these countries can provide more transparency when delivering or designing services, and when using personal data of citizens.

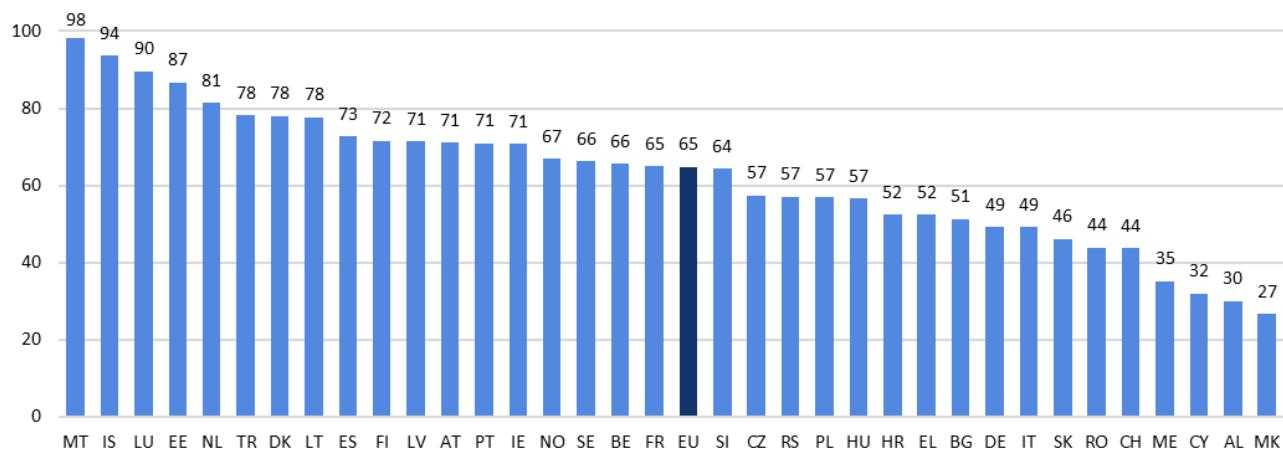


Figure 2.30 Scores per country for DESI indicator Transparency of Service Delivery, Design, and Personal Data

User Support (DESI indicator 4a6)

Figure 2.31 shows the scores for the DESI indicator User Support. The EU27 average is 84 points, highlighting that users are well supported when they encounter problems or have questions when they interact with government services. Seven countries score more than 90 points on this indicator with Malta (100 points), the Netherlands (99 points), and Estonia (98 points), and Luxembourg (98 points) leading the pack.

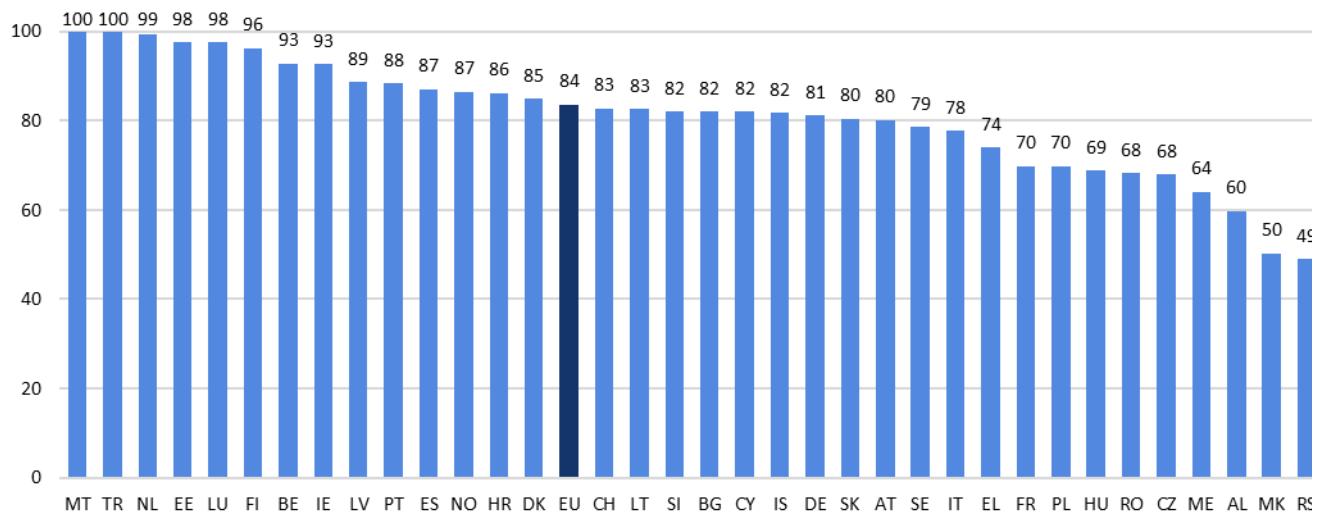


Figure 2.31 Scores per country for DESI indicator User Support

Mobile Friendliness (DESI indicator 4a7)

Figure 2.32 shows the scores for the DESI indicator Mobile Friendliness. This dimension shows the percentage of government websites that scale their resolution, and change dimensions to accommodate mobile users. The EU27 average is 84 points, which means that more than eight out of ten all websites examined within Europe are useable on mobile devices. Only three countries score below 70 points this year. Sweden, Finland, and Belgium score perfectly on this indicator as all their websites are functional on mobile devices.

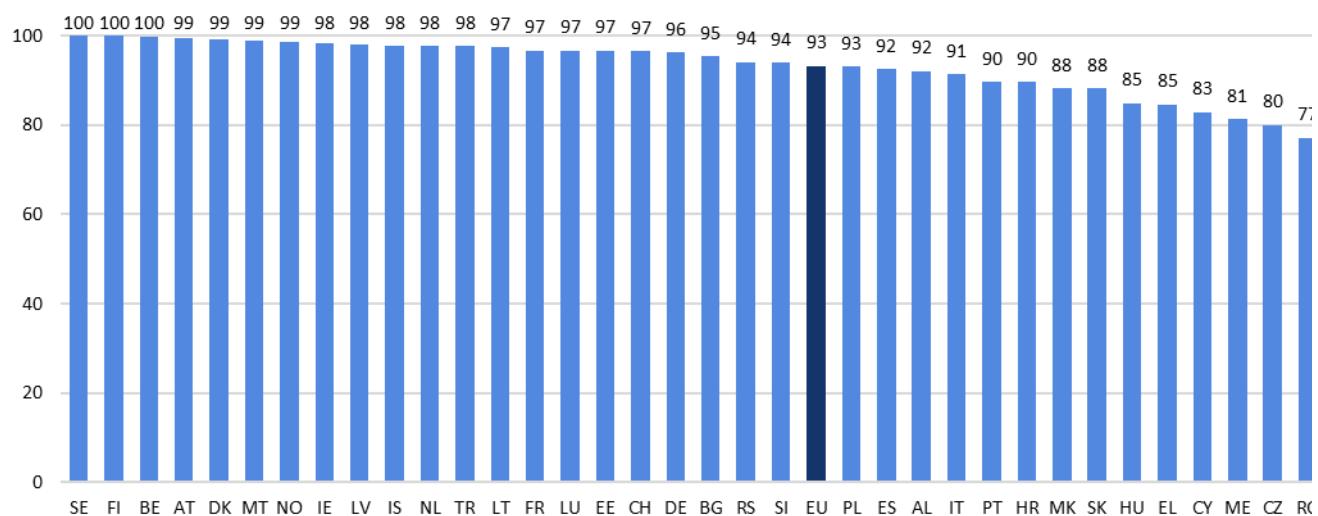


Figure 2.32 Scores per country for the DESI indicator Mobile Friendliness

3. Business Start-up

“In a competitive global market, companies must be supported to allow them to do business quickly and effectively, while reaping the benefits of the EU Internal Market.”

Didier Reynders, Commissioner for Justice



3 Business Start-up

Small and Medium-sized Enterprises (SMEs) play a pivotal role in the European economy. In total, SME's make up over half of the European economy (GDP), they employ around 100 million people, and they represent 99% of all European enterprises.⁹ SMEs drive innovation in many fields such as sustainability and digitalisation.

Given the importance of SMEs to the European economy, facilitating them in their business offers double benefits: business owners can optimise their enterprises and governments can reap the benefits of economic growth spurred by these enterprises. In this light, digital government for business owners is a key component of a thriving economy.

The eGovernment Benchmark evaluates two life events for businesses: *Business Start-up* and *Regular Business Operations*. The *Business Start-up* life event is collected in each even year since 2012, whereas the *Regular business operations* life event is collected in odd years starting from 2011. (Data are reported in the year after their collection). This report will discuss *Business Start-up*. A methodological update in 2020 meant that the services evaluated in the life events could not be compared with earlier reports. This year is the first time that life events can be compared against their earlier counterparts since the method changes.

Figure 3.1 shows the overall maturity of each country in the EU27+ for the *Business Start-up* life event and Figure 3.2 shows how each country scored in the years 2020 and 2022. In 2022, the EU27+ average for this life event is 82 points, an increase of almost 4 points. since 2020. This demonstrates that most European countries already facilitate aspiring business owners with services online. Greece and Türkiye matured significantly since previous measurement in 2020, increasing their scores 25 points each. The most mature European countries for this life event are Malta (98 points), Sweden (96 points), Estonia, (95 points), and Portugal (95 points). In total, eleven countries have scores higher than 90 points, exhibiting the online availability of services withing this life event.

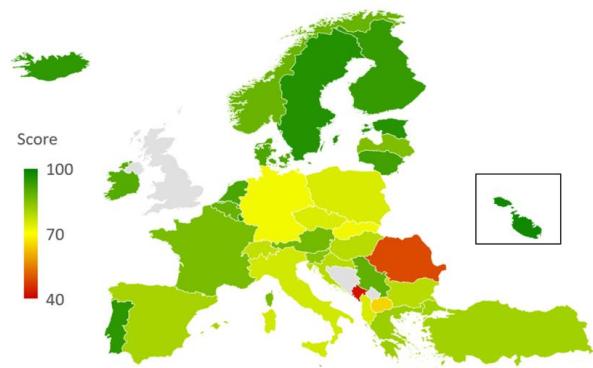


Figure 3.1 Overall maturity of the participating countries for the Business Start-up life event

Shortened Persona: **Business start-up**

Carl, 45 years, is starting his own restaurant. He has found information online to create a business plan and to help him prepare to set up his business. He made sure to obtain the necessary administrative requirements online.

Furthermore, Carl has found out that his business must comply with environmental regulation concerning handling of waste. Applying for this permit is easily possible through the website of the local community.

Carl's restaurant is going well, and he wants to hire new staff. Luckily, information and the necessary actions needed as regards taxes and employment services are available online.

After a successful first year, Carl wants to open a new restaurant in his favourite holiday destination. He does not encounter any barriers, such as language or authentication problems, in doing so.

⁹ https://ec.europa.eu/growth/smes_en

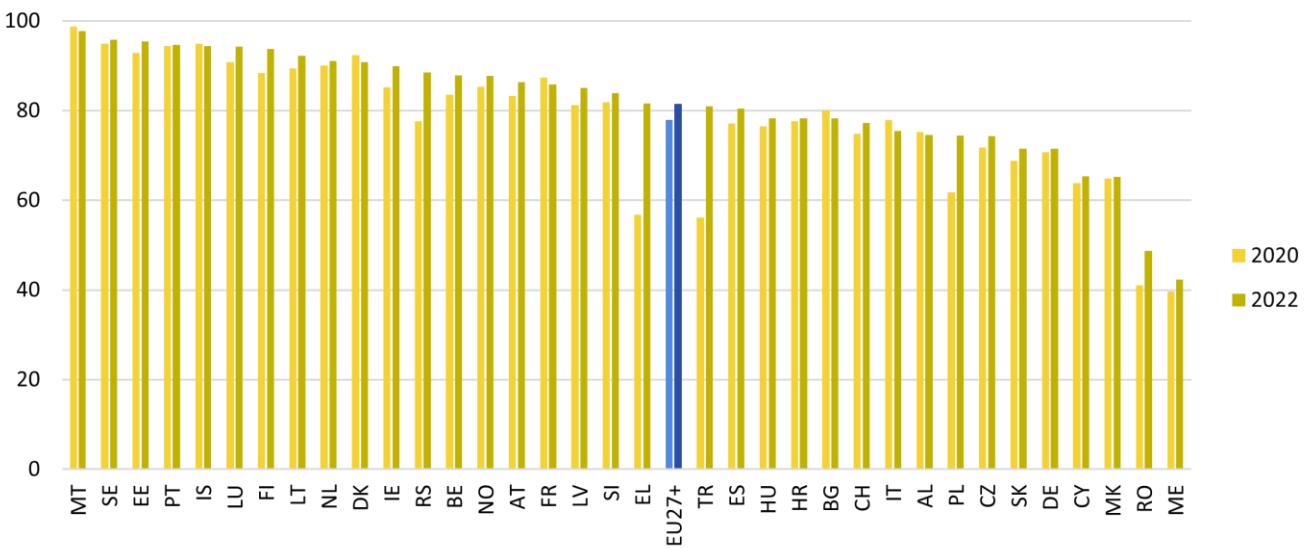


Figure 3.2 Scores for the life event Business Start-up, based on average of all four key dimensions

3.1 User centricity

The User Centricity key dimension focusses on the *Online Availability*, *Mobile Friendliness* and *User Support* of government services. User Centricity in service delivery enables citizens and businesses to get an optimal experience when dealing with public administrations. This section describes in detail the results for *Online Availability*, *Mobile Friendliness* and *User Support* for the *Business Start-up* life event.

Online Availability

The score of the indicator *Online Availability* is 96 points for this life event. This score is based on three questions: the availability of information about a service online, the possibility to complete the service online, and the possibility to find the website via a government portal.

Figure 3.3 shows the extent to which government services are available online, together with the corresponding mobile friendliness of the services in the *Business Start-up* life event. On average, Europeans can complete more than nine out of ten services for starting a business online (94%). For the services that are currently not online, business owners can at least find information online about how the services can be requested in person (5%). The number of services where European entrepreneurs could not complete the service nor find information online about the service is negligible. Less than half a percent (0,47%) of all services examined for this life event do not offer any information about the service online.

A perfect score has been achieved for the service *obtain VAT collector number*, which means that European entrepreneurs can always find information for this service on a relevant website and complete the service fully online.

In the *Business Start-up* life event, the lowest scoring service for online availability is obtaining a pollution or environmental permit. In about one out of five countries it is currently not possible to obtain a pollution or environmental permit online that would allow a business owner to handle waste.

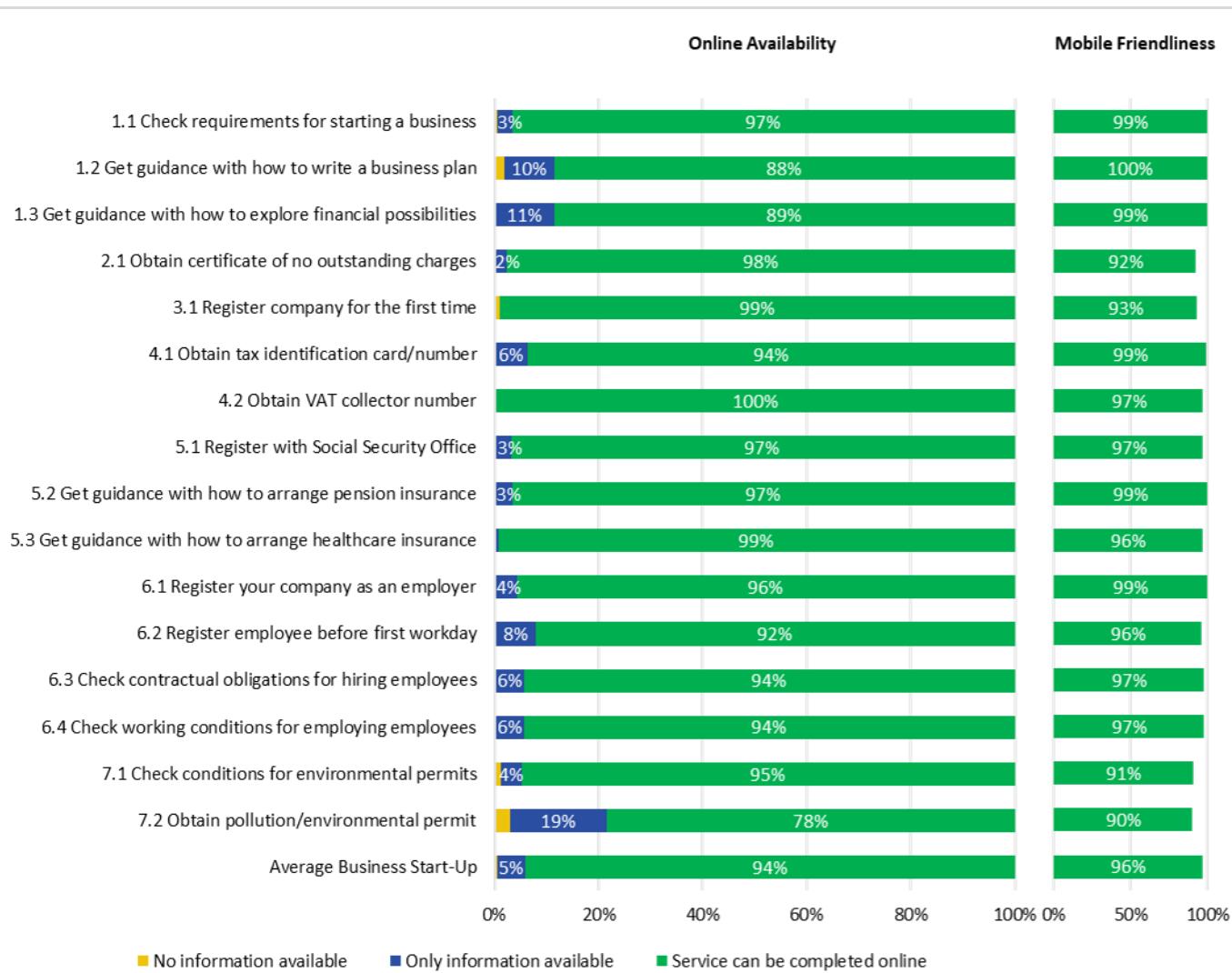


Figure 3.3 Online Availability and Mobile Friendliness per service for the Business Start-up life event

Mobile Friendliness

Almost all websites for entrepreneurs are optimised for use with smartphones, scoring an average of 96%, which means that 96% off the measured websites in this live event scale to accommodate users on mobile devices. All countries provide guidance on writing a business plan on a mobile-friendly website, making it easy for aspiring entrepreneurs to take their first steps on their mobile phone. As with online availability, this study finds that websites related to environmental topics are least mature for mobile friendliness.

User Support

The average score for the *User Support* indicator on portals evaluated for the *Business Start-up* life event is 95 points. Notable is that 100% of the portals in this life event offer some form of demonstration that explains how users can successfully complete the necessary steps to fulfil the service.

3.2 Transparency

Transparency comprises the indicators *Transparency of Service Delivery*, *Transparency of Service Design*, and *Transparency of Personal Data*. *Transparency of Service Delivery* measures whether public services provide clear, openly communicated information about how the service is delivered. *Transparency of Service Design* assesses whether users can participate in policy and service design. *Transparency of Personal Data* evaluates to what extent users are in control of their personal data.

Transparency of Service Delivery

Figure 3.4 show how often service websites provide users with features that make the service process more transparent and understandable. More than nine out of ten (92%) services in the Business Start-up life event send users a delivery notice upon completion of the service. Slightly more than three out of four (77%) service websites provide a progress tracker, which helps users know how many steps they still need to complete. Nearly as many services (74%) give the possibility to save written work as a draft to complete the service later.

On the other hand, the estimation of the duration of the processes is often not communicated. Information about the process duration is available on 64% of websites. In addition, information about actual service performance, such as a satisfaction score, is available on only slightly more than half (55%) of the websites.

Services	Delivery Notice	Progress tracker	Draft possibility	Estimation of process duration	Delivery timelines clear	Maximum time limit set	Information about service performance
2.1 Obtain certificate of no outstanding charges	97	63	67	66	90	81	35
3.1 Register company for the first time	97	82	72	58	85	77	50
4.1 Obtain tax identification card/number	97	94	91	83	92	89	80
4.2 Obtain VAT collector number	100	80	83	75	88	81	75
5.1 Register with Social Security Office	97	83	80	72	75	72	56
6.1 Register your company as an employer	93	79	72	59	78	69	59
6.2 Register employee before first workday	92	80	70	54	82	61	46
7.2 Obtain pollution/environmental permit	65	56	56	48	55	51	38
Average Business Start-Up	92	77	74	64	80	73	55
Highest score		Lowest score					

Figure 3.4 Averages scores for the transparent service delivery for services for the Business Start-Up life event

Transparency of Personal Data

The *Business Start-up* portals score 77 points for the *Transparency of Personal Data* indicator. This score is based on several questions that measures how well government institutions communicate how they use personal data. As an example of a specific survey question, entrepreneurs can modify their personal data online in nine out of ten countries (89%), demonstrating that governments enable entrepreneurs to be in control of their own data.

Transparency of Service Design

The *Transparency of Service Design* indicator for the *Business Start-up* life event scores 67 points, which shows that not all services allow users to participate in policy and service design. Entrepreneurs are often informed about the policymaking process (94% of measured websites) and the service design process (77%). However, information on how to actually participate in the policymaking process (51%) or the service design process (46%) is often lacking.

3.3 Key Enablers

The Key Enablers dimension comprises four sub-indicators: eID, eDocuments, Pre-filled Forms, and Digital Post. A national eID provides users with the possibility of secure authentication online and eDocuments help users send and receive verified files with the government. Pre-filled Forms measures whether users can enter their data once or must duplicate data entry

in multiple forms, and Digital Post evaluates whether it is possible to communicate with the responsible authorities solely through digital channels.

eID

Figure 3.5 shows the extent to which entrepreneurs can use their eID for services in the *Business start-up* life event. For nearly nine out of ten (87%) services business owners can use their national eID to request a service online. For a further 8% of the services, online authentication is possible, albeit not with an eID. For this case, think for instance about a municipality where a separate account needs to be registered, for example, with an email address. In only one out of every twenty (5%) services measured for this life event was no form of online authentication possible. In these rare cases, the user needs to go to a government office to authenticate themselves in person to access the service.

Within the life event *Business Start-up*, two services, registering a company for the first time and obtaining a tax identification number, allow their users to fully authenticate themselves online. Specifically, for eID use, these two services enable users to authenticate with eID in 94% and 90% of cases, respectively. Even though strong improvements are observed from previous years especially for enabling online authentication in general, there are still services within this life event where eID uptake can be further enhanced. For instance, the service *Obtain certificate of no outstanding taxes* offers online authentication in 92% of countries, but eID authentication is not possible in 16% of these countries. General online authentications are often less secure than using a national eID system. Business owners needed to visit the city council most often to obtain an environmental permit, since in 16% of cases only physical authentication is possible to complete the service.

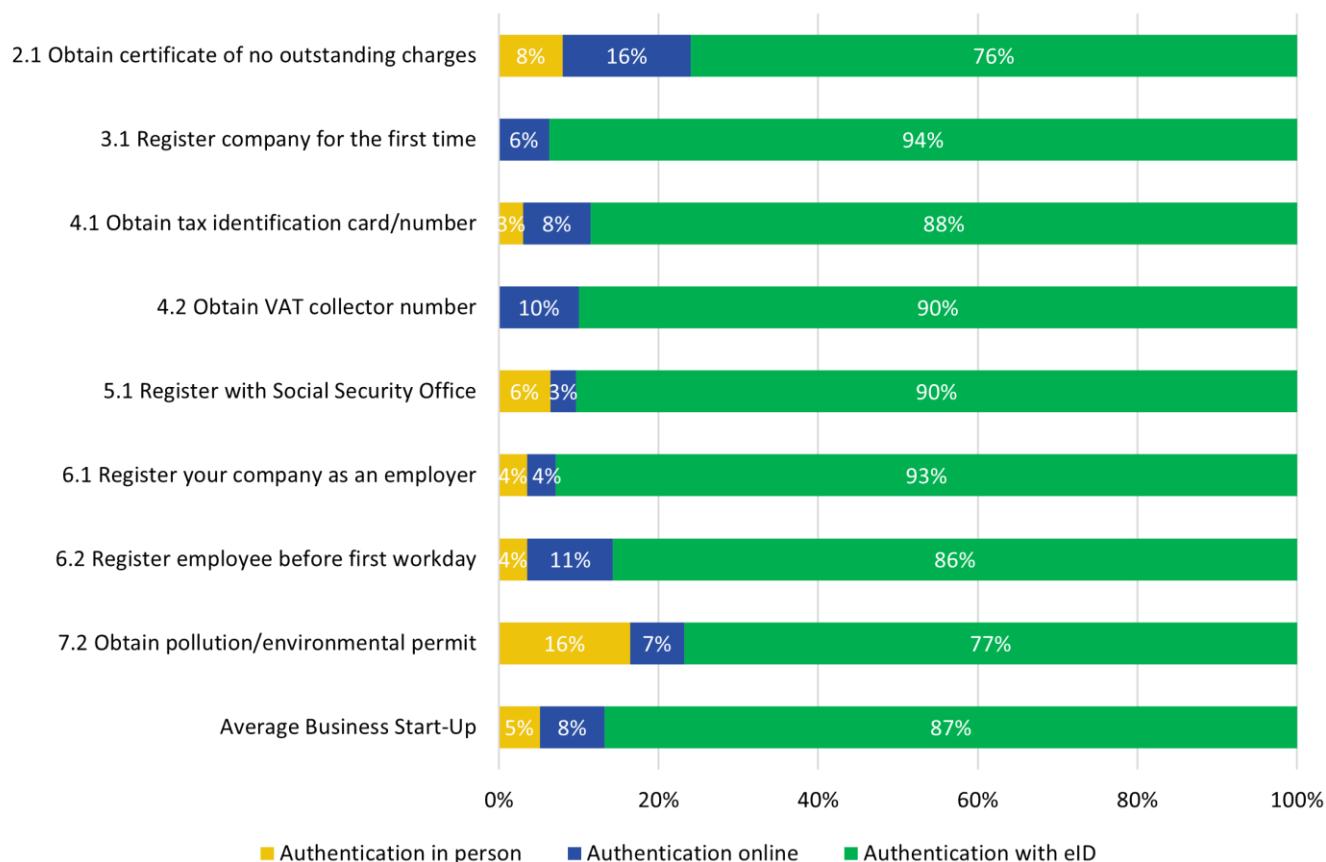


Figure 3.5 Authentication possibilities for services in the Business start-up life event if authentication is required

eDocuments & Pre-filled Forms

Figure 3.6 shows the score per service for the indicators *eDocuments* and *Pre-filled Forms*. For 93% of the *Business Start-up* services, users can submit or download eDocuments that are required for the service. Four out of five services help entrepreneurs by prefiling personal information when they must fill in forms, saving business owners time and reducing errors.

Submitting and downloading eDocuments is especially easy for business owners when they need to obtain a tax identification number (97%) or when an entrepreneur wants to register their company for the first time (99%). Less amenable to eDocument use is obtaining an environmental permit. An eDocument option is available in three out of four countries, meaning that entrepreneurs in a quarter of European countries still need to deviate to non-digital means to complete this service. This supports other findings that services related to environmental permits still often require physical authentication.

Business-owners enjoy that personal information is prefilled in 91% of European countries, when obtaining a tax identification number. However, in several countries in Europe entrepreneurs must still provide all information themselves when filling out digital forms. This is especially true for registering a new employee, where business users are required to provide all the information themselves in 73% of cases.

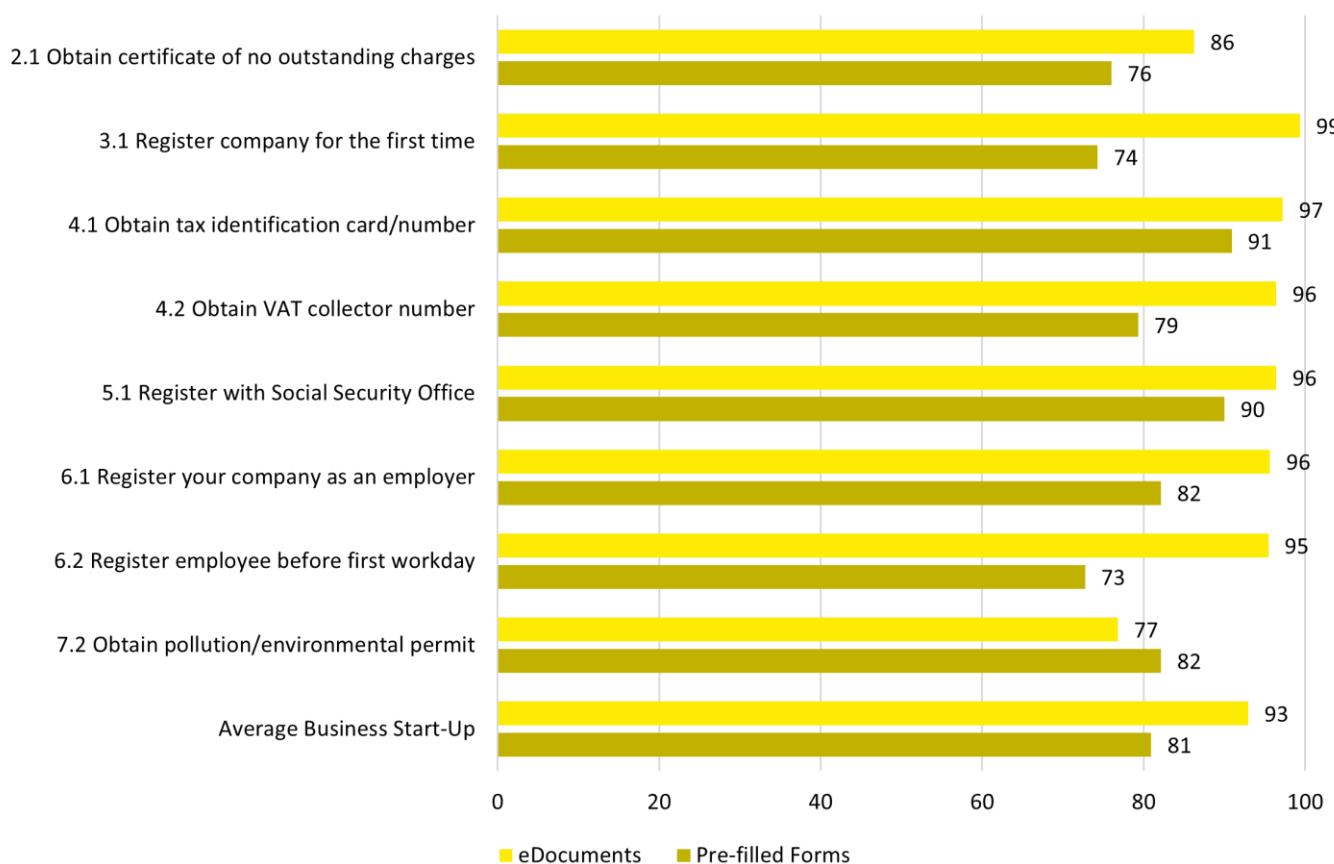


Figure 3.6 eDocument and Pre-filled Forms per service for the Business Start-up life event

Digital Post

Entrepreneurs can use their digital mailbox to safely communicate with their governments for nearly all services measured in this life event. 98% of all portals employ such a tool. A digital mailbox offers clear benefits when discussing private matters, for example tax declarations, such as improved safety features and less room for human error.

3.4 Cross-border Services

Cross-Border services evaluates how easy it is for non-national users to access and use online services provided by public authorities in another European country. It is comprised of four indicators: *Online Availability* of cross-border services, *User Support* on cross-border portals, *Cross-border eID*, and *Cross-border eDocuments*. These indicators measure if services are available online, if there is sufficient *User Support*, and if key enablers like *eID* and *eDocuments* work for people living or coming from abroad.

Cross-border online availability

The score for the indicator *Cross-border online availability* for the *Business Start-up* life event stands at 62. This metric is derived by combining the availability of information about a service online for cross-border users and the possibility to complete the service online. Figure 3.7 shows for each service how often information is available online to cross-border users and how often services can be completed online.

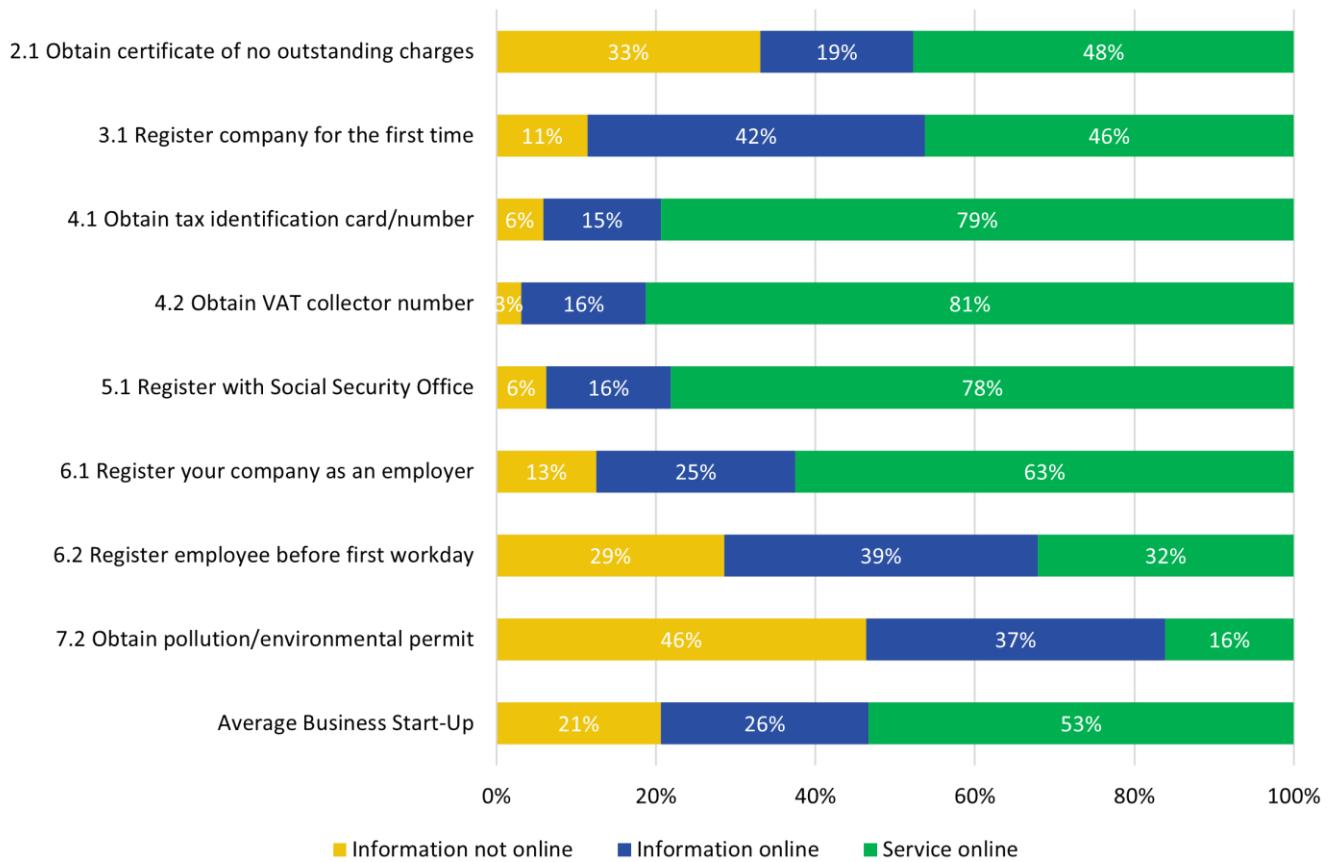


Figure 3.7 Services online for cross-border users in the Business Start-up life event

Cross-border users can complete slightly more than half of the investigated services (53%) online. For another quarter (26%) of the services, non-national entrepreneurs can find information about a service online but are unable to finalise the service fully online. In more than one in five countries (21%) a service within this life event cannot be completed online, nor is any information about the service provided in English or a language other than the official language of the country. A lack of information in English and the relevant services only being available to users who can authenticate with a national eID are named frequently as barriers for cross-border service completion.

Services with greater cross-border online availability include obtaining a tax identification number, obtaining a VAT collection number, and registering with the Social Security Office, which can all be completed online by cross-border users in more than two third of countries. On the other hand, entrepreneurs that need to register an employee in another country can do so online

in only one in three countries. The environmental permit services are also often not online. For these services, a physical visit is still required.

Cross-border User Support

User support for non-national users is very high for entrepreneurs. The score for the *Cross-border User Support* indicator is 88 points. Moreover, all countries have a help functionality available for citizens from other countries to help them overcome potential issues with the web portal when setting up a business.

Cross-border eID and eDocuments

Figure 3.8 shows how often entrepreneurs can use an eID for *Business Start-up* services, both from a national¹⁰ as well as a cross-border perspective. On average, services offer authentication with national eID more than twice as often as they do for cross-border eID.



Authentication with eID per service		
	National	Cross-border
2.1 Obtain certificate of no outstanding charges	76%	34%
3.1 Register company for the first time	94%	30%
4.1 Obtain tax identification card/number	88%	77%
4.2 Obtain VAT collector number	90%	59%
5.1 Register with Social Security Office	90%	57%
6.1 Register your company as an employer	93%	42%
6.2 Register employee before first workday	86%	18%
7.2 Obtain pollution/environmental permit	77%	19%
Average Business Start-Up	87%	42%

Figure 3.8 Comparison eID for Business Start-up services, national and cross- border

The use of cross-border eIDs is still significantly underrepresented compared to national counterparts for the services *Register employee before first workday* and *Obtain pollution/environmental permit*. Both these services score below 20% for cross-border eID usage. The only service that gives cross-border users adequate opportunity to use their cross-border identification is the service *Obtain tax identification card/number*, with a score of 77%.

Figure 3.9 illustrates the extent to which users can submit or download eDocuments from both a cross-border and a national perspective. The differences between national and cross-border possibilities for eDocuments is substantially smaller than for *Cross-border eID* and *Cross-border Online Availability*; however, a noticeable difference can still be observed. eDocuments could be downloaded or submitted for 93% of national services, whereas the same applied for only 63% of cross-border services.

One of the first steps for starting a business in another country is to *Register your company for the first time*, from which submitting documents digitally would facilitate entrepreneurs to get started. Yet only half (52%) of European countries allow aspiring business-owners to download or submit eDocuments from abroad. This result is extraordinary given that the option to submit documents digitally is available in nearly all countries (99%) for national users. Cross-border users that want to *Register an employee before their first workday* are even less likely to be able to download or submit the required documents electronically: entrepreneurs could find for this service an option to use eDocuments in just 52% of countries. The service to *Obtain pollution/environmental permit* is also low for cross-border users with a score of just 55%.

¹⁰ For national eID the score to question “F3: if it is possible to authenticate online, can you use your eID?” was taken instead of the score of the indicator, to ensure a valid comparison. The indicator score for national eID is a composite indicator of online authentication, eID and Single Sign On (SSO). For cross-border eID we used question I2: “If an authentication is needed for a cross-border service, is it possible to authenticate online using your national eID?”.

Opportunity to submit or download eDocuments, per service		
2.1 Obtain certificate of no outstanding charges	86%	63%
3.1 Register company for the first time	99%	52%
4.1 Obtain tax identification card/number	97%	93%
4.2 Obtain VAT collector number	96%	81%
5.1 Register with Social Security Office	96%	79%
6.1 Register your company as an employer	96%	72%
6.2 Register employee before first workday	95%	47%
7.2 Obtain pollution/environmental permit	77%	55%
Average Business Start-Up	93%	68%

Figure 3.9 Comparison eDocuments for Business Start-up services, national and cross-border

Czech Republic | On-line Creation of Companies

Relevant Key Dimension(s)

User Centricity, Cross-Border Services

Life event

Business Start-Up, Career

1. Good practice description

The system run by the Notarial Chamber of the Czech Republic allows the citizen to establish a company fully on-line and in real-time. The core of the solution is the on-line interaction between the client and the notary based on a secured videoconference interconnection. At the same time, the notary provides the client with legal advice. Based on the clients' needs, the notary draws up the articles of association in the form of an electronic notarial deed, which bears the electronic signatures of the client and the notary. The final step is the registration of the company with the Business Register carried out directly by the notary.

2. Benefits

- The highest security levels: on-line authentication of the client using eID/banking identification tool combined with videoconference connection. One more element strengthening the reliability of the authentication: the notary is able to read out the citizen's photograph from the Citizens Register and compare it thanks to the videoconference connection.
- Since its launch on 1st September 2021, the system has been used more than 1,200 times.

3. Key success factors

- Scope of usage is not limited to the establishment of companies, it enables the clients also to perform amendments to the structure of the company, e.g. appointment of a director, or to certify an electronic signature.
- The notary can provide the client on-line with a qualified electronic signature, which can be used also for other purposes.

4. More information

More information can be found at:

<https://www.nkcr.cz/sro-online-informace>

<https://obcan.portal.gov.cz/prihaseni> (upon logging in to the Citizen's Portal)

4. Career

“Finding a quality job means financial independence and it puts people on the path for better social integration”

Nicolas Schmit, Commissioner for Jobs, and Social Rights

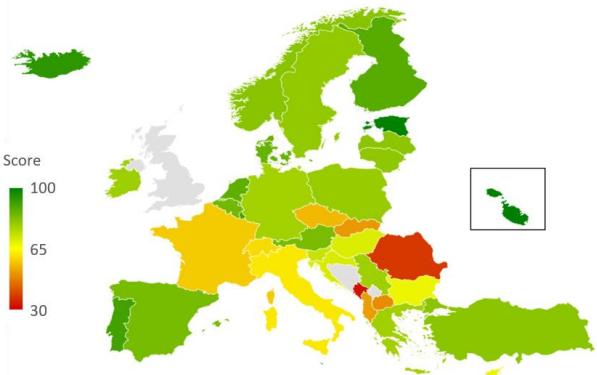


4 Career

What it means to have a career is constantly changing. While it used to be commonplace to work for a single employer for many years or even decades, it is now becoming more and more ordinary to find a new job every so often. Finding a new job is not always easy. This life event assesses the extent to which citizens are facilitated by their governments throughout the journey of becoming unemployed, applying for unemployment benefits, and finding a new job.

The *Career* life event was first measured in 2012 and reported in 2013. Since 2020 it is evaluating services from a cross-border perspective, which examines whether the services are as easy to complete if a user does not speak the native language of the country in which they need to access a service or does not have a national eID.

Figure 4.1 shows the overall maturity of each country in the EU27+ for the *Career* life event, which is an aggregate of four underlying key dimensions, and Figure 4.2 shows how each country scored in the years 2020 and 2022. The average maturity of the EU27+ countries for this life event is 74 points, which is an increase of 7 points compared to the previous benchmark of 2020. This score positions *Career* as the second highest scoring life event assessed this year, being more mature than *Family* and *Studying*. Two countries scored perfectly for this life event in the latest data collection. Both Estonia and Malta have career-related eGovernment services that score 100 points. Other countries that are performing well in this domain are Iceland (94 points), Portugal (91 points), and Luxembourg (90 points). In these three countries, unemployed citizens can complete most of their interactions with the government for career-related services online.



Shortened Persona: *Career*

Marc, 29 years, recently lost his job. He registers himself as unemployed and applies for unemployment benefits. He wonders how much benefits he is entitled to and for how long, and searches for this information online in his personalised file.

He finds out there are several possibilities to get help and support from the government for his regular costs on housing and he also applies to receive additional benefits to cover other expenses.

Marc obtains information about the labour market and information on recruitment fairs. To increase his chances of a successful job application, he seeks assistance from a public officer.

As Marc lives close to the border, he is also looking for work across the border, where he tries to obtain similar services as in his home country.

At the same time, Marc's mom reaches the entitled age for receiving her pension. After being in contact with the government himself, Marc decided to help her apply for her pension.

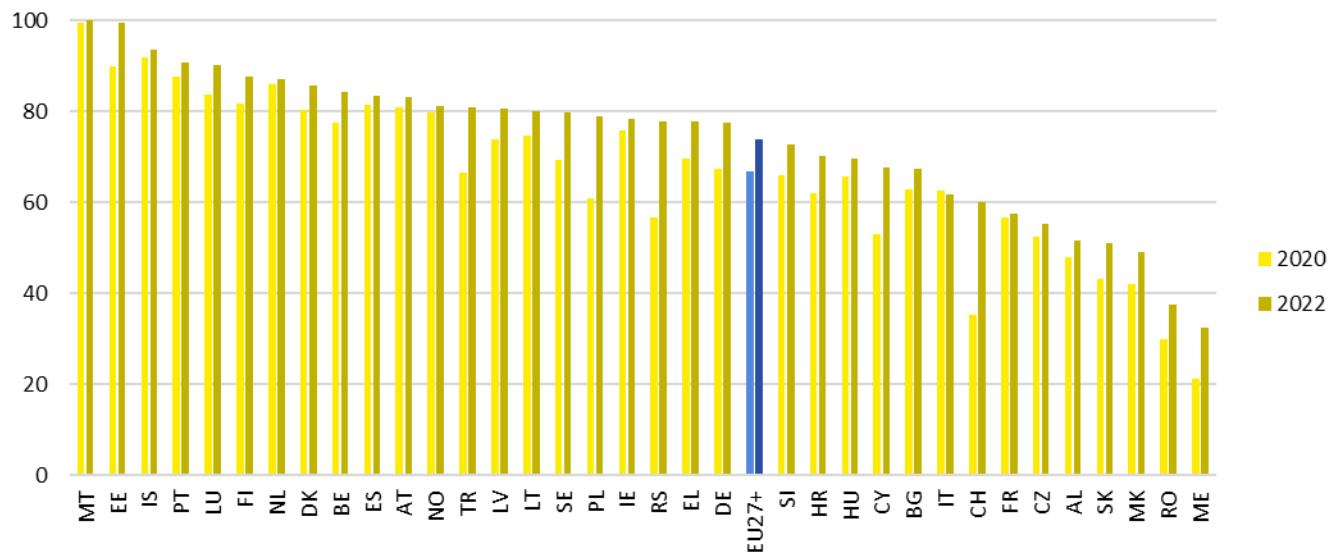


Figure 4.2 Country averages of all key dimensions for the Career life event

4.1 User Centricity

The User Centricity key dimension comprises of the *Online Availability*, *Mobile Friendliness*, and *User Support* indicators. User-centric services enable citizens and businesses to get an optimal experience when dealing with public administrations. This section describes in detail the results for *Online Availability*, *Mobile Friendliness* and *User Support* for the *Career* life event.

Online Availability

The score of the indicator *Online Availability* for the Career life event is 90 points. This score is based on three questions: the availability of information about a service online, the possibility to complete the service online, and the possibility to find the website via a government portal.

Figure 4.3 shows the extent to which services in the Career life event are available online for national citizens and whether the websites are optimised for use on a mobile phone. For the services that cannot be completed online, governments often do at least provide information online on how to complete the service (15%). In 2% of the examined career-related services, there was not even information online available on how to complete the service.

Declaring personal income taxes can be completed online in 97% of European countries, which is one of the services that is most digitalised across Europe. In addition, when Europeans are nearing their retirement, they are facilitated well online by their governments. In 95% of the examined services, citizens can find the estimate the value of their future pensions. Moreover, in over eight out of ten (84%) European countries, citizens can apply for their pension online.

Unemployed Europeans often encounter digital barriers when they need to fulfil certain tasks to keep their unemployment benefits, but digital maturity within this dimension can be observed. For example, in most European countries, unemployed citizens need to submit evidence that they are looking for work regularly. Two years ago, this was possible online in half of the countries (52%), whereas this year it is not possible in four out of five countries (79%).

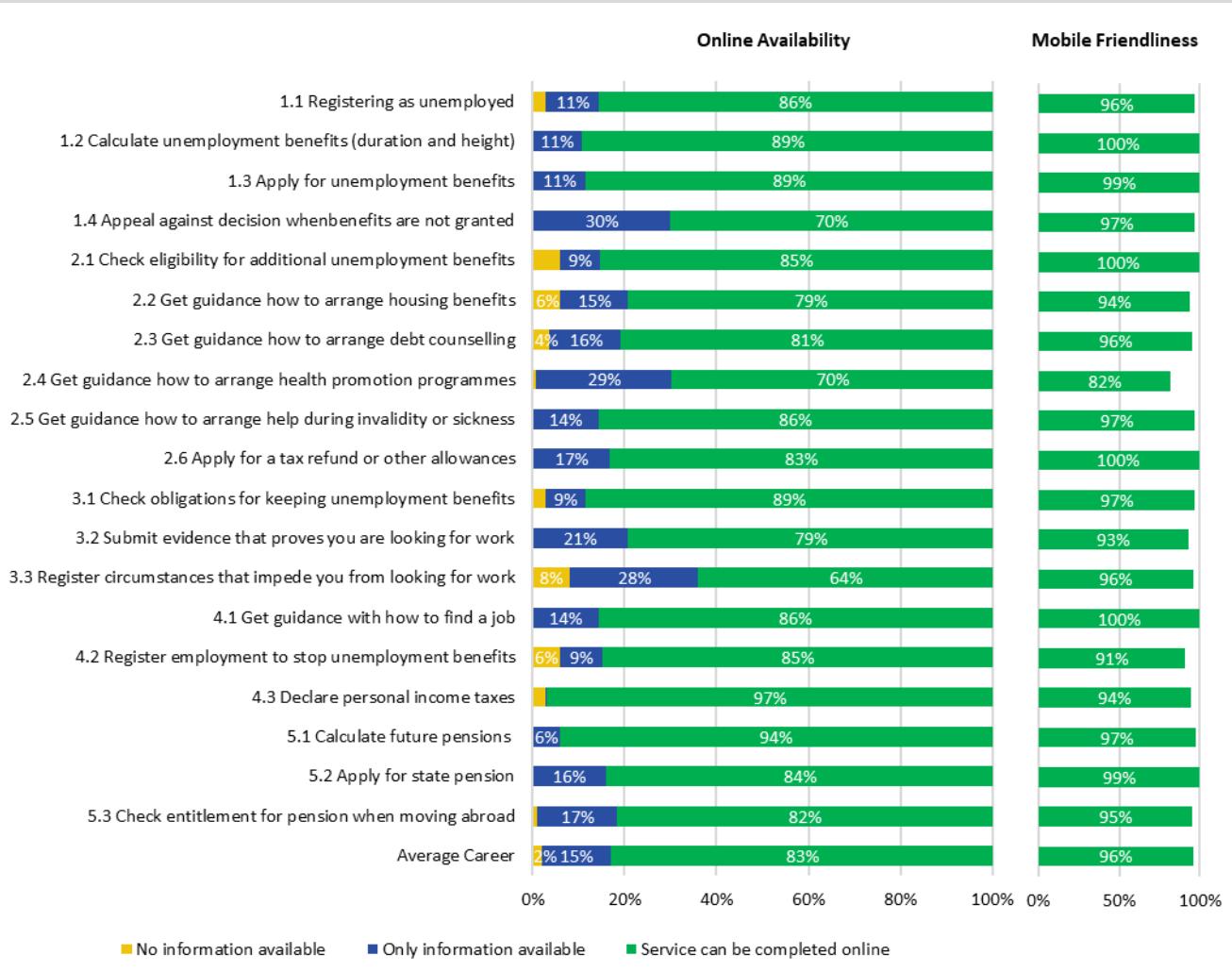


Figure 4.3 Online availability and mobile friendliness of services in the Career life event

When unemployed citizens are not able to look for work, for example, due to illness, then they need to register why they did not look for work. This service is still quite often offline as in only 68% of the countries is a citizen able to submit this evidence online. This point shows that unemployed citizens could be facilitated better in their digital interaction with the government to keep their unemployment benefits.

Mobile Friendliness

Figure 4.3 also shows the *Mobile Friendliness* of all services in the *Career* life event. On average nearly all (96%) of the services within this life event can be considered mobile friendly. Four services even got a perfect score for mobile friendliness: *Calculate unemployment benefits*, *Check eligibility for additional unemployment benefits*, *apply for a tax refund*, and *get guidance for how to find a job* all scored perfectly on this dimension. Which shows that people in need for financial aid, can often take the first steps on their mobile phone. Similarly, people who need help in finding a new job are also well facilitated on their mobile phone.

User Support

The average score for *User Support* on portals evaluated for the *Career* life event is 95 points. Notable is that 100% of examined portals have a Frequently Asked Questions (FAQs) section to help people quickly find answers to questions they might have related to these services.

4.2 Transparency

Transparency comprises the indicators *Transparency of Service Delivery*, *Transparency of Service Design*, and *Transparency of Personal Data*. *Transparency of Service Delivery* measures whether public services provide clear, openly communicated information about how the service is delivered. *Transparency of Service Design* assesses whether users can participate in policy and service design. *Transparency of Personal Data* evaluates to what extent users are in control of their personal data.

Transparency of Service Delivery

Figure 4.4 shows how often service websites in the *Career* domain provide users features that make the service process more transparent and understandable. In almost than nine out of ten (88%) of measured services, users obtain a delivery notice upon successful completion of the service, assuring them that their request was completed properly. However, many of the other features that make a service process transparent are often lacking. For instance, less than half of the services (46%) make it clear how long the entire process might take. Furthermore, only slightly more than one third (34%) of the services show any information about overall service performance.

Two services have relatively transparent service delivery across Europe in terms of transparent services delivery within this life event. 91% of countries provide citizens, that are doing their personal income taxes, a progress tracker to show how many steps they still need to take to complete the service. Additionally, in 81% of cases, people applying for a pension can save their work so that they can complete the service later. Furthermore, *Registering as unemployed* is also a relatively transparent service: the delivery timelines are made clear in 70% of measured services and 60% of services provide an estimation on the duration of the service request. Although these numbers still leave room for improvement, they are substantially higher than the average score of this life event.

Citizens enjoy less transparent service delivery when appealing against a government decision to not grant unemployment benefits. For this service, citizens often do not have a progress tracker to find where they are in the process (44%) and are not able to save their work as a draft (46%). For citizens that need to register circumstances that impede them from looking for work, only 44% of European countries provide an estimation of the duration of this process. This highlights a real possibility to improve transparency features for many career-related services.

Services	Delivery Notice	Progress tracker	Draft possibility	Estimation of process duration	Delivery timelines clear	Maximum time limit set	Information about service performance
1.1 Registering as unemployed	95	82	70	60	70	62	36
1.3 Apply for unemployment benefits	90	75	77	54	74	66	29
1.4 Appeal against decision when benefits are not granted	71	44	46	40	57	53	33
2.6 Apply for a tax refund or other allowances	86	71	67	54	67	63	58
3.2 Submit evidence that proves you are looking for work	90	57	57	41	59	38	21
3.3 Register circumstances that impede you from looking for work	83	44	47	24	40	40	12
4.2 Register employment to stop unemployment benefits	96	70	62	48	61	52	33
4.3 Declare personal income taxes	97	91	88	44	68	74	50
5.2 Apply for state pension	86	75	81	46	60	60	31
Average Career	88	68	66	46	62	56	34
Highest score							
Lowest score							

Figure 4.4 European averages for features for transparent service delivery for services in the Career life event

Transparency of Personal Data

The *Career* life event obtains the highest score of the four life events assessed this year for the *Transparency of Personal Data* indicator with 79 points. This indicator shows to what extent users can access, modify, and monitor their personal data via the most relevant government web portals. Portals for the *Career* life event often have a complaint procedure available for users that are concerned that their personal data is used in an inappropriate way (94%).

Transparency of Service Design

Portals for the *Career* life event are relatively transparent about how users can participate in policy and service design processes and obtain a score of 69 points for the *Transparency of Service Design* indicator. A stark difference arises between providing information about policymaking and service design and enabling citizens to participate in policymaking and service design. As information is often given about how policy and design are created, but users are often informed how they can participate in the creation of policy or design of a service themselves.

4.3 Key Enablers

The Key Enablers dimension comprises four sub-indicators: *eID*, *eDocuments*, *Pre-filled Forms* and *Digital Post*. A national *eID* provides users with the possibility of secure authentication online and *eDocuments* help users send and receive verified files with the government. *Pre-filled Forms* measures whether users can enter their data once or must duplicate data entry in multiple forms, and *Digital Post* evaluates whether it is possible to communicate with the responsible authorities solely through digital channels.

eID

Figure 4.5 shows the authentication possibilities for services in the *Career* life event. For almost one out of six services in the *Career* domain, users still need to authenticate offline (15%), meaning that they must bring their identification documents to a government building. In contrast, citizens can use their *eID* to authenticate online for 75% of services. Some services are more enabled for *eID* use than others. In 91% of countries, citizens can use their *eID* when declaring personal income taxes. Users can also often use their *eID* to authenticate themselves for ending unemployment benefits (82%).

For other *Career* services, online authentication is not yet the norm in Europe. For example, when appealing against a decision when unemployment benefits were not granted or when registering circumstances that impede citizens from looking for work, users still need show their passport in person in a third of European countries.

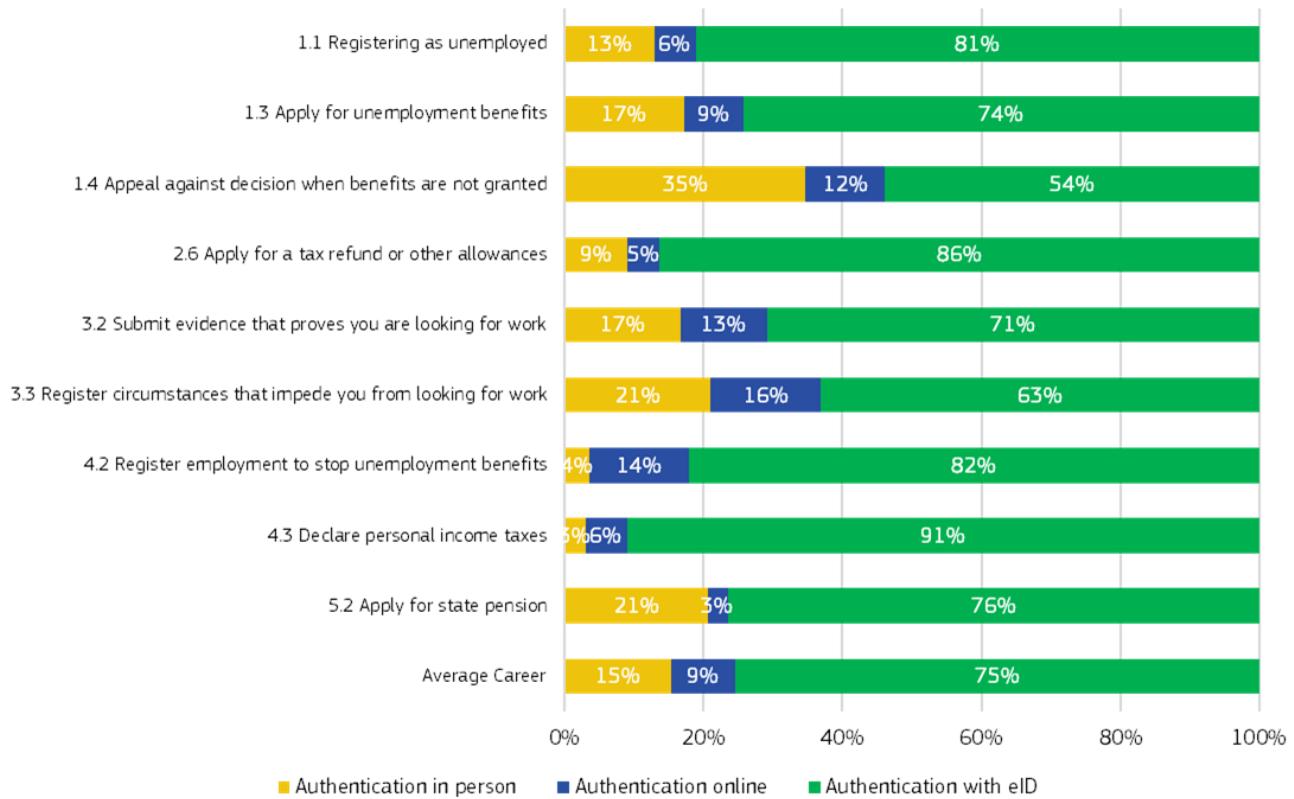


Figure 4.5 Authentication possibilities for services in the Career life event if authentication is required

Documents & Pre-filled Forms

Figure 4.6 shows the extent to which services in the *Career* life event offer the possibility to submit or download eDocuments that are required and how often personal information for users is prefilled on forms.

Citizens could, on average, submit or obtain eDocuments for more than seven out of ten (74%) services in this life event, where such documentation is required. For the services where eDocuments could not be uploaded or downloaded, users need instead to send or receive a physical copy of the form to government departments in the relevant countries. Users could submit or download eDocuments in all countries when doing their personal income taxes. Other services that facilitated the usage of eDocuments are *Registering as unemployed* and *Apply for a tax refund or other allowances affected by unemployment*, both with 81% eDocuments use.

However, for many other services, the use of eDocuments could be made more widespread. Services that enable citizens to retain their unemployment benefits especially often do not provide users with a method of submitting or downloading important documents online, such as *Submit evidence that you are looking for work* (63%) and *Register circumstances that impede you from looking for work* (50%).

In terms of prefilling information, 73% of services in the *Career* domain have personal information prefilled via Pre-filled Forms. Especially for services that require large amounts of personal information to be captured, prefilling of information is a worthwhile exercise. An example of such a service is *Declare personal income taxes*. In 97% of countries at least some of the personal information is prefilled when obtaining this service. Citizens who recently found a new job are also well supported in this regard: in 83% of countries information was prefilled for citizens when they registered employment to stop their unemployment benefits.

Some services are less well supported by Pre-filled Forms. When appealing against a decision about unemployment benefits, users must enter all their personal information themselves 37% of the time. Citizens that want to apply for their pensions also often need to find all their information themselves. In 30% of countries no information is prefilled when applying for a

state pension. It seems that information sharing between government bodies responsible for working citizen and government bodies responsible for elderly citizens can be improved to enable reuse of personal information.

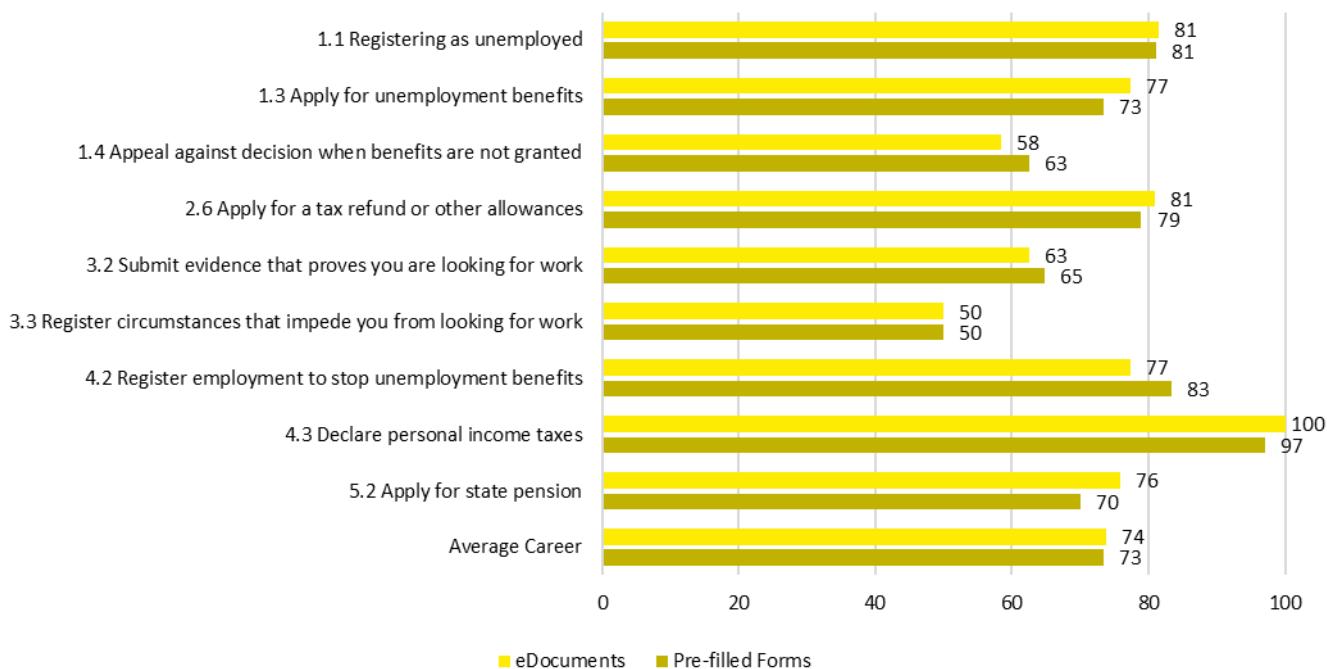


Figure 4.6 Average indicator scores for eDocuments and Pre-filled Forms per Career service

Digital Post

For 97% of countries under evaluation, users can choose to receive digitally all their communications with the government related to services in the *Career* life event.

4.4 Cross-border Services

Cross-border Services evaluates how easy it is for non-national users to access and use online services provided by public authorities in another European country. It is comprised of four indicators: *Cross-border Online Availability*, *Cross-border User Support*, *Cross-border eID*, and *Cross-border eDocuments*. These indicators measure if services are available online, if there are sufficient help functionalities, and if key enablers like eID and eDocuments work for people living or coming from abroad.

Cross-border Online Availability

The score for the indicator *Cross-border online availability* for the *Career* life event stands at 54. This metric is derived by combining the availability of information about a service online for cross-border users and the possibility to complete the service online. Figure 4.7 shows for each service how often information is available online to cross-border users and how often services can be completed online.

Often, non-national citizens need to visit the city council or municipality office when becoming unemployed in a foreign country, since these could be completed online in less than one out of four countries (22%). On average, 64% of all services within this life event could not be completed online. Of these services, 27% do not even have information about the service online for cross-border users.

In less than four out of ten countries, cross-border users can complete their income tax declaration online (38%). However, after calculating the value and duration of unemployment benefits, non-national citizens can rarely apply for the unemployment benefits online, which is currently possible in only 29% of countries.

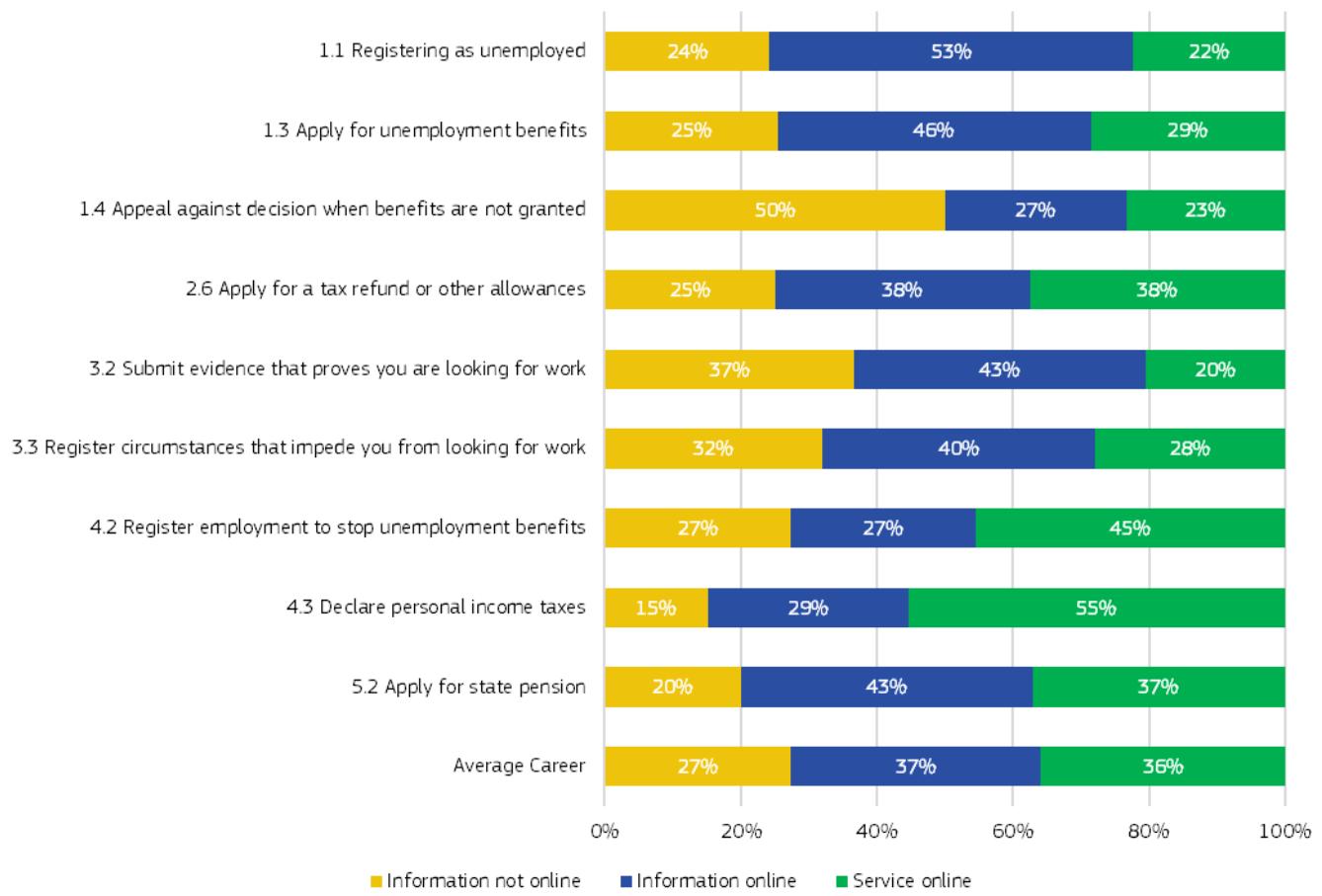


Figure 4.7 Cross-border online availability of Career services

Cross-border User Support

User Support functionalities for cross-border users are not yet on the same level as for national portals. Unemployed people that do not have the national identity of the country from which they are requesting a service and do not speak the national language often encounter issues online. The average score for the *Cross-border User Support* indicator for the *Career* life event is 74 points.

Cross-border eID and eDocuments

The use of non-national eIDs is still relatively uncommon for *Career* related services as summarised in Figure 4.8. Online authentication with eID for cross-border users was available for 31% of the services, compared to 75% for national users.

Cross-border eID functionality is most prevalent for *Apply for a tax refund*, being available in half of all measured countries. This might suggest a tendency for services that involve the tax authorities to have advanced eGovernment functionalities. For citizens that just lost their job and want to register as unemployed, less than one out of ten countries made the use of cross-border eID possible. 21% of countries enabled citizens to use a cross-border eID when applying for unemployment benefits. When a person cannot look for work due to an impediment, cross-border users could use a form of eID in only 18% of all measured cases.

Authentication with eID per service

<i>1.1 Registering as unemployed</i>	81%	20%
<i>1.3 Apply for unemployment benefits</i>	74%	21%
<i>1.4 Appeal against decision when unemployment benefits are not granted</i>	54%	25%
<i>2.6 Apply for a tax refund or other allowances affected by unemployment</i>	86%	50%
<i>3.2 Submit evidence that proves you are looking for work</i>	71%	22%
<i>3.3 Register circumstances that impede you from looking for work</i>	63%	18%
<i>4.2 Register employment to stop unemployment benefits</i>	82%	46%
<i>4.3 Declare personal income taxes</i>	91%	38%
<i>5.2 Apply for state pension</i>	76%	38%
<i>Average Career</i>	75%	31%

Figure 4.8 Comparison eID for Career services, national and cross-border

Figure 4.9 presents how often cross-border users could download or submit eDocuments. Little more than half of the services offered a functionality for cross-border users where eDocuments could be submitted or downloaded when required. For national users, this functionality exists for 74% of services in the *Career* domain.

National citizens could always submit or download eDocuments when declaring their income taxes (100%), whereas only 73% of the countries allow cross-border eDocuments. This makes this service substantially easier to finalise for national users compared to cross-border users. Currently, more than half (56%) of countries allow cross-border users to submit eDocuments when appealing against a decision about unemployment benefits, which is more than double compared to the previous data collection two years ago. Improvement for cross-border users can especially still be achieved in the services registering as unemployed (39%) and submitting evidence that proves that you are looking for work (36%), as these services score lowest on this metric for this life event.

Opportunity to submit or download eDocuments, per service

<i>1.1 Registering as unemployed</i>	81%	39%
<i>1.3 Apply for unemployment benefits</i>	77%	50%
<i>1.4 Appeal against decision when unemployment benefits are not granted</i>	58%	56%
<i>2.6 Apply for a tax refund or other allowances affected by unemployment</i>	81%	67%
<i>3.2 Submit evidence that proves you are looking for work</i>	63%	36%
<i>3.3 Register circumstances that impede you from looking for work</i>	50%	50%
<i>4.2 Register employment to stop unemployment benefits</i>	77%	80%
<i>4.3 Declare personal income taxes</i>	100%	73%
<i>5.2 Apply for state pension</i>	76%	52%
<i>Average Career</i>	74%	56%

Figure 4.9 Comparison eDocuments for Career services, national and cross-border

Türkiye | My Working Life

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Career

1. Good practice description

The service was developed under the coordination of the Digital Transformation Office (DTO) of the Presidency of the Republic of Türkiye and is also managed by the DTO. With the service, citizens can carry out all their tasks and transactions related to their employment status from the integrated structure named “My Working Life”, by bringing together the services provided by different institutions related to working life and presenting them from a single screen. The integrated services are as follows:

- Started working life
- Job search
- Farmer operations
- Health-treatment
- Professional competence
- Insurance
- Retirement

2. Benefits

- Citizens can directly access more than 75 e-Government Gateway services related to working life through their own modules from this single service.
- The service was used 379,387,167 times from September 30, 2021, when it was first opened to access, until February 28, 2023.
- This service works in integration with the services associated with more than 10 institutions.
- Citizens can get the Social Security Institution service statement document via the e-Government Gateway as a barcode document within seconds, reachable 24/7, in accordance with the 4a/4a/4c status, instead of going to the relevant institution and receiving it hours later.
- By reducing bureaucratic processes; information transactions such as monthly salary information of retirees, salary deductions, retirement inquiries are made digitally through this service.

3. Key success factors

- The services included in “My Working Life” integrated service are among the most used services of the e-Government Gateway.
- It is an important success factor that the service has been used by 380 million since its establishment.

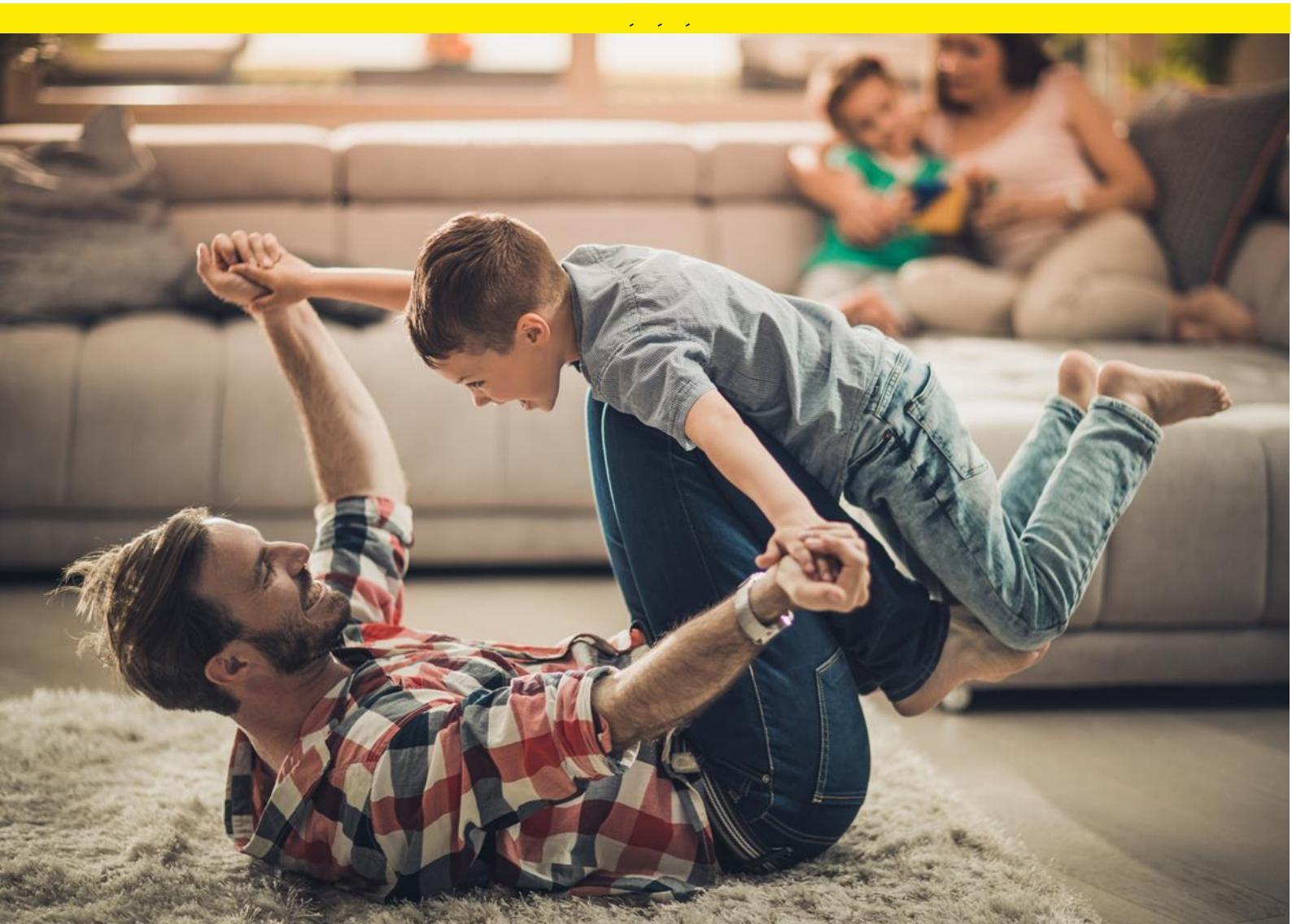
4. More information

- <https://turkiye.gov.tr/calisma-hayatim>
- <https://www.youtube.com/watch?v=vUyoxlub68I>

5. Family

“All children should have the same rights irrespective of how they were conceived or born and of their type of family”

Didier Reynders, Commissioner for Justice



5 Family

The *Family* life event assesses services that citizens encounter in the personal sphere of their life. Think for example about giving birth, getting married, registering a divorce, arranging a funeral, or obtaining documents such as a passport. The key question asked in this report is: to what extent can citizens interact with their governments online for these services?

Data for the *Family* life event was first collected in 2016 and published in 2017 and is reported in a two-year cycle. Since 2020 this life event is assessed from a cross-border perspective to consider also how citizens interact with digital systems of other governments. Since 2022, services pertaining to the European Health Insurance Card are evaluated under the *Health* life event and not the *Family* life event as in an earlier methodology.

Figure 5.1 shows the overall maturity of each country in the EU27+ for the *Family* life event and Figure 5.2 shows a comparison per country for data collected in 2020 and 2022. The European score for this life event is 70 points, an increase of almost 7 points from 2020. However, as was the case in 2020, this is still the least mature life event, in terms of digitalisation of public services, of the four life events considered in this year's evaluation.

Malta remains the most mature country in this domain, with an average score of 97 points. Six other countries – Iceland, Estonia, Norway, Denmark, the Netherlands, and Lithuania – have scores of 90 points or higher. In general, this means that citizens in these countries are facilitated well by eGovernment, such that personal services can be obtained easily, transparently, and securely for national and cross-border users.

Four countries score below 50 points for this life event. This means in these places, family-related services from the government still often require visiting a government building. Nevertheless, the number of countries with scores lower than those 50 points was eight in the previous report, showing that many countries substantially improved.

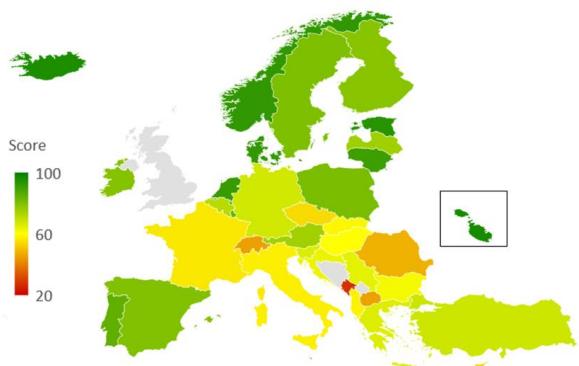


Figure 5.1 Overall maturity of the participating countries for the *Family* life event

Shortened Persona: *Family*

Fiona, 34, has just found out that she is pregnant. She and her partner Peter are very excited. Fiona wants to know the practicalities of the pregnancy. For instance, how much maternity leave will she get and whether it is paid or unpaid.

7 months later Fiona gives birth to a healthy boy, Steven. Fiona researches the amount of child allowance she will obtain and applies for the allowance. Fiona and Peter aren't married, and therefore Peter has not obtained parental authority when little Steven was registered. He therefore applies for parental authority.

Peter proposes Fiona to marry him. She accepts and they plan their wedding. On honeymoon, they realise they lost their child's birth certificate. They request a new certificate in order to get a passport for Steven. Fiona also realises that her passport is about to expire, so she applies for a new one.

Then suddenly, Fiona's dad passes away. Fiona must start arranging the funeral and the necessary administrative processes.

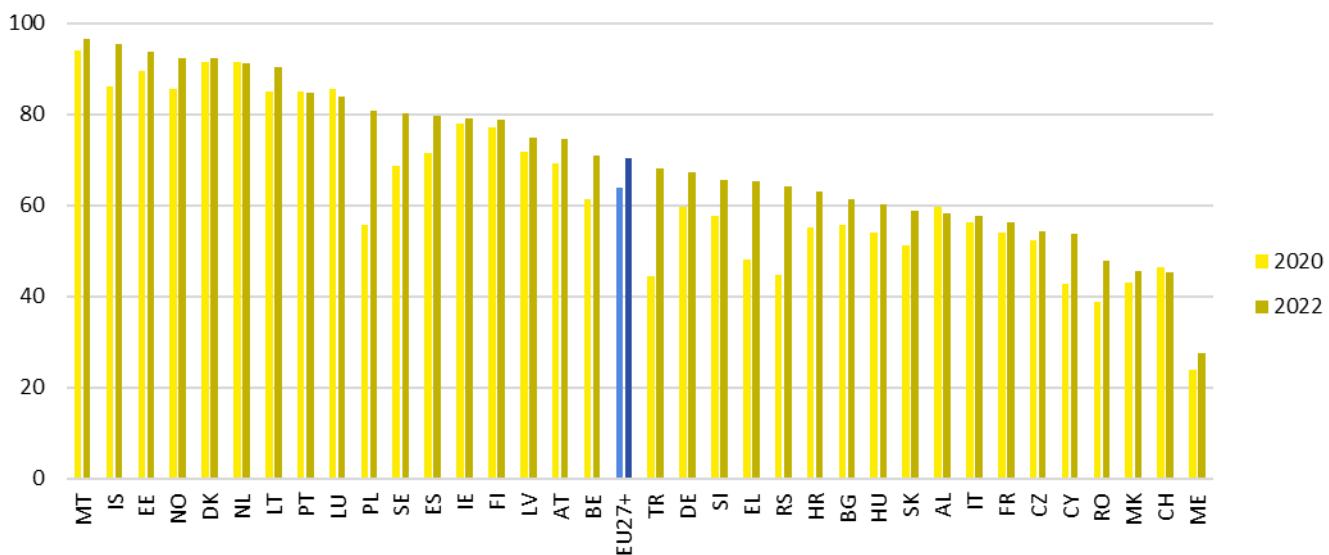


Figure 5.2 Country averages of all key dimensions for the Family life event for the years 2020 and 2022

5.1 User Centricity

The *User Centricity* key dimension focusses on the *Online Availability*, *Mobile Friendliness* and *User Support* of the services. User centric services enable citizens and businesses to get an optimal experience when dealing with public administrations. This section describes in detail the results for *Online Availability*, *Mobile Friendliness* and *User Support* for the *Family life* event.

Online Availability

The score of the indicator *Online Availability* for the *Family life* event is 84 points. This score is based on three questions: the availability of information about a service online, the possibility to complete the service online, and the possibility to find the website via a government portal.

Figure 5.3 shows the extent to which services are available online and whether the service websites are mobile friendly for the *Family life* event. 71% of all services under evaluation in this domain could be completed online. For another 27% of the services, information could be found online but online completion of the services was not possible.

Information on the conditions for parental leave are readily available online in the benchmarked countries (90%). *Obtaining a birth certificate* remains one of the most available services to perform online for an average family at an unchanged 89% from the previous report. Similarly, *applying for a child allowance* is another service readily available online (89%). In 86% of the countries, citizens can also *obtain a passport* online.

The services least available online in many European countries are *registering parental authority* (48%) and *registering to get married* (41%). However, these two dimensions are both more available online than they were in 2020, where both only scored 34%.

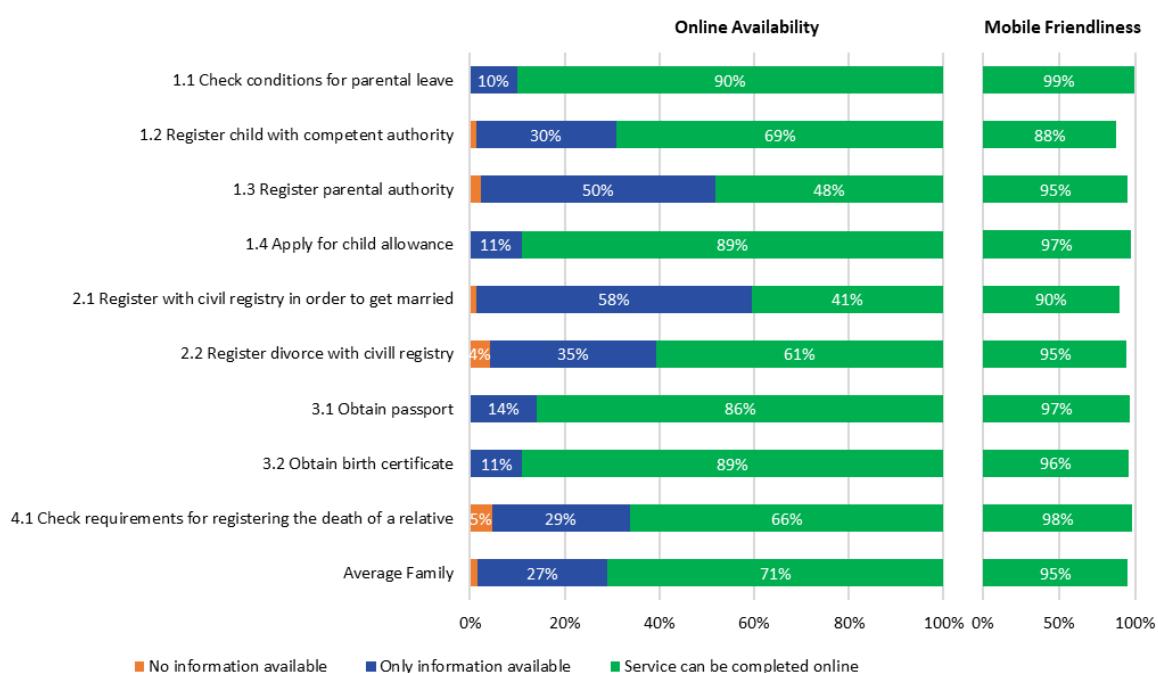


Figure 5.3 Online availability and mobile friendliness of services in the Family life event

Mobile Friendliness

Family-related services that are available online tend also to be accessible on a mobile device, with 95% of websites evaluated as mobile friendly. The service least optimised for mobile use is *Registering a child with a competent authority*, where 88% of the evaluated services are mobile friendly. The largest improvements for mobile friendliness can be made in the services aimed at *obtaining a birth certificate* and *checking requirements for registering death*, with increased scores of about 10 p.p. compared to the previous report.

User Support

The government portals of the *Family* life event offer a range of functionalities to users to ask for help, contact officials, or voice their opinion. The score for the *User Support* indicator is 94 points, which is in line with the other life events included in this report. Portals in the *Family* life event generally perform above average in terms of user support compared to the other life events. For example, 97% of all portals in the *Family* life event provide users with a feedback functionality, which is 7 p.p. above the EU27+ average. Moreover, 100% of portals for family-related services have some form of demonstration to explain the steps the user has to take to obtain the service.

5.2 Transparency

Transparency comprises the indicators *Transparency of Service Delivery*, *Transparency of Service Design* and *Transparency of Personal Data*. *Transparency of Service Delivery* measures whether public services provide clear, openly communicated information about how the service is delivered. *Transparency of Service Design* assesses whether users can participate in policy and service design. *Transparency of Personal Data* evaluates to what extent users are in control of their personal data.

Transparency of Service Delivery

Figure 5.4 shows the extent to which features are made available to users to make the service process more transparent for each of the transactional services in the *Family* life event.

Services	Delivery Notice	Progress tracker	Draft possibility	Estimation of process duration	Delivery timelines clear	Maximum time limit set	Information about service performance
1.2 Register child with competent authority	67	29	33	51	57	39	22
1.3 Register parental authority	74	46	34	41	58	53	18
1.4 Apply for child allowance	90	79	70	61	66	68	41
2.1 Register with civil registry in order to get married	69	45	33	43	50	43	21
2.2 Register divorce with civil registry	71	50	50	40	56	60	28
3.1 Obtain passport	78	60	45	58	77	59	21
3.2 Obtain birth certificate	83	74	38	57	71	54	30
Average Family	76	55	43	50	62	54	26

Highest score Lowest score

Figure 5.4 European averages for features for transparent service delivery for services in the Family life event

The score for *Transparency of Service Delivery* for the *Family* life event in the EU27+ is 51 points, the lowest among the life events evaluated in this report. The most common transparency feature in this life event is for users to receive a delivery notice upon completion of services (76%). Moreover, for 62% of the services delivery timelines were made clear, up from 56% in 2020, so users know how much time it will take for a service to be delivered.

Only two transparency features score below 50%, an improvement from five features in 2020. The most lacking transparency measures are the possibility to save work as a draft (43%) and the availability of information about the performance of the service (26%). However, five of the seven features are still below 60%.

The most transparent digital service is *applying for a child allowance*, which scores highest for six of the seven transparency features. This service exceeds the average for the transparency features of being able to save work as a draft (in 70% of countries for the child allowance service compared to the average of 43% for all services) and in getting information on service performance (in 41% of countries for the child allowance service compared to the average of 26% for all services).

The services *Obtaining a passport* and *obtaining a birth certificate* are the services where countries are most clear about delivery timelines. As citizens were told when they would receive the document after they requested it online for in 77% and 71% of countries respectively.

In the previous report, *registering parental authority* and *registering to get married or close a civil partnership* were the two least transparent services. However, relative improvements in the transparency features of these services have left *registering a child with a competent authority* as the least transparent service in 2022. The websites for registering a child with a competent authority have a progress tracker in only 29% of countries and in only four out of ten countries are users informed about how long the process of requesting the service will take.

Additional ways in which transparency in service delivery can be improved is by adding visual aids to websites that explain filling in the online form and by providing feedback on erroneous data entry, since an average of only 27% and 33% of countries, respectively, provide these for family-related services.

Transparency of Personal Data

Within the Family life event it is also important to see to what extent users can access, modify, and monitor their personal data. The score of the *Transparency of Personal Data* indicator for the portals in the *Family* life event is 76 points, which is above the biennial average of all life events, which stands at 72 points. Citizens can often notify their government that their data is incomplete or incorrect in 89% of measured services and can raise complaints regarding their data in 91%. Increasingly, citizens can modify their personal data online themselves (83% of services compared in 2022 to 72% in 2020). However, users are often unable to monitor if their data has been consulted by the government (56%).

Transparency of Service Design

Portals in the *Family* life event remain the best performing for *Transparency of Service Design* at a score of 72 points, meaning that citizens can often find information and about policies making and service design process. The main improvements still to be made are giving users information on how they can participate in design improvement activities and in policy making processes.

5.3 Key Enablers

The Key Enablers dimension comprises four indicators: *eID*, *eDocuments*, *Pre-filled Forms* and *Digital Post*. A national *eID* provides users with the possibility of secure authentication online and *eDocuments* help users send and receive verified files with the government. *Pre-filled Forms* measures whether users can enter their data once or must duplicate data entry in multiple forms, and *Digital Post* evaluates whether it is possible to communicate with the responsible authorities solely through digital channels.

eID

Figure 5.5 shows the methods by which citizens can authenticate themselves for each of the transactional services in the *Family* life event. For around half of the services in this life event, users could use their national *eID* (56%) and for an additional 4% of services users could authenticate online but not with their national *eID*. Online authentication was not possible for the remaining 40% of services, meaning that citizens are supposed to present themselves in person at a government office with their identity documents to undergo authentication. These figures are largely unchanged from the previous report.

The services where users are most enabled to use their *eIDs* include applying for a child allowance (86%), obtaining a birth certificate (73%), and registering a divorce (68%).

Despite the higher values for the above listed services, several family-related services have only limited *eID* and online authentication possibilities. For instance, in-person authentication is often required for citizens that are registering their child with a competent authority (61%), registering to get married or close a civil partnership (59%), or registering for parental authority (56%).

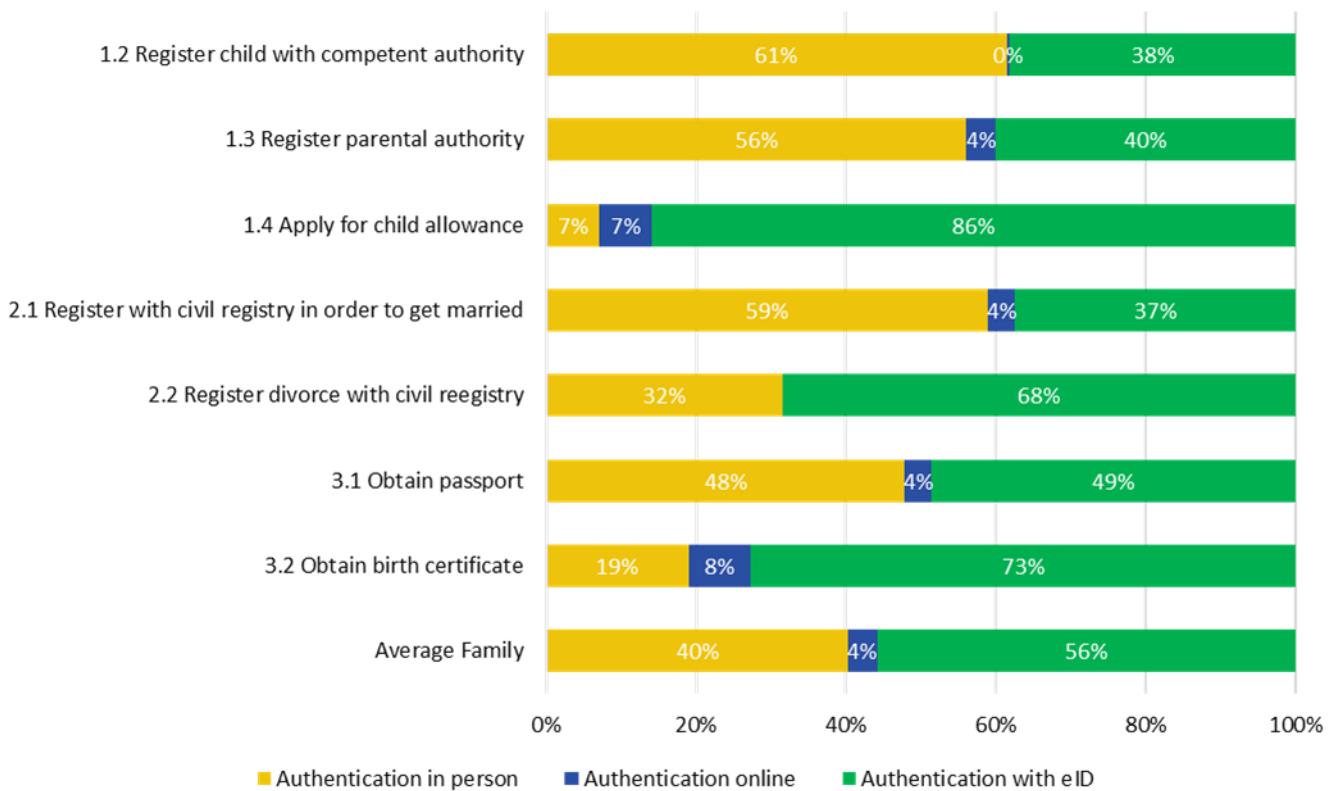


Figure 5.5 Authentication possibilities for services in the Family life event if authentication is required

eDocuments & Pre-filled Forms

Figure 5.6 shows how often users could download and submit eDocuments (as opposed to using printed documents), and how often personal information is prefilled (referred to as Pre-filled Forms) for each of the *Family* services.

In 54% of cases, users could either submit or download eDocuments, when such documentation was required, for services in this life event. The two services that stand out as being most accessible with eDocuments are requesting a birth certificate (69%) and applying for a child allowance (86%). But overall, non-digital documents remain a normal requirement for many family-related services. Citizens are therefore still required in many instances to print out documents and send them by post to the government. However, the possibility to use eDocuments did increase for several services. The option to use eDocuments for registering to get married or close a civil partnership increased by 9 p.p. to 32%. eDocument acceptance for registering parental authority increased by 19 p.p. from 35% in 2020 to 54% in 2022.

Improvements were also seen for *Pre-filled Forms*, prefiling of information increased on average across family-related services by 12 p.p., from 48% to 60%. Prefilling information when registering a child with a competent authority saw a substantial increase of 23 p.p. Four other family-related services increased by more than 10 p.p. for information prefiling. This saves time for citizens and reduces the chance of errors for governments.

Digital Post

The average score for the *Digital Post* indicator for the *Family* life event is 87 points. Citizens can choose to communicate with their central governments digitally for their family-related services in 89% of countries in Europe. In 74% of countries users can also receive communication digitally from local governments, a score that exceeds the average for portals across all life events of 61%. This is a positive sign given that the *Family* life event has many services that are provided by local service (city councils, municipalities, etc.) instead of the central government.

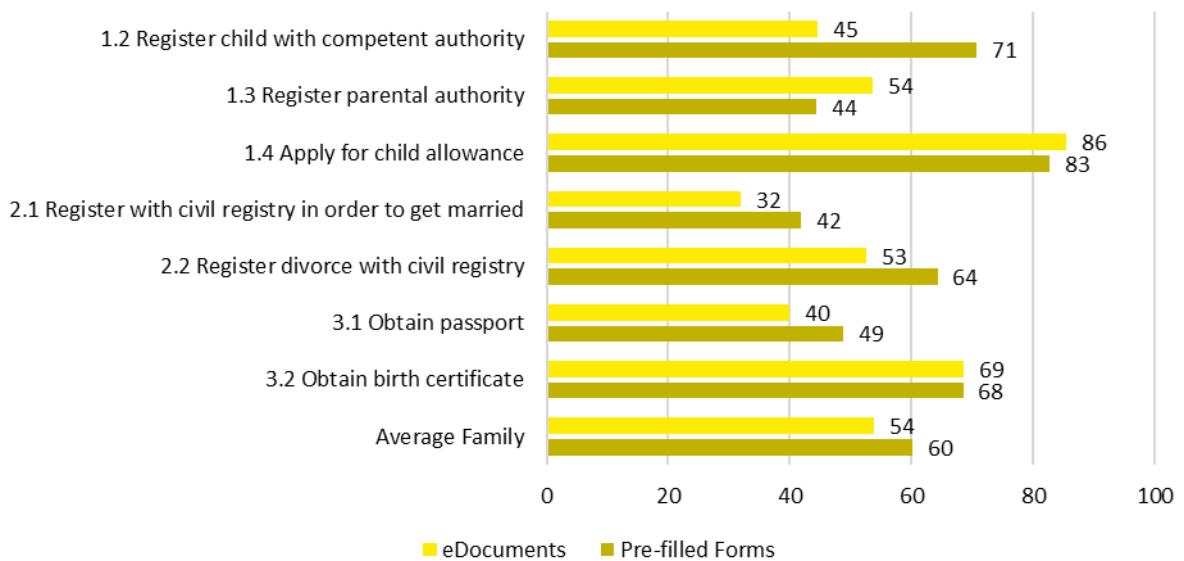


Figure 5.6 Average indicator scores for eDocuments and Pre-filled Forms per Family service

5.4 Cross-border Services

Cross-border Services evaluates how easy it is for non-national users to access and use online services provided by public authorities in another European country. It is comprised of four indicators: *Cross-border Online Availability*, *Cross-border User Support*, *Cross-border eID*, and *Cross-border eDocuments*. These indicators measure if services are available online, if there are sufficient help functionalities, and if key enablers like eID and eDocuments work for people living or coming from abroad.

Cross-border Online Availability

For the *Family* life event, only applying for a child allowance is evaluated from the perspective of a cross-border user. The indicator score for *Cross-border online availability* of family-related services is 65 points. In 46% of countries, applying for a child allowance can be completed online as a cross-border service (compared to 89% for national users). In 37% of countries only information about the service is provided online for non-national citizens, such as in a language other than the national language of the government, but without the ability to complete the service online. In the remaining 17% of cases, neither information about the service nor the service itself is available online, making it a challenge for non-national citizens to request these services.

Cross-border User Support

The *Cross-border User Support* indicator has a score of 74 points. The web portals used for child allowance applications tend to have help functionality accessible for non-national citizens (94%) as well as feedback mechanism for non-nationals to give their opinion on the service (80%). However, only 49% of portals have complaint procedures available that are easily accessible for non-nationals.

Cross-border eID and eDocuments

When applying for a child allowance, users could authenticate with an eID 86% of the time for national services, compared to only 40% of the time for cross-border services.

The possibility to use eDocuments when applying for a child allowance is less discrepant between national and non-national citizen than for the use of eIDs, with eDocument use available in 86% of European countries for national citizens and 70% of European countries for non-national citizens. However, the general pattern is that such online tools are less accessible for cross-border services.

Slovakia | Birth of a child

Relevant Key Dimension(s)

User Centricity

Life event

Family

1. Good practice description

When a child is born it is no longer necessary to fill in various forms or personally visit various places to finish all the paperwork as it was before. We have simplified the procedure down to one form that needs to be filled in by a parent in a hospital – **Agreement on name and surname of a child**. This can be done also online. Based on this form the birth certificate will be sent automatically to parents. Child will be automatically subscribed to the health insurance of his/her mother and automatically registered for permanent residence of his/her mother. After the birth certificate is issued, the state will proactively start the procedure for approval of child allowance and it also automatically sends the disposable birth grant. This was done within the Quickwin 3 project and in line with the “once only” principle.

2. Benefits

- This service has been used for 30 000 children since April 2022 and it is a huge time saver for many parents

3. Key success factors

- Intensive communication with other responsible institutions (Ministry of Interior, Ministry of Health, Ministry of Social Affairs and National Centre of Health Information), doctors and Maternity Hospitals – they all were willing to cooperate in order to simplify this procedure for parents

4. More information

More information can be found at: https://www.slovensko.sk/sk/zivotne-situacie/zivotna-situacia/_narodenie-sprievodca/ (in SK only)

6. Studying

“Education is the key driver to lead societal developments and build a generation of talented Europeans”

Mariya Gabriel, Commissioner for Innovation, Research, Culture, Education and Youth



6 Studying

Quality education empowers citizens to enter the labour market and attain a more prosperous future. This, in turn, contributes to the economic wellbeing of the society. Over 18 million students were enrolled in 2020 at a tertiary education in the European Union¹¹. These students need to arrange their courses, organise their finances, and look ahead to their careers. Many of these students also spend periods of their studies in other countries to broaden their horizons.

The *Studying* life event assesses how well students are helped by their digital governments. Think of questions like: Is it possible to register for a degree online? How can students apply for grants? Can students find information about going abroad for a semester? The *Studying* life event has been included in the eGovernment Benchmark since 2013, with data being collected for this life event every even year.

Figure 6.2 shows the average of all key dimensions per country for the *Studying* life event and a comparison per country for data collected in 2020 and 2022. The average maturity of this life event is 73 points, an increase of 4 points from the previous report.

Malta provides local and visiting students with the most mature eGovernment for study-related services and scores 100 points, retaining the top position since the previous report. Five other countries score 90 point or more in the overall scoring: Finland (95 points), the Netherlands (95 points), Sweden (94 points), Iceland (94 points), and Luxembourg (90 points). Four countries score 50 points or fewer for this life event: Cyprus (50 points), Bulgaria (50 points), Serbia (42 points) and Albania (34 points). Students in lower scoring countries will need to present themselves in person at various institutions to arrange study-related services. The average score for EU27+ countries is 73 points for this life event.

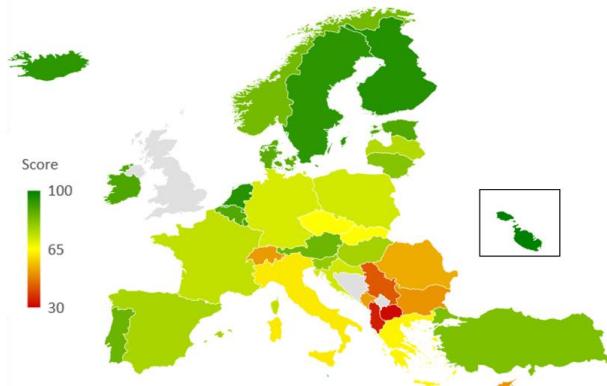


Figure 6.1 Overall maturity of the participating countries for the Studying life event

Shortened Persona: *Studying*

Maria, 20 years old, wants to enrol in a Business Administration degree in her home country. She searches online for information about possible study programmes. She finds a good match and applies for the degree programme through the university's online portal.

In order to fund her studies, she applies for student finance and complementary social benefits. Insight into her financials is important to her and she would also like to calculate any additional financial possibilities.

During the degree programme, she tracks her academic progress on her personal page, which enables her to look up her grades online and register for additional courses and exams.

The university also provides information for students who want to study abroad or want to apply for an internship.

Indeed, two years into the programme Maria is interested in arranging a study abroad opportunity. She searches for general information about possible destination countries and wants to know what is required for enrolment. She needs a clear understanding of what she can expect when studying abroad.

At the end of her programme, she is excited to start her career and seeks guidance from the university on how to tackle this next phase of her life.

¹¹ https://ec.europa.eu/eurostat/statistics-explained/index.php/Tertiary_education_statistics

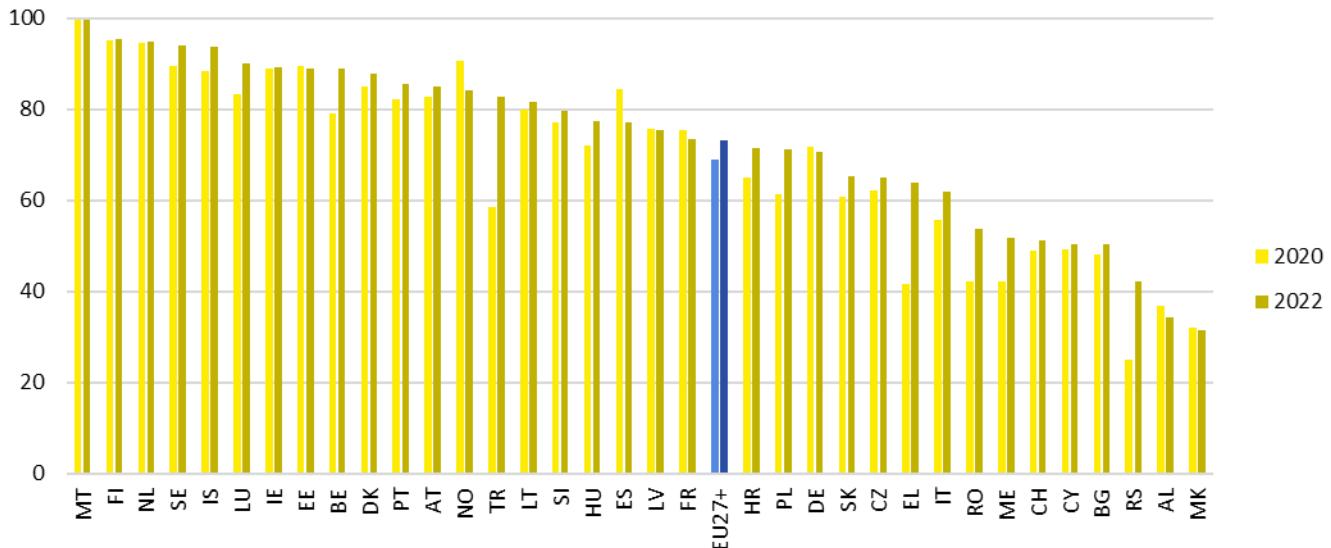


Figure 6.2 Country averages of all key dimensions for the Studying life event

6.1 User Centricity

The *User Centricity* key dimension focusses on the *Online Availability*, *Mobile Friendliness* and *User Support* of the services. User centric services enable citizens and businesses to get an optimal experience when dealing with public administrations. This section describes in detail the results for *Online Availability*, *Mobile Friendliness* and *User Support* for the *Studying* life event.

Online availability

The score of the indicator *Online Availability* for the *Studying* life event is 88 points. This score is based on three questions: the availability of information about a service online, the possibility to complete the service online, and the possibility to find the website via a government portal. Figure 6.3 shows that most study-related services can be completed entirely online (87%). For an additional 11% of the services, students could find information about the service online, but needed to visit the university or a government organisation to complete the service. For the remaining 2% of services, students could neither find information about the service nor complete the service online.

Services related to finding information and monitoring progress tend to score highest. Students can use online services to *monitor their grades and personal data* (99%), *find information about study programmes* (97%), *check the admission requirements for enrolment* (97%), and *receive guidance for studying abroad* (96%) as well as for *internships and careers* (91%). Students can also increasingly *register for their programmes* online. This service is available online in 90% of cases, up from 83% in the previous report.

The service least available online is being able to *apply for a student grant when studying abroad* (60%). In 13% of cases there is no information available online for this service. Therefore, it remains an opportunity for European countries to further enable studying abroad by making this service available online. Another service amenable for improvement is *applying for additional social benefits*, which can currently be completed online in 70% of cases. It is easier to *apply for study grants* online (84%).

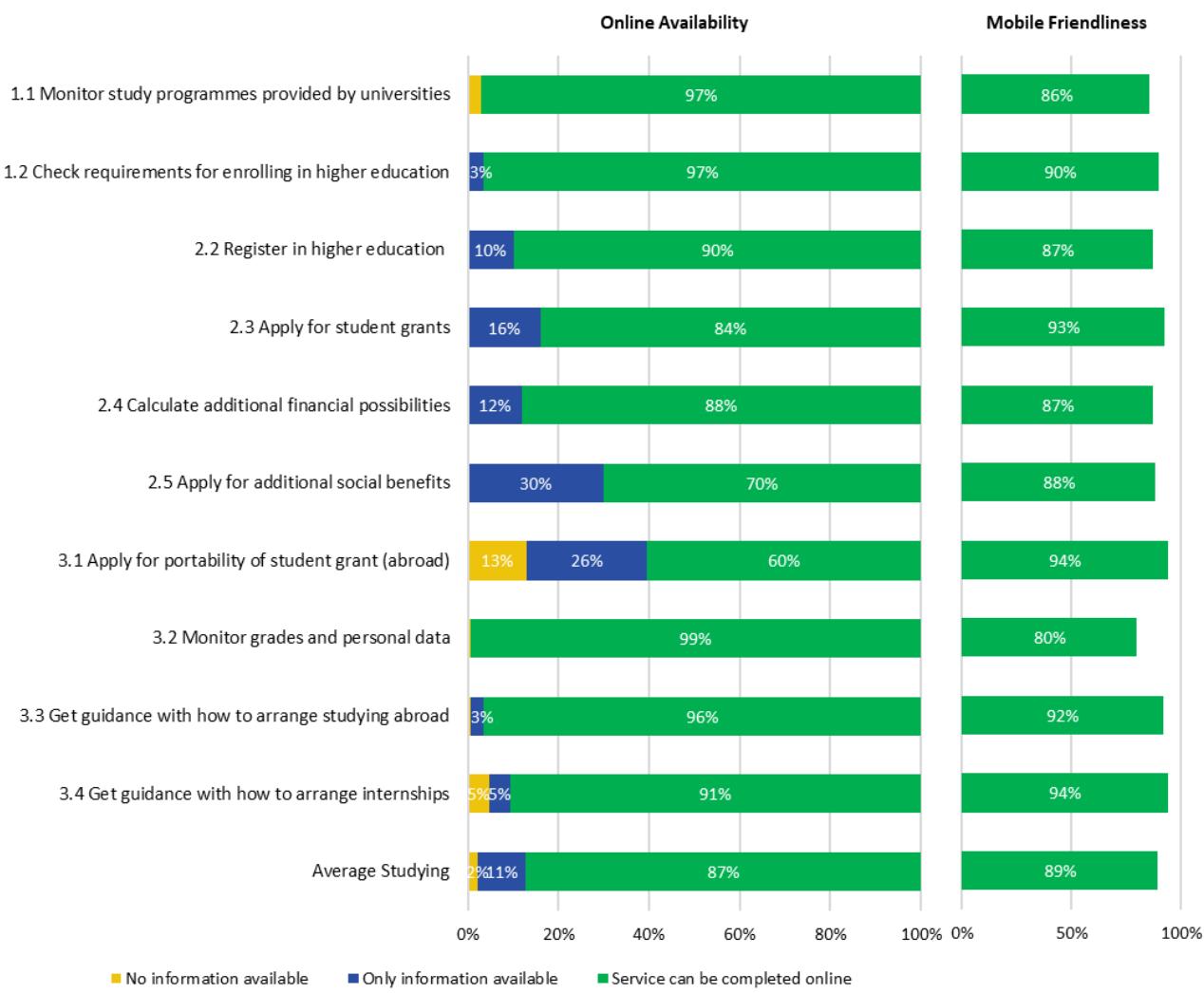


Figure 6.3 Online availability and mobile friendliness of services in the Studying life event

Mobile Friendliness

89% of the websites assessed in the *Studying* life event are judged as mobile friendly. However, *Studying* remains the least mobile friendly life event in this year's assessment. The average score for mobile friendliness for study-related services is 89%. Falling below this average are the services of monitoring grades and personal data (80%), finding information about study programmes (86%), registering in higher education (87%), calculating additional financial possibilities (87%), and applying for additional social benefits (88%). Services that are used frequently throughout the *Studying* phase of life, such as monitoring grades and personal data, might be good candidates for improvement in terms of mobile friendliness.

User Support

The overall score for the *Studying* life event on the *User Support* indicator is 94 points, which is in line with the scores for the other life events assessed in this report. (The average score for the four included life events is 95 points). In general, portals for study-related services answer Frequently Asked Questions (94%), provide instructions that demonstrate how to obtain the services (94%), have feedback mechanisms for user opinions (94%), provide platforms for discussions (97%), and identify relevant contact information (97%). On the other hand, a possible point of improvement is to make complaint procedures available online. This is the lowest scoring feature within user support for *Studying*, being available on only 83% of portals.

6.2 Transparency

Transparency comprises the indicators *Transparency of Service Delivery*, *Transparency of Service Design* and *Transparency of Personal Data*. *Transparency of Service Delivery* measures whether public services provide clear, openly communicated information about how the service is delivered. *Transparency of Service Design* assesses whether users can participate in policy and service design. *Transparency of Personal Data* evaluates to what extent users are in control of their personal data.

Transparency of Service Delivery

Figure 6.4 shows the extent to which features that enhance transparency of the service process are present on websites for study-related services. The most common transparency feature incorporated into service websites is a delivery notice that informs the users that the service step has been completed successfully online (83%). Additionally, two out of three services have a progress tracker that informs users of the number of steps that must be taken before completing the service (unchanged from the previous report). In many cases there is also information provided around expected delivery time, such as an advisory on the delivery timelines for the service (65%) and/or on the maximum time limit for service delivery (60%).

Although still one of the lower scoring transparency features, 52% of service sites communicate how long the entire process is expected to take, an increase of 7 p.p. from the previous report. On the other hand, little progress has been made on informing users about the performance of the service they are about to use, which scores an almost unchanged 40% from the last report.

Registering in higher education is the top performing service across all transparency features. This service especially exceeds the average on the time-related transparency features. Websites for this service surpass the average score for study-related services by 17 p.p. for providing delivery timelines, by 14 p.p. for providing an estimation of the process duration, and by 14 p.p. for providing a maximum time limit on service delivery. This means that, in general, users know when to expect an outcome on their university registration.

On the other hand, students who are eligible for additional social benefits (and who are therefore probably facing financial hardship), still encounter a relatively non-transparent service process. However, improvements have been made since the previous report. For example, more countries provide progress trackers (+8 p.p.) and an estimation of the process duration (+10 p.p.).

More countries have also incorporated an estimation of the process duration when applying to port a study grant abroad, giving a 10 p.p. improvement for this transparency feature on this service compared to the previous report. However, other transparency features for this service have not improved relative to the other study-related services, causing applying to port a study grant abroad to have the lowest score in 4 out of 7 transparency features.

Services	Delivery Notice	Progress tracker	Draft possibility	Estimation of process duration	Delivery timelines clear	Maximum time limit set	Information about service performance
2.2 Register in higher education	92	79	67	66	82	74	45
2.3 Apply for student grants	81	65	59	51	71	68	45
2.5 Apply for additional social benefits	80	62	49	42	55	50	35
3.1 Apply for portability of student grant (abroad)	79	63	52	48	54	49	34
Average Studying	83	67	57	52	65	60	40

Highest score Lowest score

Figure 6.4 European averages for features for transparent service delivery for services in the Studying life event

Transparency of Personal Data

Online portals for students are relatively transparent compared to other life event, which means that students can access, modify, and monitor their personal data through government web portals. The score for the *Transparency of Personal Data* indicator for the *Studying* life event is 77 points (up from 71 points in 2020), which is higher than the biennial average of all life events of 72 points. Students can notify the service website if their data are incorrect or incomplete (91%) and can follow a complaints procedure regarding their data (91%). An aspect for improvement is enabling users to monitor who has consulted their data and for what reason, as this feature is currently implemented in only 56% of cases.

Transparency of Service Design

The *Studying* life event has improved on the *Transparency of Service Design* indicator, allowing more users to participate in policy and service design. The score for this year is 67 points, up from 56 points in 2020. Information about the policymaking process remains highly available (97%) and students are more informed about the process of service design of the countries (67%) than they were in 2020 (42%). However, students could still be informed better on how to participate in the policymaking process (57%) and how they can enrol in activities to improve the design and delivery of services (49%).

6.3 Key Enablers

The Key Enablers dimension comprises four indicators: *eID*, *eDocuments*, *Pre-filled Forms* and *Digital Post*. A national *eID* provides users with the possibility of secure authentication online and *eDocuments* help users send and receive verified files with the government. *Pre-filled Forms* measures whether users can enter their data once or must duplicate data entry in multiple forms, and *Digital Post* evaluates whether it is possible to communicate with the responsible authorities solely through digital channels.

eID

Figure 6.5 shows the methods by which users can authenticate themselves for each of the study-related services. The *eID* indicator for the *Studying* life event stands at 59. Users can authenticate with their national *eIDs* for 63% of services, up from 58% in 2020. A further 21% of services can be accessed with online authentication, but not with an *eID*. For example, many universities ask students to make online university accounts for which an *eID* is not required. For the remaining 16% of studying services, it is necessary to authenticate in person for the delivery of the service.

Overall, registering in higher education remains the service that most enables applicants to use online methods of authentication (including with *eID*). In only 10% of cases do applicants need to present themselves in person to register with the higher education provider. *eIDs* are used most often for registering in higher education (67%) and applying to port a student grant abroad (65%). On the other hand, the services that most often require in person authentication are applying for student grants (24%) and applying for additional social benefits (17%), which both relate to a form of financial aid.

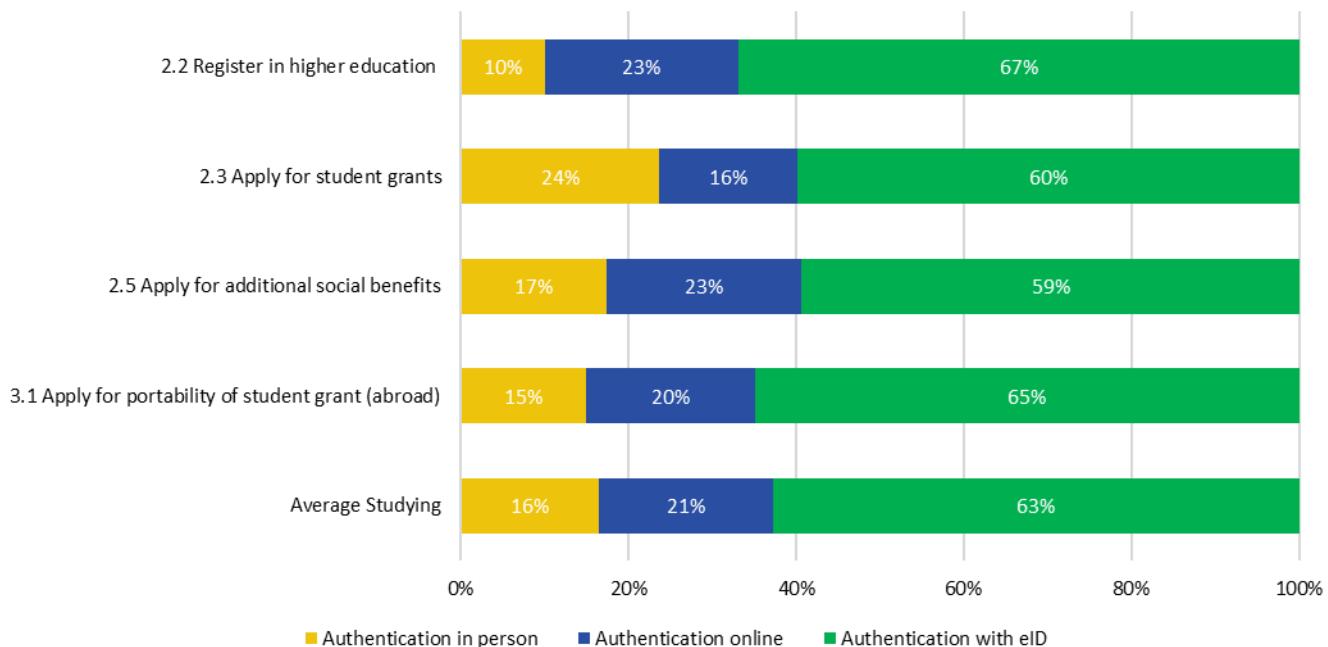


Figure 6.5 Authentication possibilities for services in the Studying life event if authentication is required

eDocuments & Pre-filled Forms

Figure 6.6 shows how often students could submit or download official documents required for a study-service in electronic form (eDocuments) and how frequently their personal information is prefilled when using the services (called Pre-filled Forms). The *Studying* life event has an indicator score of 76 for eDocuments and 58 for Pre-filled Forms. This score for Pre-filled Forms especially falls behind the biennial average score of 68 across all life events.

Users can use eDocuments in 78% of cases, meaning they can upload or download official documents online instead of using hard copies and the postal service. eDocuments are especially accepted when registering in higher education (89%). On the other hand, applying for student grants (73%) and applying to port the grant abroad (73%) are the least enabled services for eDocuments.

Personal information is prefilled in 67% of cases, up from 59% in the previous report. Information is prefilled most often when applying for student grants (73%) and for additional social benefit (74%). On the other hand, information is prefilled the least often when registering in higher education (53%).

Digital Post

The average score for the Digital Post indicator for the *Studying* life event is 89 points. Students can receive communications online from the central government via a dedicated mailbox in 86% of countries. In 74% of cases, users can also receive communications digitally from the local government for study-related services, which is higher than the average score of 61% across the portals for all life events.

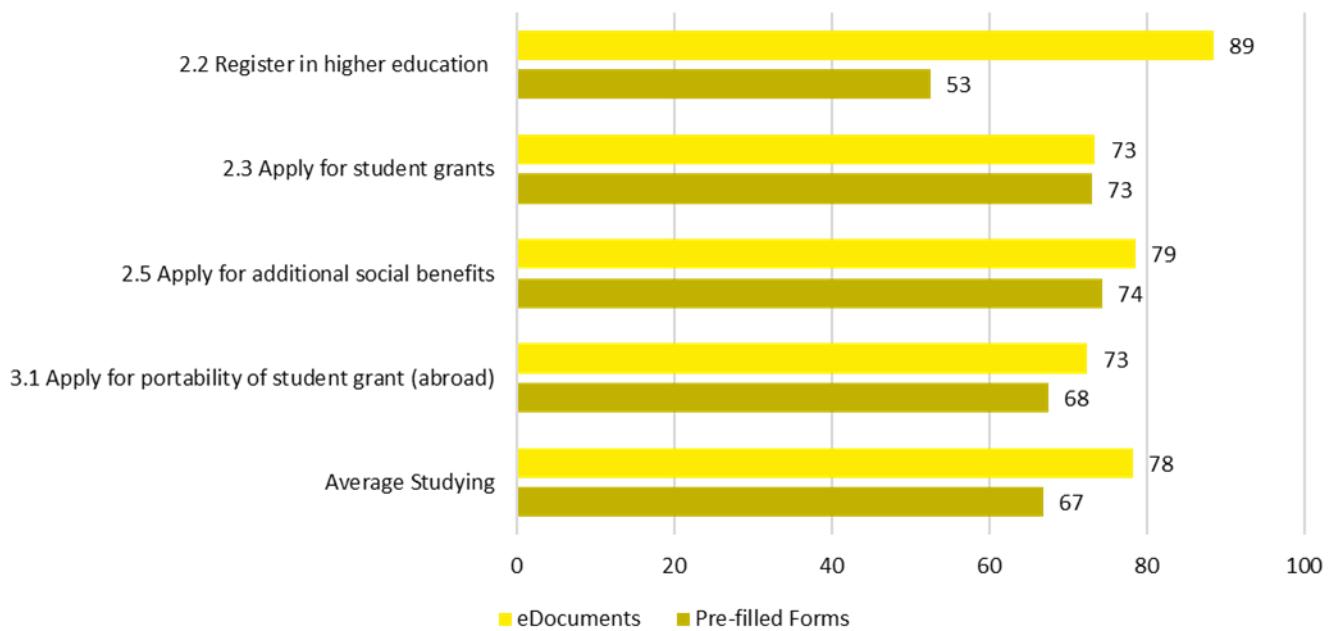


Figure 6.6 Average indicator scores for eDocuments and Pre-filled Forms for services in the Studying life event

6.4 Cross-border Services

Cross-border Services evaluates how easy it is for non-national users to access and use online services provided by public authorities in another European country. It is comprised of four indicators: *Cross-border Online Availability*, *Cross-border User Support*, *Cross-border eID*, and *Cross-border eDocuments*. These indicators measure if services are available online, if there are sufficient help functionalities, and if key enablers like eID and eDocuments work for people living or coming from abroad.

Cross-border Online Availability

The score for the indicator *Cross-border online availability* for the *Studying* life event stands at 73 points, which is higher than the biennial average score across all life events for this indicator of 62. This metric is derived by combining the availability of information about a service online for cross-border users and the possibility to complete the service online.

Figure 6.7 shows how often international students can obtain services online. 61% of the services evaluated in this domain could be completed entirely online and an additional 24% of services at least had information about the service provided online in multiple languages, which enables students to go on and complete the service through non-digital channels. For the remaining 17% of study-related services, international students can neither complete the service online nor find online information on how to complete the service through non-digital means.

The services most available for international students to complete online are obtaining recognition of their diplomas and certificates (77%) and registering for higher education (71%). On the other hand, it is more difficult for students to arrange services pertaining to financial assistance online in a cross-border context. For example, international students can apply online for student grants and additional social benefits in only 54% and 41% of cases, respectively.

Even though applying for additional social benefits is the service least available online for international students, it is the service for which the most information is provided online (41%), so students can at least be guided in completing the service through non-digital means. Having information for international students available online increases the likelihood that they are aware of important studying-related services such as applying for additional benefits.

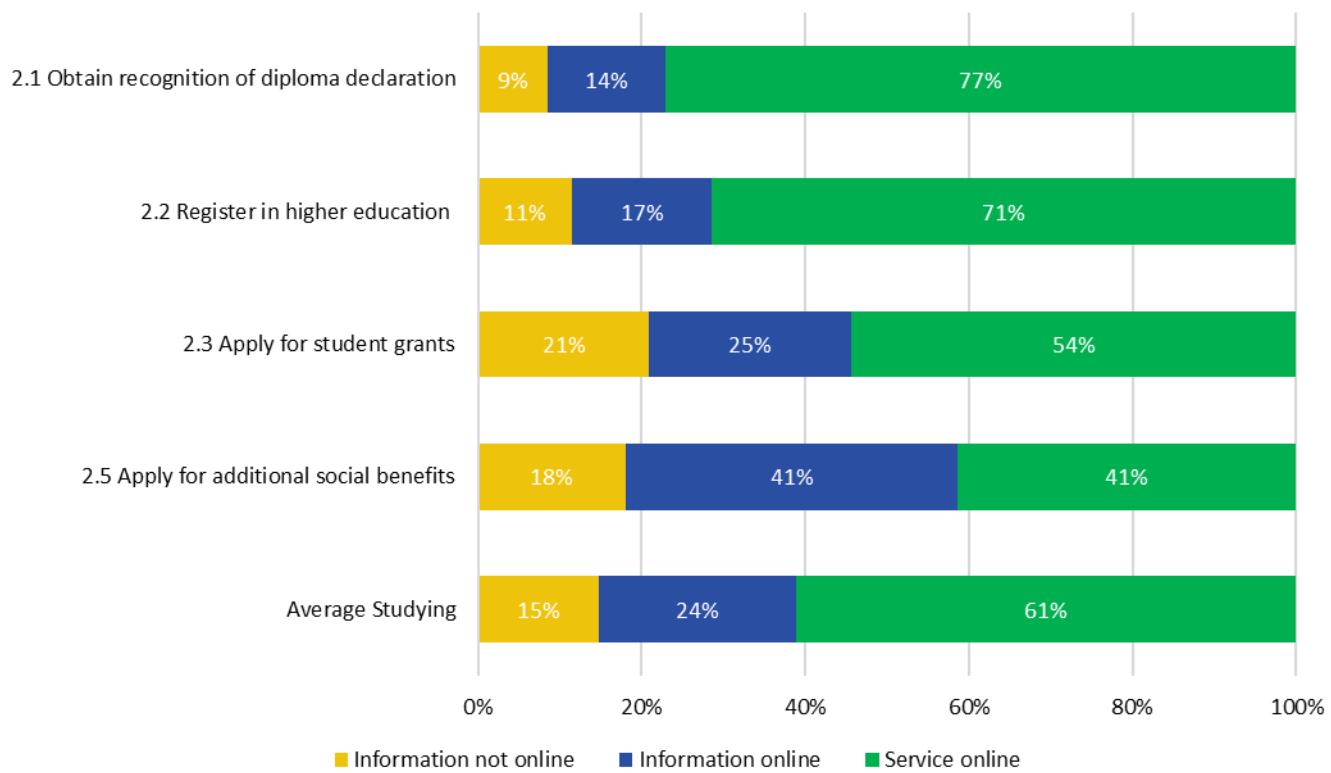


Figure 6.7 Cross-border online availability for services in the Studying life event

Cross-border User Support

In general, international students are well supported when seeking help with study-related services online. The average score for the EU27+ in the *Studying* life event is 81 points for this indicator, which is above the biennial average of 70 points across all life events. Notably, almost all services (97%) provide some form of help functionality for international students on their portal websites. There is also often a feedback mechanism for international students to provide their opinion on study-related services (83%). A less maturity capability is in making it clear for international students how to access complaint procedures (63%).

Cross-border eID and eDocuments

Figure 6.8 shows how often national and cross-border users could use their eIDs for study-related services. To note, obtaining recognition of a diploma declaration is measured only from a cross-border perspective; hence, no score is provided for national users.

There is a large disparity in the ability to authenticate with eIDs between national (63%) and cross-border users (19%) for study-related services. To emphasise, students studying abroad could use their national eIDs for only one out of five services that were assessed. This suggests that interoperability of electronic authentication between countries is not yet well established for these services. Indeed, the average score for the cross-border eID indicator for the *Studying* life event is 18%, the lowest among the life events assessed in this report.

Applying for additional social benefits is the service most integrated between countries in terms of eIDs, where 29% of services enable international students to authenticate themselves using their national eIDs.



Authentication with eID per service		
2.1 Obtain recognition of diploma declaration	-	9%
2.2 Register in higher education	67%	19%
2.3 Apply for student grants	60%	18%
2.5 Apply for additional social benefits	59%	29%
Average Studying	63%	19%

Figure 6.8 Comparison eID for Studying services, national and cross-border

Figure 6.9 shows how frequently national and cross-border users could download or submit eDocuments for the services within the *Studying* life event. International students were able to submit or download eDocuments for 66% of services under evaluation, compared to 78% for national citizens. Applying for student grants is the service most enabled for cross-border user of eDocuments and is also the service with the smallest discrepancy between national and cross-border users (6 p.p. difference).



Opportunity to submit or download eDocuments, per service		
2.1 Obtain recognition of diploma declaration	-	81%
2.2 Register in higher education	89%	62%
2.3 Apply for student grants	73%	67%
2.5 Apply for additional social benefits	79%	55%
Average Studying	78%	66%

Figure 6.9 Comparison eDocuments for Studying services, national and cross-border

Croatia| e-Enrollments – Establishment of complete electronic services of enrollment in educational institutions

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Studying

1. Good practice description

This digital solution provided citizens with the establishment of a complex electronic service to users of educational institutions, which includes enrollment in kindergartens, primary and secondary schools and admission to dormitories, registration and implementation of state graduation exams and registration at higher education institutions. adults and records of key data on schools, students, and staff in the central records. This system allows end users to use public enrollment services with as few additional administrative obligations as possible.

1. Benefits

A total of 3,214 enrollment applications were submitted and processed through the system. Also, the system was used by 1,951 students who sought accommodation in one of the 60 student dormitories in the pedagogical year 2021/22. A total of 1,758 students are enrolled.

2. Key success factors

The system enables users a simpler, more transparent and faster enrollment procedure and is connected to state services, which represents a less administrative burden, both for students and parents, and for educational institutions and dormitories themselves.

7 Annex. Good Practices

Albania | e-Albania platform

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers, Cross-border services

1. Good practice description

The digital revolution of the public services in Albania has deeply changed the citizens perception about the electronic communication with the public institutions, for this reason today we provide **1227** online services or about **95%** of the total public services. They are dedicated to a large category of users, starting with the employed, unemployed individuals, pupils, students, businesses, retired people, Albanian citizens abroad, or even the public administration employees, etc. e-Albania offers services that are 100% reengineered by making a complete paperless service.

60 electronic systems are connected to the Governmental Interoperability Platform (GG), the core architecture that enables the exchange of real-time data in a safe and reliable manner. The services are also available in the mobile version and the dedicated mobile app, as it is user friendly and it is the easiest way to be used from all age, young and elderly people or even the social groups with less access to technology.

As for the online support mechanism, e-Albania provides online helpdesk, that is designed to give the users information and support in response to their enquiry or in relation to specific queries, technical enquires, and e-services. An informative area on user support (FAQs and information on using the portal) is also available on the portal.

Each e-service has its description section, before it is used, where the user can get prior information on:

- The context of the service and its legal basis
- The necessary accompanying documentation (evidence), divided into two groups:
 - The state-issued documents which are simply listed but are gathered by the public employee on behalf of the user, after giving his consent.
 - The remaining documents such as self-declarations and private documents that should be provided by the user himself.
- The steps for applying for the service and its procedure until delivered
- The time necessary for the provision of the service
- The costs
- The validity of the final document
- Information of the provider institution and problem-solving contacts
- The above-mentioned information on other languages, if applicable
- Other information

2. Benefits

number of users (2.8 million); more than 9 million euros saved from the removal of fees when providing e-sealed documents free of charge; elimination of 999 years of waiting in lines.

3. Key success factors

- 1) centralized infrastructure
- 2) strong political will in the digital revolution

4. More information

More information can be found at: www.e-albania.al

Albania | Business e-services

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers, Cross-border services

1. Good practice description

The digital revolution of public services in Albania has long since changed the perception of citizens and businesses regarding electronic communication with state institutions, enabling today 1,227 online services or about 95% of all public services, out of which a significant part is dedicated to business services.

- 439 services in the e-albania portal dedicated only to businesses
- 320 services in the e-albania portal for citizens and businesses

During 2022, 8,636,000 public services were obtained through e-Albania, out of which 1,600,000 are public services provided for the category of businesses. Also, a total of 6.7 million e-sealed documents were generated by citizens and businesses, out of which 1.1 million only by businesses and 53,726 businesses were registered in the e-albania portal.

- 787,800 applications made for business services at the National Business Centre. These included, Simple/historical extracts, Registration certificates and application to change the registration of a Natural Person
- The General Directorate of Customs offers 38 services for business for which 17,000 applications were made during the year 2022. Most often used were the authorization for active processing regime, request for additions to the authorization of the active processing regime, and authorization for exemption from fuel excise duties for fishing vessels
- For the Agricultural and Rural Development Agency, a total of 72,711 applications were submitted by farmers
- 90,000 applications for the Social Insurance Institute for the services offered to businesses:
 - Request for birth allowance and grant for children born to employed persons
 - Income for temporary disability from general illness
 - Income for temporary disability from accidents at work and occupational diseases
 - Income for sickness compensation when the workplace changes
 - Income for permanent disability to a small extent from accidents at work and occupational diseases
- The "Application for electronic certificate for the fiscalisation project" service of the National Agency of Information Society counts 111,062 applications for the year 2022, helping taxpayers for electronic invoices in the framework of the fiscalisation project.
- Businesses operating under the jurisdiction of the Municipality of Tirana can be informed and pay unpaid local taxes and fees, as well as to be provided online with the verification of the liquidation of taxes with an electronic seal. For these services during the year 2022, 114,000 applications are counted.
- Business applications for construction permits and licenses in the field of construction/design/supervision account for 36,000 applications in 2022.

2. More information

More information can be found at: www.e-albania.al

Austria | eAusweise App – Digital Driving License

Relevant Key Dimension(s)

User Centricity, Key enablers

Life event

Moving, Transport

1. Good practice description

The digital driving licence is the first electronic ID of the “eAusweise (eID) app” and is a quick and easy way to show your driving licence using your smartphone. The system allows you to share your driving licence data using contactless technology.

- To present your digital driving licence, you show the person asking to see it a **time-limited QR code**. They then scan the QR code, which allows them to check the data they need on their own device.
- You do not need an active internet connection to show your licence if you are asked to do so by the traffic police. The police officer will be able to retrieve your details from the driving licence database using the QR code, which means **the digital driving licence cannot be faked**.
- When you show your digital driving licence to a private individual, the data from the QR code is transmitted via Bluetooth. Using this system encrypts the data to ensure the licence is genuine. The person checking your licence can do so using the eAusweise (eID) or eAusweis Check (eID Check) apps.
- You do not need a separate user account for the eAusweise (eID) app; just sign in using your ID Austria account. When used together with the Digitales Amt (Digital Office) app, it provides secure two-factor authentication for digital services. Both apps support fingerprint security and face recognition (based on the secure element/ trusted execution environment of the smartphone).

2. Benefits

- Start on 18 October 2022 and already more than 200000 activated driving licenses
- Important contribution in the field of cyber security and user-centric eGovernment

3. Key success factors

- Flexibility and user-orientation based on a quick and easy way to show your driving licence using your smartphone.
- Secure and user-friendly mGovernment.

4. More information

More information can be found at: [eID \(oesterreich.gv.at\)](http://eID (oesterreich.gv.at))

Austria | Project “Zoll4D” (PoC)

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers, Cross-border services

Life event

Cross-Border Services

1. Good practice description

Proof of Concept for interactive customs search supported by mixed reality.

- Vehicle inspections pose a number of challenges for customs. **Zoll4D** is an application for Android smartphones that is intended to serve as a supportive and work-saving tool for customs when carrying out vehicle inspections.
- The application displays the camera image of the smartphone. When the customs officer points the smartphone at the vehicle, an information overlay is placed over the car. The overlay now shows possible hiding places and a step-by-step guide indicating which steps are necessary to open the selected hiding place.
- The current demonstrator provides three different visualization types, which can be selected and changed at any time (Augmented Reality, 3D- and 2D-View).

2. Benefits

- Initial situation: currently, customs officers need many years of experience to know and detect hiding places of contraband in vehicles (numerous types of vehicles). This solution helps to interactively detect hiding places with a clear display via an application through mixed reality (present virtual objects (3D shapes, images, texts, ...) into the real environment and into one's own perspective. Display on different devices, like smart phone, tablet, 3D glasses (e.g. Microsoft Hololens) is possible.
- The goal and vision of Zoll4D beyond the demonstrator is to concentrate existing experience and knowledge of long-serving customs officers, to combine this with technical information and statistical evaluations in order to make this data available on site in real time. This cross-linking of information can enable customs officers to be more efficient and successful.

3. Key success factors

- Time saving. No unnecessary searches in places that are not suitable for hiding places in vehicles (e.g. certain type of vehicle has no free space under driver's seat).
- The customs officers do not need extensive experience. An easy-to-use application with dataset of international examples (e.g. same vehicle XY had hiding place under driver's seat) supports the officers in doing their job.

4. More information

Proof of Concept by Austrian Ministry of Finance, the Austrian Computing Center (Bundesrechenzentrum) and the Technical University Vienna (TU Wien). More information will be available after the implementation of the project.

Austria | Grants4Companies

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Regular Business Operations, Business Start-Up

1. Good practice description

In 2022, a new application called **Grants4Companies**, was developed and released within the Austrian Business Service Portal (“Unternehmensserviceportal”, www.usp.gv.at). It offers registered companies an automatically derived list of **suitable grants**.

Grants4Companies uses methods from symbolic artificial intelligence (AI) to evaluate formalized eligibility criteria based on available company data, using the **Austrian once only platform** “Digital Austrian Data Exchange (**dadeX**)” with user consent to obtain the required data from the registers of the public administration. The application automatically determines appropriate grants as logical consequences of the formalized rules and available data.

A rule-based derivation of consequences can also be used to satisfy data minimality criteria in the cross-border exchange of evidences as mandated by the Single Digital Gateway Regulation (SDGR). We are using an analogous approach in our design of national components that implement this regulation.

2. Benefits

- Automation saves time by reducing manual inspection of eligibility criteria
- More than 20 grants are already formalized for automated reasoning
- Explainable AI: the automated reasoning can be automatically explained and made fully transparent by showing derivation trees and natural language explanations

3. Key success factors

- One of the first uses of AI programming languages in the Austrian administration
- Involvement of domain experts for logic programming and AI
- Availability of standardized technologies for rule-based reasoning

4. More information

The pilot project won the 2021 e-government prize in the category “Bestes Projekt zum Einsatz innovativer Technologien und Infrastrukturen 2021”:

<https://www.egovernment-wettbewerb.de/gewinner/gewinner-2021.html>

Belgium | Datavindplaats (Data Finder)

Relevant Key Dimension(s)

Transparency, Key enablers

Life event

Regular Business Operations, Transport, Business Start-Up, Studying, Career

1. Good practice description

[Datavindplaats](#) (= *the place to find data*) is the very first initiative that combines geospatial, open and 'closed' data and APIs into one very user-friendly portal. Bridging the gap between all the required standards improves data exchange, reduces and simplifies maintenance, increases efficiency and consistency... and keeps it as simple as possible for data providers in describing their data once-only, while reaching the widest possible audience. The metadata shown in the Datavindplaats is based on the umbrella concept of a consolidated standard, leaving out many domain-specific concepts, so the user interface can remain simple, clear, easy to use and lovable. In this way the Datavindplaats becomes a facilitator for the next generation of re-usable data solutions.

2. Benefits

- Time saved due to having to search on only one portal for the data or API a user needs
- Time saved by presenting complex details in a user-friendlier way
- For data suppliers: only one place where they need to describe datasets and only one catalogue that they have to maintain the contents for

3. Key success factors

- We successfully bridged the semantic gap between different domains, which is a first in the world
- We consolidated several existing catalogues of datasets, and added insights into all the APIs that were not present in any existing catalogue
- We transformed technical domain information into a more readable format, legible by users not proficient in the given domain.

4. More information

More information can be found at: <https://www.vlaanderen.be/datavindplaats>

Belgium | Geopunt

Relevant Key Dimension(s)

User Centricity, Key enablers

Life event

Regular Business Operations, Moving, Health, Business Start-Up, Studying, Family, Career

1. Good practice description

Geopunt is a portal providing access to over 700 well-designed geospatial information layers. A set of different consultation functionalities allows combining multiple data sources together to get insight into the attributes, characteristics and features of a particular location.

The geospatial information that is available on Geopunt originates from hundreds of official Flemish government sources and is bundled together into a single centrally accessible portal. This guarantees that Geopunt provides the highest quality data that can be re-used with a lot of confidence. The portal additionally provides access to a catalogue containing almost 7000 other geospatial data sources. For GIS users, Geopunt provides plug-ins so they can integrate the functionalities of the portal into their own everyday software.

Over a million companies, organizations, individuals and government agencies are very enthusiastic users of Geopunt. Many of them consider it to be THE reference geospatial portal, an indispensable tool for professionals and an important means of communication.

2. Benefits

- Geopunt is the ‘no wrong door’ portal to Flemish geospatial data, providing access to the most used sources, with more than 700 map layers and almost 7000 datasets in the catalogue.
- The data available on the portal is highly reliable because it is sourced from official government agencies.
- Geopunt provides both an accessible visual map which is easy to use by everyone as well as advanced query & retrieval functionalities and plug-ins for the professional user. In 2022 we counted 1.2 million users.

3. Key success factors

- An important key factor that contributed to the success of the renewed Geopunt (released in January 2023) was the co-creation of the vision. We started 2 years ago on a journey to involve our users as much as possible: we held several user surveys, we created a business case built on depth-interviews with key users from the different target audiences, we organized a lot of feedback sessions with users and data providers, and we created a steering committee that gave us feedback before and during the project. In this way we created a shared vision and a totally new, improved product.
- The availability of re-usable back-end components within Digitaal Vlaanderen, together with the expertise of the team, made it possible to create a sustainable and manageable product.
- The availability of geodata, geospatial services (standardized) and standardized metadata within Flanders gives us the necessary resources to make a reliable product for the end-user.

4. More information

More information can be found at: www.geopunt.be

Belgium | Intergovernmental products and services catalogue

Relevant Key Dimension(s)

Key enablers, Cross-Border Services

Life event

The catalogue provides information about the products and services related to all life events for citizens, entrepreneurs and associations that are (partly) supported by local, Flemish and even federal governmental services

1. Good practice description

The intergovernmental products and services catalogue (IPDC) provides both input and output services. On the input-side, IPDC provides an interface for the decentral management of information on governmental products and services in a standardized linked open data way. On the output-side, it provides a central front-end and API's to easily access and reuse machine-readable data. In 2022, the IPDC was extended with a solution to enable local governments to enrich the catalogue with their own specific information on their products and services (the local products and services catalogue – LPDC). Thanks to this extension, we now can gather all information on local governmental products and services only once and provide it for easy reuse by third parties as well. At the same time citizens, entrepreneurs and organisations get the guarantee of up to date info, where possible tailor-made to their specific situation. The catalogue provides a highly efficient way of working by provisioning the LPDC-modules of each local government with generic information concepts on services that are (partly) similar for all local governments, so they only have to enrich these with their own specific information. These generic information concepts are well written and user-centric, and in English for cross-border use by e.g. Your Europe.

2. Benefits

- Providing generic information concepts and keeping them up to date from a single source saves all local governments the time of producing the content individually and enables its easy reuse. As a result, in 4 months' time we were able to provide information on more than 11.000 local services from 282 local governments, and we're still counting.
- The IPDC provides API-services for easy reuse by third parties of all its information on governmental services. For example by the Your Europe site, but also the websites of local governments, the portal of the Flemish government Vlaanderen.be, This saves the effort of keeping multiple individual API-connections set up and maintained.
- Citizens, entrepreneurs and associations can be confident that information on public products and services is correct and up-to-date everywhere it is being offered. The information is also clearly recognizable as official government information, which creates more confidence in the products and services, and in government as a whole.

3. Key success factors

- Local governments already reused generic information from the IPDC. Now we also provide a solution that allows them to reuse their specific information and keep this in sync with the generic information. They can easily provide reusable, machine-readable information through an easy-to-use user interface embedded in the "Counter for local authorities" (an online platform that local governments already knew and used for 11 other intergovernmental processes).
- The IPDC allowed us to respect the 12 December 2022 deadline, set by the European Single Digital Gateway regulation, by which local governments had to provide cross-border information on government services for citizens and entrepreneurs, in English. On top of that several other important Flemish e-government initiatives, such as My Citizen Profile or the Portal for Enterprises, are also going to reuse the provided information.
- New product teams were simultaneously working on both a new version of IPDC and the extension LPDC for use by local governments, which made it possible to devote a lot of attention to supporting successful adoption by local governments and the necessary change management in handling information about (local) government products and services.

4. More information

More information can be found at: <https://productencatalogus-v3.vlaanderen.be/nl/start> and <https://lokaalbestuur.vlaanderen.be/lokale-producten-en-dienstencatalogus>

Belgium | Mijn Burgerprofiel (My Citizen Profile) mobile app platform

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Starting a Small Claims Procedure, Studying, Family, Career

1. Good practice description

Mijn Burgerprofiel mobile app platform is the answer to the expectation of the citizen to have a single mobile application to organize all of their government-affairs. The Mijn Burgerprofiel mobile app platform allows local governments to create a custom branded mobile application that combines both local and Flemish government products and services such as documents, attestations, messages and so on. Flemish and local governments can extend the Mijn Burgerprofiel app with custom services and functionalities. By applying the look and feel of the local government the positive close relationship between the local government and its citizens is maintained and strengthened. The app keeps citizens actively informed about their affairs with the government, such as new messages, important events and actions they need to take in ongoing cases. In addition, the app also acts as a digital vault or personal wallet to safely store personal documents, such as certificates, attestations, or identity documents such as a driver licence or insurance card.

2. Benefits

- 13 cities have published a localized app based on the Mijn Burgerprofiel mobile app platform. 14 cities are currently in progress of publishing an app
- The app was installed 200.000 times during the first 6 months after its initial release
- The citizens' engagement with the app was increased with the help of push notifications

3. Key success factors

- We delivered the project in less than 6 months by leveraging on existing building blocks, which enabled us to optimize our resources and accelerate the development process
- We have established a strong partnership with local governments and their service providers to facilitate collaboration and drive efficient delivery of services and features

4. More information

More information can be found in Dutch at: <https://www.vlaanderen.be/digitaal-vlaanderen/onze-oplossingen/mijn-burgerprofiel/de-mobiele-app-mijn-burgerprofiel-en-uw-gemeente-app>

Belgium | Real Estate Information Platform

Relevant Key Dimension(s)

Transparency, Key enablers

Life event

Moving, Family

1. Good practice description

In Flanders, notaries and real estate agents are obliged to enquire and communicate information about the real estate in the selling process. This information is bundled in a comprehensive dataset delivered by the municipalities. Up till now the municipalities had to put a lot of manual work effort into gathering all this information and the data was delivered in PDF documents. By creating a centralized information sharing platform, we have been able to eliminate registration problems, to overcome the fragmentation of information all over different government levels and to provide structured data to the real estate actors so they can automate parts of their business processes.

2. Benefits

- A centralized real estate information hub for data sharing between the real estate sector and the government, so that the real estate sector no longer has to deal with 300 different municipalities.
- At least 130,000 real estate transactions yearly will be efficiently serviced by the platform, which means a reduction in workload for municipalities, real estate agents and notaries.
- Decrease of time between the sales decision and the effective transfer of ownership

3. Key success factors

- Co-creation process between government and real estate sector, where it was decided together (using so-called business working groups) how the platform should work and which kind of information requests should be answered
- Intense stakeholder management (e.g. integration parties are involved since the beginning, data providers and municipalities are engaged)
- Domain-driven platform, using reusable building blocks, designed for flexibility in adapting to future usage changes

4. More information

More information can be found at: <https://www.vlaanderen.be/digitaal-vlaanderen/het-vlaams-datanutsbedrijf/vastgoedinformatieplatform>

Belgium | Federal Service Platform (FSP)

Relevant Key Dimension(s)

Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

The **Belgian Federal Service Platform** provides secure unified access to authentic data sources in the form of web services and APIs. These are standardized technical links (machine-to-machine, based on the most common protocols) between the data sources and the government organizations that use the data. Thanks to this seamless flow of data, the Only Once-principle is being realized in practice.

2. Benefits

- At the end of 2022, **more than one billion messages** were exchanged on a yearly basis.
- Over **650 (government) organizations** make use of this service.

3. Key success factors

- The **legal bases** (federal laws) [creating the federal service integrator](#) and the [Belgian Only Once-law](#).
- The smooth exchange of data between **the (six) clusters of service integrators** at multiple levels of government within Belgium:

4. More information

More information can be found at: <https://bosa.belgium.be/nl/services/federale-dienstenintegrator> (NL) and <https://bosa.belgium.be/fr/services/integrateur-de-services-federal> (FR).

Belgium | connectoo training

Relevant Key Dimension(s)

User centricity

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

The connectoo training aims to **reduce the digital divide in Belgium** by training public officials in order to gain tools and the right mindset for helping vulnerable citizens encountering challenges with online administrative procedures. Connectoo is a free online training course accessible to anyone working for a federal, regional or municipal administration.

2. Benefits

- The training course went online in the summer of 2022 and attracted **nearly 1.000 participants in just a few months**, even before the official communication was launched.
- **The goal is to train and certify 10.000 public employees in Belgium by 2030**, in order to become a more user-centered government that actively seeks to reduce the digital gap.

3. Key success factors

- **The political willingness from the federal government** and more specifically from the Secretary of State for Digitalization Mathieu Michel, to start and foresee the necessary funding for the implementation of this project, has proven to be crucial.
- **The co-creative approach**, based on the active involvement of the various stakeholders and beneficiaries of the project, is also a key success factor for a project like this.

4. More information

More information can be found at: <https://bosa.belgium.be/nl/connectoo> (NL) and <https://bosa.belgium.be/fr/connectoo> (FR).

Belgium | BOSA Accessibility Check

Relevant Key Dimension(s)

User centricity

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

The [Accessibility Check](#) is an instrument that can be used as a means to check the accessibility of a webpage. It is an open source tool that can detect a number of violations of the EU accessibility guidelines.

2. Benefits

- The Accessibility Check is a tool that can be used for accessibility audits, in addition to other reporting instruments.
- It is a useful instrument for the control bodies that have to **assess compliance with the EU Directive on the accessibility of the websites and mobile applications of public sector bodies** in the EU member countries.

3. Key success factors

- Since the Accessibility Check can be added as a bookmark to one's browser, it is a very easy and user-friendly way to generate an overview of the accessibility of a website.
- It is part of a [broader website, campaign](#) and [set of tools](#) with a focus on the accessibility of websites containing government/public information in Belgium.

4. More information

More information can be found at <https://bosa.belgium.be/nl/applications/bosa-accessibility-check> (NL) & <https://bosa.belgium.be/fr/applications/bosa-accessibility-check> (FR).

Bulgaria | Single portal for access to electronic administrative services (egov.bg)

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Business Start-Up, Studying, Family, Career, Regular Business Operations, Moving, Transport, Starting a Small Claims Procedure

1. Good practice description

The Single portal for access to electronic administrative services of the Republic of Bulgaria has been upgraded to meet the needs of e-government users. The portal provides an easy-to-use interface for a simpler and more convenient way to use electronic services. The upgraded portal serves as a national point of contact under Regulation (EU) 2018/1724 of the European Parliament and of the Council of 2 October 2018. It is also compliant with the requirements of Directive (EU) 2016/2102 of 26 October 2016.

Users of the Portal have the opportunity to use a personal space where they can store their favorite (important) services, track their history of searched and / or requested electronic services, as well as the results of these services.

At present, 439 electronic administrative services have been developed and published for centralized request through the Portal, 213 of which are provided by central administration, 170 by municipal, 32 by specialized territorial and 21 by regional administration.

In response to the COVID-19 situation, a job application service was developed for the unemployed at the Labor Office, which is one of the most used electronic services.

2. Benefits

- Single point of access for eGovernment services, personal information and electronic messages.
- Online services 24/7.

3. Key success factors

- Available for both citizens and businesses.
- Whole government cooperation in service design and delivery to have more digital services available.

4. More information

More information can be found at: <https://egov.bg/>

Croatia| e-Enrollments – Establishment of complete electronic services of enrollment in educational institutions

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Studying

1. Good practice description

This digital solution provided citizens with the establishment of a complex electronic service to users of educational institutions, which includes enrollment in kindergartens, primary and secondary schools and admission to dormitories, registration and implementation of state graduation exams and registration at higher education institutions. adults and records of key data on schools, students and staff in the central records. This system allows end users to use public enrollment services with as few additional administrative obligations as possible.

2. Benefits

A total of 3,214 enrollment applications were submitted and processed through the system. Also, the system was used by 1,951 students who sought accommodation in one of the 60 student dormitories in the pedagogical year 2021/22. A total of 1,758 students are enrolled.

3. Key success factors

The system enables users a simpler, more transparent and faster enrollment procedure and is connected to state services, which represents a less administrative burden, both for students and parents, and for educational institutions and dormitories themselves.

4. More information

More information can be found at: <https://e-upisi.hr/>

Cyprus | Digital Services Factory (DSF)

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers, Cross-border services

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

The Digital Services Factory (DSF) is one of the main strategic initiatives under the Digital Government Portfolio of the Cyprus Digital Strategy aiming to enhance government's transformation. This initiative was promoted in partnership with the Government Digital Service (GDS) of the United Kingdom. The Digital Services Factory defined the new service delivery model that will enable the efficient provision of high-quality digital services, based on a modern and flexible methodology that responds to citizens' needs.

Several standards and procedures that promote the use of user-centered design and agile development practices have been put into place. The Framework for the Digital Transformation of the Government Services has also been completed, laying the foundations for a more effective public-private partnership. This new government approach supports standardization of methodology and delivery across Government. The Framework for the Digital Transformation of the Government Services allows companies that are active in the field of technology to build services, individually or in consortiums, through mini competitions. Mini competitions will include the delivery of services in buckets, maximum up to 5 that fall under the same business scope.

2. Benefits

- Ensure uniformity, consistency, security and accessibility of public services
- Enable private sector to actively participate in accelerating government services digitization
- Provide services that are built to meet the needs of citizens/businesses.

3. Key success factors

- Political Commitment and support
- Collaboration with the Government Digital Services, UK aiming to leverage the country's experience on digital transformation and user-centered public digital services. In 2022 DSF was working closely with GDS International Team. This partnership set the foundations for the future development of digital services through the building and development of processes, reusable components and open-source tools.

4. More information

<https://dsf.dmrnid.gov.cy/>

<https://www.dmrnid.gov.cy/dmrnid/dmrnidblog.nsf/home/home?openform>

Cyprus | Apply for a Child Birth Grant

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Family

1. Good practice description

The Child Birth Grant (CBG) service allows mothers of newborns to apply on-line for a grant in a simple, fast and easy way. Mothers are eligible for the CBG if they gave birth within the past 12 months and have paid social insurance contributions. The service has a high transactional volume (around 10.000 applications annually) and applies the once-only principle, that is, citizen's data already held by the government are not requested to be resubmitted by the citizen.

The service was developed by the Digital Service Factory (DSF) team of the Deputy Ministry of Research, Innovation and Digital Policy (DMRID).

2. Benefits

The service was released in June 2022. Information below refer to the period June – December 2022.

- Time to complete (digital vs manual submission): 5 minutes to complete the service and file the application, comparing to the manual submission that requires a total of around 30 minutes
- Time to receive payment: up to 4 months for the manual submissions and up to up to 15 days for the digital ones
- Average take-up: percentage of users that successfully submit their application
 1. online → increase from 20% to 61%
 2. paper form → decrease from 80% to 39%
- Efficiency in application status:
 1. Approved and Paid: Digital - 73%, Manual - 57%
 2. Applications still in progress: Digital - 3%, Manual 32%

3. Key success factors

- Agile methodology was used
- A User Centred Design (UCD) approach was followed to understand the users' needs, to rapidly test assumptions and to react to changing requirements, in order to meet these needs. The user was always at the center and the service was built tailored users' needs, preferences, and behaviors.
- A multidisciplinary Service Team was established including the role of a product manager, service owner, delivery manager, user researcher, content designer, service designer, interaction designer, developer, tech architects, a performance analyst and a test lead.

4. More information

The service was released in June 2022 and is available at the following link <https://child-birth-grant.service.gov.cy>

Cyprus | Central System for State Aid and Deminimis

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Regular Business Operations

1. Good practice description

The main purpose of the computerized system «Central System of Registers of State Aids and the De Minimis Aids» (CSRSA) regarding the De Minimis Aids, is the registration by all Cypriot Competent Authorities of all the De Minimis Aids that are granted to natural or legal entities or other beneficiaries that carry out economic activity, regardless of the legal status that governs them. In addition, in order to confirm the correctness of the data of the Beneficiaries before their registration in the System, the connection of the System with the Government Information Repository (GIR) was implemented through the Ariadne Government Portal.

Through the CSRSA, a closer monitoring of the aid granted is achieved, among other things, as well as ensuring the possibility of verifying that the individual, sectoral and national cumulative limits are not exceeded.

2. Benefits

The service was released in January 2022. The CSRSA system is used by more than 200 users.

Benefits of the system:

- closer monitoring of the aid granted
- verified that the individual, sectoral and national cumulative limits are not exceeded
- reduced time on unproductive tasks

3. Key success factors

- Agile methodology was used
- During the phase of analysing user needs of the project, a service team from all responsible Cypriot Competent Authorities was established in order to examine their needs
- The company implemented the project according to user needs on time, within the estimated budget

4. More information

The service was released in January 2022

Czech Republic | MyHealth@EU Cross-border ePrescription/eDispensation Service

Relevant Key Dimension(s)

Cross-Border Services

Life even

Health

1. Good practice description

The cross-border ePrescription/eDispensation service is deployed by the National Contact Point for eHealth for Czech Republic (NCPeH). The Czech NCPeH is a part of the MyHealth@EU service infrastructure, which is owned by the European Commission and connects the member state national contact points, which serve as national gateways for the exchange of patient data.

The cross-border ePrescription/eDispensation service allows EU citizens to obtain their medication in a pharmacy located in another EU country, thanks to the online transfer of their electronic prescription from their country of residence where they are affiliated, to their country of travel.

This means that Czech citizens will be able to pick up their medicine on the basis of an electronic prescription prescribed by their Czech doctor. Visitors from other EU countries will be able to pick up the medicine if it was prescribed on an electronic prescription by a doctor in their country.

2. Benefits

The benefits of the services are direct for citizens, as they will be able to pick up their prescribed medicine in another EU country, without the need to have the prescription on paper, as was the practice until now.

The described service directly supports the freedom of movement of European citizens between Member States by facilitating the possibility to easily pick up their prescribed medicine, when they are in a Member State that is not their country of affiliation. Czech as well as European citizens are the beneficiaries of the service.

3. Key success factors

- Cross-border co-operation with European Commission and other EU member states within the MyHealth@EU infrastructure
- Co-operation with State Institute for Drug Control as the authority responsible for the national electronic prescription system.

4. More information

More information can be found at:

<https://www.nixzd.cz/verejnost>

<https://www.epreskripce.cz/projekt-preshranicni-vymeny-ereceptu>

Czech Republic | Patient Access to Health Data on Citizen Portal

Relevant Key Dimension(s)

User centricity

Life event

Health

1. Good practice description

The National Contact Point for eHealth (NCPeH) is a public administration information system, whose primary function is the cross-border exchange of health data between authorized healthcare professionals – doctors and pharmacists.

The NCPeH operator has decided to use the existing Citizen Portal services to provide citizens/patients with secure access to their health data that is exchangeable through the MyHealth@EU services. The “Medical Documentation” tile in the Citizen Portal will provide the citizen with access to his or her patient summaries, which are available from the connected hospitals (<https://www.nixzd.cz/poskytovatele>).

2. Benefits

- 859 437 requests, 7827 transferred documents

3. Key success factors

- Good and efficient cooperation with Ministry of Interior and National Agency for Communication and Information Technologies

4. More information

More information can be found at: <https://obcan.portal.gov.cz/prihlaseni>

Czech Republic | On-line Creation of Companies

Relevant Key Dimension(s)

User Centricity, Cross-Border Services

Life event

Business Start-Up, Career

1. Good practice description

The system run by the Notarial Chamber of the Czech Republic allows the citizen to establish a company fully on-line and in real-time.

The core of the solution is the on-line interaction between the client and the notary based on a secured videoconference interconnection. At the same time, the notary provides the client with legal advice. Based on the clients' needs, the notary draws up the articles of association in the form of an electronic notarial deed, which bears the electronic signatures of the client and the notary. The final step is the registration of the company with the Business Register carried out directly by the notary.

Following technological instruments are used in the solution:

1. Java 11 (Wildfly application server),
2. TypeScript (React),
3. ffmpeg (video processing),
4. Websocket, Rest and Soap communication.

2. Benefits

- The highest security levels: on-line authentication of the client using eID/banking identification tool combined with videoconference connection. One more element strengthening the reliability of the authentication: the notary is able to read out the citizen's photograph from the Citizens Register and compare it thanks to the videoconference connection.
- Since its launch on 1st September 2021, the system has been used more than 1,200 times.

3. Key success factors

- Scope of usage is not limited to the establishment of companies, it enables the clients also to perform amendments to the structure of the company, e.g. appointment of a director, or to certify an electronic signature.
- The notary is able to provide the client on-line with a qualified electronic signature, which can be used also for other purposes.

4. More information

More information can be found at:

<https://www.nkcr.cz/sro-online-informace>

<https://obcan.portal.gov.cz/prihlaseni> (upon logging in to the Citizen's Portal)

Denmark | Digital Certificates and Apps

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business StartUp, Family

1. Good practice description

In recent years, the Danish Government have made it possible for citizens to use apps as a voluntary digital alternative to the national Danish Health Insurance Card and the Danish Driving Licence card. Furthermore, with the Digital Post App, people can access most of the functionalities that are available on the national citizen portal, including reading, writing, replying, and deleting their Digital Post from authorities. These digital certificates and app solutions make it possible for Danish citizens to have all their public ID cards and digital communication channels on a single digital mobile device.

2. Benefits

- 1.3 million citizens have downloaded the Digital driving licenses app in the course of 2022
- 2.2 million citizens have digital Health Insurance Cards.
- Both Card Apps are used around 45.000-49.500 times per day.
- 4.6 million citizens receive Digital Post from public authorities (76% of the whole population).

3. Key success factors

- High user satisfaction (4.4 out of 5 stars on user reviews from IOS) and number of uses makes the apps an essential supplement to physical solutions in a digital decade.
- At one point in 2022, the Agency for Digital Government app solutions ranked number 1, 2 3, 4, and 5 on App Stores most downloaded list.

4. More information

More information can be found at: <https://en.digst.dk/systems/>

Denmark | Rollout of the 3rd generation of eID scheme (MitID)

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Studying, Family, Career

1. Good practice description

Throughout 2022, all NemID users have been migrated to MitID: Denmark's 3rd generation infrastructure of digital ID. MitID satisfy the newest requirements for security and is adapted to new technologies and future needs. Like its predecessor, it's used to access all public services, all internet payment and banking services, as well as a substantial number of other private services. As a new cross-border feature, MitID accommodate foreign passports or ID cards with a chip. In addition to a strong partnership with the financial sector, the rollout was accompanied by a comprehensive information campaign.

2. Benefits

- A smooth transition to one secure national eID solution across sectors used by all Danish citizens from the age of 13; provides access to all public digital services (more than 300 public service providers) and a large number of private digital services (more than 700 private service providers) such as banks, insurance companies and other private companies for validation of payment transactions.
- It is possible for Danish citizens to use their national eID across EU borders and access self-service solutions in those EU countries where solutions have been developed for this purpose and identity matching is in place.
- Throughout 2022, 99.2% (5 million citizens) of NemID users migrated to MitID and 95% of all eID transactions are now done through MitID.

3. Key success factors

- Public-Private collaboration. MitID as well as NemID is envisioned and jointly developed by the Danish Agency for Digital Government and Finance Denmark; a unique and well-established partnership between the public sector and an organisation representing the Danish financial institutions. This collaboration made the rollout a joint public/private effort.
- A comprehensive information campaign. The rollout was accompanied by an advertisement and promotion campaign targeted all citizen groups. The information campaign was advertised in newspapers, television, public transportations, and relevant websites.

4. More information

More information can be found at: <https://en.digst.dk/systems/mitid/three-generations-of-eid-in-denmark/>

Denmark | Network for Digital Inclusion

Relevant Key Dimension(s)

User centricity, Transparency

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

Since 2015, the Agency for Digital Government has facilitated a nationwide network whose main objective is supporting and enhancing digitally challenged residents' possibilities of participating in the digital society. Network for Digital Inclusion consists of about 70 different organizations, central, and local government authorities, as well as other entities working with digitally challenged residents. The network organizations represent groups with physical and cognitive disabilities; the elderly; immigrants, and socially vulnerable people. The network helps identify and qualify digital issues, and generate ideas and initiatives on how to support the different groups in staying or becoming adequately digital to be selfreliant.

2. Benefits

- Securing high quality in communication materials, guides, publication, and such.
- Generating ideas for concrete initiatives, products and solutions to address digital issues.
- Passing on new knowledge, relevant guides, and tuition materials targeting the digitally challenged part of the population.

3. Key success factors

- Reduce the share of digitally-challenged citizens.
- Generate digital-services solutions that embrace groups with special needs.
- Securing a digital transformation that works for all citizens.

4. More information

More information can be found at: [www.https://en.digst.dk/digital-services/digital-inclusion/](https://en.digst.dk/digital-services/digital-inclusion/)

Estonia | Neurokõne

Relevant Key Dimension(s)

User centricity, Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

Neurokõne helps to provide more accessible e-services. This can be used as a basic component for all public services which enables visually impaired people to consume e-services more comfortable manner. This can also be used in network applications.

Neurokõne is a prototype of Estonian neural speech synthesis developed by the [NLP research group](#) at the [University of Tartu](#). The model has been trained on Estonian news and literature corpora. The system is currently able to imitate the speech of six different speakers. Although the project is not finished, we can already see that a neural speech synthesis model sounds much more natural when compared to previous approaches.

2. Benefits

- There are 200 000 visually impaired people in Estonia and 2000 blind people who can benefit this service

3. Key success factors

- Cooperation
- Science

4. More information

More information can be found at: <https://neurokone.ee/>

Finland | Suomi.fi e-Authorizations

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

Suomi.fi e-Authorizations make it possible to act on behalf of other persons, companies, associations or other organisations.

In Suomi.fi e-Authorizations, private persons, companies, associations and other organisations can authorise a person, company, association or other organisation to act on their behalf. A mandate is an electronic power of attorney. The digital mandates are saved in the Mandate Register of Suomi.fi e-Authorizations, where the verification of the authorizations is done.

When the user selects to have someone else use the service on their behalf, a mandate check query is made to the e-Authorizations service. The e-Authorizations service retrieves the data from the basic data registers and/or the Mandate Register and returns the response in real time to the e-service. The answer is given as either Yes or No or as a list of mandate themes approved in the e-service.

2. Benefits

The e-Authorizations service offers numerous benefits for both service providers and end users:

- for service providers: an automatic and reliable check of mandates and rights in real time; savings through the digitalisation of transaction and service processes
 1. Cost savings estimated for organizations in Finland are 6–10 € per single transaction, compared to paper-based acting on behalf of citizens or organizations
- for end users: a better service experience – efficient self-service for end users regardless of place and time
 1. Substantial time and cost savings for citizens when no need for writing and managing paper mandates
 2. No need to physically visit customer service points
- reducing the risk of malpractices

Suomi.fi-e-Authorizations: Extent of use

- In use in more than 200 different digital services in Finland + all of Finland's over 800 pharmacies accept digital mandates also in physical, over the counter transactions.
- Over 4 million authorization queries per month.
- 20 million digital mandates created by citizens and companies in the Suomi.fi-national portal.

3. Key success factors

- the e-Authorizations service retrieves the data from the basic data registers (The Finnish Population Information System, Finnish Trade Register, Finnish Register of Associations, the Mandate Register etc.)
- each e-service independently determines which roles entitling to representation or what kind of mandates granted in Suomi.fi e-Authorizations people need for carrying out transactions in the service
- the Suomi.fi Data Exchange Layer

4. More information

More information can be found at:

<https://palveluhallinta.suomi.fi/en/sivut/valtuudet/esittely> (for e-services)

www.suomi.fi/instructions-and-support/e-authorizations/what-is-suomifi-e-authorizations (for citizens)

France | Proactive administration

Relevant Key Dimension(s)

User centricity, Key enablers

Life event

Moving, Transport, Studying, Family

1. Good practice description

In its new Strategic Roadmap for eGovernment, the French Government plans to use data as a lever for a strengthened Proactive Administration, notably in order to fight the non-take-up. The idea is to go from a “once-only” principle to a “never tell us” principle. The objective is to use available data to make rights directly available for users, notably regarding the Government’s political priorities (ID card renewal, social fares for transports, electoral registration, youngsters in a dropout situation, student life, etc.).

2. Benefits

- **Users don't have to prove their status anymore to get a benefit.**
 - For example, students receiving a state or regional grant are eligible for €1 meals in collective student restaurants. Using the new API « scholarship status », the organization in charge of catering was able to automatically allocate the €1 meals to concerned students (more than 700 000 students).
- **Every potential recipient knows about his rights and, if possible, each right is granted automatically**
 - For example, the “energy voucher”, which allows users to pay for any energy bill was sent automatically to every eligible household (12.6 millions).
- **Services don't have to manually process eligibility files**
 - For example, the complementary health insurance is granted automatically to every recipient of the solidarity income, without services nor users having to fill up the detailed form

3. Key success factors

- Short-term, "run-of-the-mill" projects (3-6 months)
 - To demonstrate feasibility and bring quick gains to users (e.g., targeting large family cards, social solidarity pricing for transportation with communities)
 - To test the integration of new use cases into interministerial capitalization systems
- Incremental provision of an interministerial data sharing system ("Datalab" ; see below), used to create new proactive actions (information or automatic attribution)
- Availability of interministerial targeting and calculation tools
- Ability to link fiscal and social situations on the one hand and, on the other, the gradual harmonization of criteria for granting rights
- Financing and support for proactive actions

4. More information

More information can be found at:

France | Public start-ups/"Beta" method

Relevant Key Dimension(s)

User centricity, Transparency

Life event

Regular Business Operations, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Career

1. Good practice description

In its new Strategic Roadmap for eGovernment, the French Government plans to enhance and disseminate the "Beta.gouv.fr" or "Public Startup" methodology for the development of digital services, which replicates the "Lean Startup" methodology in an administrative environment. The philosophy behind this approach is to allow for a more entrepreneurial approach to the development of digital products, focusing on social impact of digital projects all whilst mitigating financial risks.

2. Benefits

- The "Public Startups" model for development allows public administrations to take entrepreneurial risks when developing new digital services, all whilst mitigating financial risks. Numerous products such as "Mon Entreprise" (originally designed to encourage business owners in the UK to relocate to France by explaining the French fiscal system, but which ended up having a higher adoption rate amongst small-business owners in France) would not have been able to pivot and find new audiences without the flexibility afforded by the framework.
- The model also allows for greater user-centricity when designing digital services. A service such as "Signal Conso" which allows consumers to file small claims when their rights as consumers over any disputes with private businesses would never have worked without strong buy-in from private businesses. The "Public Startup" model allowed the public administration building the product to build the product in collaboration with private business stakeholders, by iterating rapidly and asking for direct feedback from stakeholders after each iteration.
- The cost for development of digital services using this methodology is also considerably lower than using traditional methodologies (such as waterfall). For instance, a product such as "Demarches Simplifiées" costs 1 200 000 € annually, and has allowed the instruction of over 300 000 000 forms in 2021 alone (bringing the cost down to 40 cents per form, compared to 7 € per form if public administrations continued to use paper)
- A 2020 report by the "Cour des Comptes", the French Government's auditing body, estimated that a staggering 46% of major IT projects failed. These failures are very costly, with many projects having an estimated budget of above 9 million euros. The "Public Startups" methodology caps starting costs for all projects at circa 400 000€ per annum, and allows the public administration to discontinue the project at any time if the services do not meet their targets in terms of real world impact.
To date, over a 100 digital products have been terminated within one year of being launched since 2015, all with overall costs kept under 400 000€ each.

3. Key success factors

- Creating "incubators" in ministries and administrations to let our teams work in a flexible environment, with low constraints
- Encouraging our teams to test, maybe fail, learn, and test again

4. More information

More information can be found at:

- <https://beta.gouv.fr/> ;
- <https://doc.incubateur.net/communaute/je-ne-travaille-pas-chez-beta.gouv/bilan-2021-du-programme-beta.gouv#bilan-2022> ;
- <https://doc.incubateur.net/communaute/gerer-sa-startup-detat-ou-de-territoires-au quotidien/gestion-administrative/guide-de-financement-des-startups-detat/1-reperes-pour-decideuses-et-decideurs-publics-sur-le-cout-des-services-numeriques> ;
- <https://dashlord.incubateur.net/>

France | DataLab

Relevant Key Dimension(s)

User centricity, Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

In its new Strategic Roadmap for eGovernment, the French Government plans to establish a new "Datalab" hosted by the Interministerial Digital Directorate. Its objective is to help data project leaders succeed in order to modernize policy-making, public action, etc. It will exploit the data useful for the modernization of public policies in their management or their proactivity.

It will be able to initiate projects internally by launching new conquests or support projects piloted by administrations, public establishments of local authorities and persons under public or private law responsible for a public service mission. The idea is to provide administrations with a legal and technical safe place for the experimentation regarding the use of data (open but also secret).

2. Benefits

- Costs, non-recourse and violence avoided, improved quality of public debate, reduced delays, administrative simplification, etc.

3. Key success factors

- Develop within the administration a product culture including continuous improvement, with an incremental strategy and a focus on impact.
- Initiation and acceleration of data projects thanks to the contribution of material, technical, human and legal resources.
- All projects must follow an incremental approach. The impact on public policies at each level of deployment, the strategy to achieve the milestones and the indicators selected must be clearly defined before their launch.
- Designation of the Interministerial Digital Directorate (DINUM) as a coordinator and single entry point for administrations in the context of the European Data Governance Act (DGA)

4. More information

More information can be found at: <https://www.numerique.gouv.fr/espace-presse/stanislas-guerini-guichet-10-millions-deuros-projets-exploiter-donnees-publiques/>

Germany | Wirtschaftsserviceportal NRW

Relevant Key Dimension(s)

User Centricity, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Business Start-Up

1. Good practice description

The Business Service Portal North Rhine-Westphalia (NRW) is the central digital gateway for businesses in North Rhine-Westphalia. With the concentrated approach for "open source", standardization and development of online services in a modular system, a future-proof platform solution was created with the WSP.NRW, which can deliver client-related application data nationwide fully digitalised. All online procedures in NRW are made available to other authorities across states and levels in a micro-service architecture according to the so-called one-for-all principle.

Since 2022, North Rhine-Westphalia has been also one of the responsible authorities for the German Register Modernization Program, which deals i.a. with the implementation of the once-only principle. In 2023 NRW became responsible for the program area dealing with the connection of German online procedures and registers to the European Once-Only-Technical System (OOTS) to fulfill the requirements of the Single-Digital-Gateway Regulation. In cross-border piloting projects with other member states, such as Austria and the Netherlands, central infrastructure components like an intermediary platform and an SDG connector are being developed and tested. It is also planned to involve other member states in this cooperation.

2. Benefits

- More than 400 business-related administrative services plus basic services, e.g. start-up assistant, for joint use and subsequent use for other authorities
- Piloting the once-only principle for retrieving evidence using newly developed SaaS components that can be made available for subsequent use nationwide and for all administrative areas on different administrative levels
- Implementation of the requirements from the Single Digital Gateway Regulation in the business area

3. Key success factors

- Concretisation and parameterisation of the technical solutions through an agile approach
- Implementation of full digitalised processes both in the frontend and via standardized interfaces to specialised processes; Application data are standardized as XÖV modules
- Technical parameterisation/client capability through its microservice architecture
- Factory based process approach
- Sustainable legal framework through WiPG NRW
- Development of online services as MVP in so-called digitisation lines in an modular system

4. More information

More information can be found at: <https://service.wirtschaft.nrw/>

Germany | Administration Cloud

Relevant Key Dimension(s)

Transparency, Key enablers, Digital Sovereignty

Life event

Administration

1. Good practice description

Cloud computing has grown into a major paradigm in the IT-world – this applies for the administration as well; at the same time, a number of clouds are already in use in the German public administration at federal, state and local level. However, because the individual technical structure as well as the cloud stacks, used by these clouds are not standardized, they are (if at all) interoperable with each other only to a limited degree. Thus it is at least difficult to share cloud services or at least to reuse applications in the different clouds. Therefore the IT Planning Council decided to build up a federal multi-cloud. The underlying strategy is intended to introduce uniform standards and open interfaces as a means of establishing an interoperable multi-cloud infrastructure across the board. The primary goal is to provide the option of using cloud services and software solutions on reciprocal basis; a further goal is to reduce critical dependencies on individual vendors through its standardized, modular IT architectures. The realization of the multi-cloud is already in progress; the second version of the architecture framework is in effect. A minimum viable product is already in use.

2. Benefits

- reduces dependencies and strengthens digital sovereignty
- increases efficiency and effectiveness in development, implementation and operation
- ensures and strengthens privacy and information security
- optimises data exchange, shared storage and use by federal, state and local public administration

3. Key success factors

- can be used by IT service providers on a federal, state or local level
- enables the IT service providers to share cloud services and to reuse applications
- reduces costs

4. More information

More information can be found at www.it-planungsrat.de/foederale-zusammenarbeit/gremien/ag-cloud-computing-und-digitale-souveraenitaet

Germany | Electronic Federal Legislation Procedure (E-Gesetzgebung) & Electronic Promulgation of Federal Laws and Regulations (E-Verkündung)

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Regular Business Operations

1. Good practice description

The Electronic Federal Legislative Procedure (E-Legislation/E-Gesetzgebung) project aims to map the legislative process at the federal level completely electronically, without media discontinuity and in an interoperable manner. Existing media discontinuities in the process within the federal government and between the federal government, the German Bundestag and the Bundesrat will be eliminated. Thus, the legislative work will be made modern and future-proof by focusing on current technological developments.

To ensure the digitisation of the entire legislative cycle, the E-Legislation project works closely with the E-Promulgation (E-Verkündung) project:

Since January 1, 2023, all German federal laws and regulations are promulgated on a digital internet-platform operated by the federal government. This new electronic Federal Law Gazette replaces the previous promulgation in paper form and is the only legally binding version.

In a second stage of the E-Promulgation project, the administrative processes preceding the promulgation, such as the countersignature of the original laws, will also be digitised.

2. Benefits

E-Legislation provides the following benefits:

- Digital collaboration without media discontinuity
- Increasing efficiency and reducing redundancies
- User-friendly and accessible interfaces for complex applications
- Integrated ecosystem of relevant drafting tools and convenience functions

E-Promulgation represents an important additional step towards the digitisation of the entire legislative cycle. It increases the accessibility and usability of the Federal Law Gazette and makes the administrative processes behind it more efficient and free of media discontinuity.

Both projects are crucial for the digitisation of the legislative cycle.

3. Key success factors

- E-Legislation is being developed using agile methodology. A phased deployment enables the early use of already available services and thus a user-centric, feedback-oriented development and implementation.
- An open source approach enables digital sovereignty and comprehensive reusability of the E-Legislation.
- Easy, free and barrier-free access to the Federal Law Gazette (Open Data).
- Close coordination with other projects taking forward the future digital legislative cycle.

4. More information

More information can be found at: <https://plattform.egegesetzgebung.bund.de> and <https://www.recht.bund.de>

Greece | Starting a sole proprietorship

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Business Start-Up

1. Good practice description

The digital public service of establishing a privately owned business provides an one-stop shop paperless and relatively simple 5-clicks process to the user. The service incorporates interoperability with five national registries enabling data fields to be retrieved ad-hoc by the system and also, several eligibility and validity checks to be automatically performed. At the same time, the output of the service, the Business Commencement Certificate, is an official greek public document which is available online and serves as a prerequisite for related procedures. It is important to note that the online service can be consumed by a third person acting on your behalf, if he/she has been duly authorised for this purpose from within the service application. This service entails the approval of the competent tax authority, as well as the registration in the General Electronic Commercial Registry (GEMI) and the National Social Security Agency (EFKA).

2. Benefits

- A paperless, efficient, time and cost saving public service for businesses
- Consume the service in a centralized public services portal rather than having to visit different Competent Authorities portals to complete different steps of the procedure
- Pre-filled forms and system checks and error/warning messages that guide the user throughout the service
- Reduction of administrative cost - Five (5) different transactions with relevant public authorities are now replaced by one digital application through central portal gov.gr
- 56% reduction in administrative cost – 9,7 million euros <https://diadikasies.gov.gr/metriseis/e967b62d-76cb-4688-92f7-6caaab985ff1>
- Reduction of time required for the provision of the service: Start up a sole proprietorship in 5 minutes

3. Key success factors

- Interoperability with Taxation Registry (Taxisnet), National Social Insurance Agency (eEFKA), General Commercial Registry (GEMI), National Communication Register (EMEP), Real Estate Identification Number (ATAK)
- Online availability of the service outcome – an official greek public document in digital format (QR, Digital Seal, Verification ID)
- Email/sms notification at process completion
- Authentication of users – Using Taxisnet credentials to log in
- Extraction of data through interoperability of public registries

4. More information

- [Govgr service link](#)
- [User manual](#)
- [Business Commencement Certificate download link on myAADE portal / Register & Contact](#)
- [Online Business Commencement Certificate validity check](#)
- [Procedure in Mitos](#)

Greece | National Registry of Administrative public Services – MITOS

Relevant Key Dimension(s)

User centricity, Transparency

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

The National Registry of Administrative Procedures aims at recording, mapping and modelling the administrative procedures of the State. Citizens, businesses, and civil servants using MITOS are expected to enjoy the following advantages:

- Drawing on a single reference point of reliable and up-to-date information on the obligations and actions due, the relevant legal framework, the application forms, the supporting documents, and the steps to be taken to implement each administrative procedure of the public sector.
- Standardization of information and how to process and provide services, to be handled in the same way by all materially competent bodies.
- Facilitating review and study of administrative procedures from a single point of reference to identify problematic points that need to be simplified or redesigned.

2. Benefits

- Transparency
- Complete list of existing administrative procedures
- Detailed and user-friendly information on the individual fields of each administrative procedure
- Citizens' reporting platform on unupdated or unregistered procedures
- Possibility for any user to submit a proposal to simplify or redesign a process
- Easy export of statistics

3. Key success factors

- User centered design and experience
- Interoperability with other central platforms (e.g. PSC portal, back-office KEP etc)

4. More information

By the end of February 2023 MITOS listed:

2,554 services in Greek

331 services in English

Link for the service: <https://mitos.gov.gr>

Link for the service (in English): <https://en.mitos.gov.gr>

Greece | Gov.gr Wallet (Digital Wallet with Digital ID, Driving License, and more documents)

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

Gov.gr Wallet is a digital wallet app which allows citizens to issue, store, and use their digital ID and digital driving license. It also allows them to issue, store, and use the official disability card, the unemployment card, and a vehicle information card (insurance, etc) in tandem with the Athens Ring allowance card (only specific vehicles can enter downtown Athens as per environmental regulations.)

Further, Gov.gr Wallet allows the utilization of the issued cards through a consent mechanism. For instance, before a bank clerk, the citizen in order to verify themselves, would simply have to tell the clerk their ID number, then receive a push notification, approve the transaction, and only then, would the clerk/bank receive an official digital copy of the citizen's ID data. Another similar example is the integration with the Aegean Airlines check-in process.

2. Benefits

- Easy of use (no need to carry paper/print copies anymore)
- Streamlined issuance and use
- Domestic applicability for all possible uses of ID (travel, courts, loans, police identification, etc)
- Almost 2 million documents issued (period: July 2022 till December 2022)
- Data ownership and control (share only when you want)

3. Key success factors

- User-centered design and experience
- Heavy use of interoperability
- Creating a "Wallet as a Platform" via the consent mechanism/integrations
- Security of transactions (everything is E2EE, OTP use, etc)

4. More information

More information can be found at:

<https://wallet.gov.gr>

https://en.about.aegeanair.com/media-center/press-releases/2023/aegean_digital_service/

Hungary | Automated driver's license document issuance

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Transport

1. Good practice description

In case all legal conditions required for issuing the first driver's license, or the exchange of a driver's license due to expiry or category expansion, or the exchange of documents due to a name change resulting from marriage are met, the license to drive is immediately registered in the road traffic registry, and the new driver's license document is issued and sent to the client automatically.

During the process, the client only has to make a declaration for the issuance of documents online via the Magyarorszag.hu national single point of contact portal, and take the required tests (first aid, category test, medical aptitude test). Further on, the issuing bodies send their certificates of the necessary tests electronically to the specific sectoral information system (VEN) that manages the driver's license registry, and then issuing the document is done automatically.

As a result of the related development on the driver's license registry, and the amendment of the related law, since January 2023 the driving license can be also queried by the controlling authorities via a standard interface online, directly from the registry, therefore the drivers do not have to have the actual documents with them anymore when driving within the country.

2. Benefits

- There are yearly 300 thousand driver's licenses issued (new and renewed together), which became a lot simpler on the government's side and a lot more convenient on the client's side
- The drivers do not have to have their driving documents with them when driving in the country, the controlling authorities access the registry directly online, in real-time

3. Key success factors

- Automation of data exchange between key stakeholders of the whole process (testing authorities, medical general practitioners, driver's license registry, central ID photo and signature data records, etc.)
- The VEN system automatically provides data on the client's driving rights for the controlling authorities

4. More information

More information can be found at: https://www.magyarorszag.hu/szuf_ugyleiras?id=6cbaaad5-97fb-4137-85af-858a6253afd6

Hungary | EESZT National eHealth Infrastructure and Citizen portal

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Health

1. Good practice description

The EESZT National eHealth Infrastructure is a central IT system which ensures communication and collaboration between healthcare service providers. The system transfers the health data of every patient to a central cloud-based database within the Government Data Centre, which the various health professional can consult through the corresponding hospital, general practitioner or pharmacy systems with the appropriate authorisations.

The services of the EESZT provide information to health professionals about the patient, allowing them access to information about any drugs, referrals or medical records prescribed by other therapists. This greatly improves the quality and effectiveness of healthcare, as unnecessarily repeated examinations can be avoided, and health professionals get a much more accurate picture of their patient which promotes a more definite diagnosis and faster recovery.

Meanwhile, citizens have access to the data concerning their medical treatments through a single portal: personal health records can be accessed on the Citizen portal of the EESZT, following eID authentication. The portal contains all medical data uploaded to the EESZT cloud after 1 November 2017 by institutions who joined the service.

2. Benefits

- Data transfer between various health care institutions and health care professionals through a central cloud, improving the quality and effectiveness of healthcare
- All citizens can access all their electronic health records online with an eID authentication, and can consult all data on who, when and for what purpose accessed their medical data in the system, and can restrict or give access to different healthcare stakeholders
- After the first five years of its existence, at the end of 2022 2 billion healthcare data, more than 500 million medical care events and more than 250 million EHR documents were available in the EESZT cloud
- Daily 800 thousand ePrescriptions are being issued (96% of all prescriptions dispensed)

3. Key success factors

- More than 300 outpatient and 100 inpatient institutions (practically all publicly funded healthcare institutions), 10 thousand private healthcare providers and more than 3200 pharmacies are interconnected via the EESZT
- 35000 doctors, 14000 pharmacists and more than 6000 general practitioners are using the system daily
- Daily 40 thousand citizen logins done to the eeszt.gov.hu Citizen portal

4. More information

More information can be found at: <https://e-egeszsegugy.gov.hu/web/eeszt-information-portal/home>

Hungary | MIA Chatbot – AI supported chatbot of the Government Hotline

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

In order to modernize the 1818 Government Hotline the MIA hybrid chatbot supported by artificial intelligence have been introduced in May 2021. The chatbot responds to inquiries using a combination of artificial and human intelligence. Based on the communication of the customer service operator, the bot offers response options to the operators, and then continuously learning from the accepted response suggestions, it can enter into fully automatic mode. The AI backed MIA chatbot helps to initiate simpler cases in different life events, as well as makes communication between the client and the Government Hotline more efficient.

The MIA chatbot currently provides assistance to citizens in using the Client Gate service, the Company Gate e-delivery service for businesses, as well as related to the chimney inspection service. For 2023 it is planned to further expand the use of MIA chatbot related to further services, with new functions.

2. Benefits

- In 2022 the Government Hotline (1818) answered more than 600 thousand customer questions via the MIA Chatbot service
- 38 % of these questions were answered automatically, 60 % has been answered semi-automatically (when the operator chose from the options suggested by the bot), and only 2 % needed manual answering

3. Key success factors

- Continuously learning algorithm
- Allows to alleviate labour shortages in the Government's customer service

4. More information

More information can be found at: https://www.magyarorszag.hu/szuf_hir?id=d466718f-b5e8-4dc5-8343-7c0305339dfd

Ireland | Designing Our Public Services – Design Principles for Government in Ireland

Relevant Key Dimension(s)

User centricity

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

Ireland's design principles "Designing Our Public Services", reinforces our existing design mind-set and approach and should enhance the design of our future public services in Ireland.

This is not design that is limited to aesthetic considerations – but the holistic design of service experiences & delivery, focused on the needs of people.

Designing our Public Services is an aid for public servants in continuing to put people at the forefront of service provision. These principles should serve to empower our Public Service to use powerful design tools and techniques to deliver human-centric and inclusive solutions to complex social issues.

The 10 design principles complement our existing service design approach including, the UX checklist, site guide, style guide and content guide used, for example, by gov.ie.

2. Benefits

- Increased satisfaction and engagement
- Increased accessibility
- Commonality across government
- Increased efficiencies and cost savings

3. Key success factors

- Successful adaption across government departments
- Increased accessibility and satisfaction
- Increased analytics, planning and quality assurance

4. More information

Designing Our Public Services: <https://www.ops.gov.ie/designprinciples/>

UX checklist: <https://www.gov.ie/en/publication/efad0-digital-ux-checklist/>

A very popular example of a content guide can be seen here:

<https://www.gov.ie/en/publication/cb5e4-how-to-create-content-in-a-crisis/>

Iceland | Digital agency from A to Z

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Business Start-Up, Studying, Family, Career

1. Good practice description

Digital agency from A to Z.

Supporting agencies to become fully digital by bringing the knowledge and tools needed. Digital Iceland provides consultation as well as the tools and digital assets needed to transform services and make them fully digital. Bringing knowledge and funding, Digital Iceland supports agencies by analysing service processes, creating a roadmap, prioritizing projects, digitizing service processes, setting up API services, and implementing them both internally as well as externally. In only two years the District Commissioners have become fully digital when it comes to customer service and four of Iceland's largest service agencies have already started undergoing the process of becoming digital from A to Z.

2. Benefits

- Agency acquires digital competence through Digital Iceland consulting and support.
- Digital infrastructure and implementing the Digital Iceland product portfolio, also referred to as digital core services.
- District Commissioners have become fully digital in only two years through Digital Iceland consultation and implementing the Digital Iceland portfolio.
- District Commissioners provide services for at least twice a year for all Icelanders. By digitizing the services, the lives of all living in Iceland are simplified, agency employees can provide faster, better and paper free service.

3. Key success factors

- At the end of 2023 all services at the District Commissioners will be available through a digital process.
- Icelandic Transport Authority has moved all services for vehicle ownership through the Digital Iceland portfolio so all information regarding ownership is available through My pages at [Ísland.is](#).

4. More information

More information can be found at:

<https://island.is/en/o/district-commissioner>

<https://island.is/en/o/digital-iceland/island-services>

<https://island.is/en/o/digital-iceland/island-services/my-pages>

Iceland | Government agency websites

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

All services from the government agencies in one place.

Life event

Regular Business Operations, Moving, Transport, Health, Business Start-Up, Studying, Family, Career

1. Good practice description

Government agency websites are for government agencies that want to help their users directly access the content. The agencies also enjoy the advantages of using shared tools, such as the Island.is design system, content strategy, accessibility strategy and the operational support of Island.is

The District Commissioners (DC) were the first agency to move their website to Island.is, and that decision resulted in great progress in services to the public, but every year about half of the citizens use the services of the offices in one way or another. The DCs set a goal to be a leader in government e-services with the vision of providing excellent services regardless of residence and location, wherever and whenever, according to what suits the public at any given time.

2. Benefits

- Better use of our common funds; invest for the future, open AI and better service for less.
- The websites use the design system to provide a uniform user experience, both via desktop browser and a mobile browser as well as those who use screen readers or text to speech software.

3. Key success factors

- Willingness of the government agencies to implement their agency websites to Island.is
- The design system; makes it easier and more economical for us to quickly launch new services and greatly simplifies the operation and maintenance of digital public services.

4. More information

More information can be found at: www.island.is/en/o/digital-iceland/island-services/organization-pages

<http://www.island.is/en/o/digital-iceland/development>

Iceland | life events

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Transport, Health, Studying, Family.

Strategic focus on key life events and prioritizing and linking to all digital projects. life events are linked to all digital procedures as well as content creation. Focus on digitizing and creating content around “Learning how to drive” and “Loosing a loved one” with the goal of simplifying people’s lives by rethinking serviced with “User Experience” as a guiding light.

1. Good practice description

“Learning how to drive” seems simple on the surface, except maybe for the student sitting behind the wheel. In Iceland, there are 3 agencies that handle the process in addition to driving instructors and driving schools. The procedure was analysed from A to Z from the user viewpoint. The process of “Learning how do drive” and acquiring a driver’s license used to be a heavy paper process, but is now fully digital, starting when the user sends a digital application and ending when a digital driver’s license is delivered to the user. The student applies through the government portal Ísland.is and can follow the progress of the study on Ísland.is My pages. The driving instructor and driving schools feed data like study progress through Ísland.is as well. The three agencies responsible automatically share data between themselves through APIs. This means that data is exchanged between agencies in a secure way and instead of the student being required to transport physical documents between entities.

2. Benefits

- All driving students can apply and follow up on the real time progress of their studies online through Ísland.is.
- Data is transported in a secure way through APIs / X-road.
- In Iceland there are about 7500 individuals who learn how to drive every year. A process that used to include a lot of paperwork but is now fully digital. Now the driving students don’t have to visit different agencies with documents and the agencies’ employees don’t have to do any paperwork. The data is automatically transferred between agencies and into the agencies systems.

3. Key success factors

- Willingness of agencies to cooperate and optimize their services.
- Digital Iceland design system with the focus on user focused design.
- Digital Iceland core services that enabled the agencies to cooperate.

4. More information

More information can be found at:

<https://island.is/en/news/the-book-you-never-lose-digital-book-for-driving-lessons>

<https://island.is/en/b-category-and-first-driving-license>

<https://island.is/en/digital-drivers-license>

<https://island.is/en/life-events/transport>

Italy | National Registry Programme

Relevant Key Dimension(s)

Key enablers, Cross-Border Services

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

The National Digital Data Platform is an infrastructure aiming at allowing the interoperability among public administrations in a secure and simplified way. The platform is designed according to the "Guidelines on the technological infrastructure of the National Digital Data Platform for the interoperability of information systems and databases" and is at the core of the "National Registry Programme" ("Programma Anagrafi") which enables all public administrations to reuse and share data and documents through machine to machine communication, upon the user's approval. The integration of databases and services generates an ecosystem that ensures a virtuous data quality management cycle and implements the once-only principle. The initiative, launched in Q2 2021, and currently supports 185 organizations among which 8 Central Administrations, 159 Local Administrations and 18 Public Service Managing Authorities.

2. Benefits

- Provide an ecosystem of certified data, updates in near-real time and not duplicated (ie aligned with the master data of the owner administration);
- Optimize the operations and the quality of the data of existing registries;
- Accelerate the De-Certification process, making the entire information assets accessible to the public and private sector in compliance with the current regulatory framework;
- Encourage the development of integrated and proactive intra-public sector and extra-public sector services.

3. Key success factors

- Possibility for citizens to access different public services from a single website and, according to the Once-Only Principle, entering their information just once.
- Enable different public administrations to share data and keep their registries always updated.

4. More information

More information can be found at: <https://www.interop.pagopa.it>

Italy | Designers Italia: Evaluation app for user-centric digital service

Relevant Key Dimension(s)

User centricity, Transparency

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

The **Evaluation app** is an automated tool to help verify the correct adherence to the design models for municipalities and schools. It helps to evaluate, both during and after development, the quality of the website and the compliance with the criteria of measure 1.4.1 of the PNRR "Citizen experience in digital public services". The design models allow to create institutional websites and digital services already validated by research and designed on the needs of citizens. The templates provided include ready-to-use guides and resources to help developers to get the job done quickly and cost-effectively.

The design models adhere to national guidelines and digital design best practices; they comply with the key features outlined in the *eGovernment Benchmark Method Paper 2020-2023* in terms of **User centricity** and **Transparency**.

The app is an open-source software based on Lighthouse technology and is available for Windows, MacOS and Linux. Enables website evaluation both locally (for example, a development environment) and online (publicly available).

2. Benefits

The Evaluation App helps public administrations design websites and digital services that provide great user experience to citizens, comply with the most recent regulations, while sharing good design practices through the design models it is built upon.

3. Key success factors

- **Training and dissemination:** the project helps to disseminate the principles, design culture and resources of "Designers Italia" in order to encourage the sharing of good practices among the designers of digital public services, design community and public administrations.
- **The Evaluation App of model adoption** helps the public administration and its suppliers to raise the quality and standards of the country's online public services.

4. More information

More information can be found at: <https://prossima.designers.italia.it/modelli/comuni/adotta-il-modello-di-sito-comunale/valuta-ladesione-al-modello-di-sito-comunale/>

Italy | “PA digitale 2026” platform

Relevant Key Dimension(s)

User centricity, Transparency

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

“PA digitale 2026” is the single gateway that allows the central and local public administrations to access the funds earmarked for the digital transformation projects within the National Recovery and Resilience Plan, hereafter PNRR. Through the platform, central and local public administrations can obtain information about fundings, apply for public tenders, monitor the projects implementation, receive payments and obtain online assistance.

The platform enables the Department for digital transformation to monitor tenders applications, and automatically evaluate and monitor the projects, since it is connected to external databases and third party systems from which it can import data to track projects progress.

“PA digitale 2026” is based on a user-centered approach. Representatives of the public administrations have been involved in the designing and developing process. Moreover, in order to collect feedback and improve usability, two different cycles of usability tests were performed with the participation of representatives from municipalities, schools and health institutions.

2. Benefits

- “PA digitale 2026” introduces a more efficient management system to ensure effective management of the PNRR funding; it empowers the public administrations in expediting the workflow process; it helps the public sector to achieve the goals set by the Digital Decade;
- It is a good example of digitisation of a key service for public sector employees;
- It improves the transparency of public spending.

3. Key success factors

- Almost 19k public administrations are registered on the platform (over 81% of the entire public sector), 26 public tenders have been published through the website, and 65k submissions have been collected by the platform;
- 99% of municipalities and schools are registered on the website; 99% of registered municipalities have applied for at least one tender;
- About 2 bln€ of the PNRR fundings have already been assigned to administrations;
- The platform currently manages and monitors about 47k projects;
- In a recent survey, 97% of users described their interaction with the platform as fairly satisfactory.

4. More information

More information can be found at: <https://padigitale2026.gov.it/>

Latvia | eParaksts (eSignature) mobile app

Relevant Key Dimension(s)

Key enablers

Life event

Business Start-Up, Studying, Family, Career, Regular Business Operations, Moving, Transport, Starting a Small Claims Procedure

1. Good practice description

The eParaksts mobile app is a modern and secure solution for working on eParaksts.lv site and verifying person identity in other information systems thus serving as key enabler. Upon receipt, the user may sign documents electronically, enter into contracts and receive services from authorities and merchants remotely. eParaksts mobile is available free of charge for iOS and Android smartphones.

The app also provides e-Identity authentication on a variety of self-service portals for institutions and companies, including municipal services, house management, medical and insurance service providers.

2. Benefits

- User can sign documents at anytime from anywhere in the world with an internet connection.
- Provides e-Identity authentication on a variety of self-service portals

3. Key success factors

- Increased popularity of use of mobile applications.
- Similar solutions to authentication at online banks, to which mobile users are already used to.

4. More information

More information can be found at: <https://www.eparaksts.lv/en/Produkti/Privatpersonam/mid/apraksts>

Lithuania | An e-solution for people with intellectual disabilities

Relevant Key Dimension(s)

User centricity

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career (please delete non-relevant life events)

1. Good practice description

The number of people with disabilities is constantly increasing both globally and in Lithuania. Approximately 10–15% of the European population have disabilities. It is especially difficult for people with intellectual disabilities to be full-fledged members of the community. Due to their disabilities, such as an inability to read, count, or understand the value of money, people cannot engage in commercial transactions independently, and consequently experience social exclusion. Businesses, in turn, lose potential customers if they fail to adapt their environment for people with intellectual disabilities. Solution (Youth Day Centre) - A mobile application enabling a person with an intellectual disability who struggles to understand the value of money to purchase products at trading venues.

2. Benefits

- It increases inclusion and user-centricity.
- It increases economic activity and reduces dependency.

3. Key success factors

- Engagement with innovative companies via GovTech Lab
- Centralised funding and support for innovation procurement (design contest method)

4. More information

More information can be found at: <https://govtechlab.lt/wp-content/uploads/2022/01/GovTech-Lab-apzvalga-2021-EN.pdf>

Lithuania | VR game “Industrial Panevezys”

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

Human resources: Only 2.5% of students at vocational schools in the Panevezys region study degrees relevant to the engineering industry. One of the reasons for this situation is inefficient career guidance. The city is already implementing initiatives to dispel myths about industrial companies, teach pupils and students about the occupations and career opportunities in city's enterprises, and present the attractive and innovative side of modern industry.

However, organising study visits to companies requires human and time resources which are limited and focused on performing the direct functions of the company. For this reason, companies tend to accept only a limited number of student groups under a pre-arranged schedule. To solve this, Panevėžys Development Agency together with "Iron Cat" developed a game-like educational experience about Panevėžys city industrial companies. Implemented solution was based on virtual reality (VR) technology. It allows the user to virtually visit the manufacturing plants from a spacecraft, completing missions which will require the production of modern industry.

2. Benefits

- Encourages more students to choose engineering in Panevezys.
- Achieves more scale compared to traditional “on-site” visits.

3. Key success factors

- Engagement with innovative companies via GovTech Lab
- Centralised funding and support for innovation procurement (design contest method)

4. More information

More information can be found at: <https://govtechlab.lt/wp-content/uploads/2022/01/GovTech-Lab-apzvalga-2021-EN.pdf>

Lithuania | The Automatic Field Continuous Monitoring System (ALNSIS)

Relevant Key Dimension(s)

Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career (please delete non-relevant life events)

1. Good practice description

The Automatic Field Continuous Monitoring System (ALNSIS) is an artificial intelligence tool developed for 3 years (2020-2022), designed to regularly and systematically monitor and evaluate agricultural activities throughout the territory of Lithuania using satellite data remotely, avoiding physical visits to farms. ALNSIS, with the help of developed algorithms, is able to remotely determine 20 main crops grown in Lithuania, as well as land cover, fallow cultivation, whether the field is farmed organically, whether no-till farming technology is used, what species composition of meadows, whether the meadows were mowed, plowed, whether the land abandoned, or the grass is burnt, flooded and other cases. During the summer, the results are periodically presented to farmers on the NMA e-portal on the basis of a "traffic light": green color - the field is suitable, red - unsuitable, yellow - the field is evaluated.

2. Benefits

- Lower administrative resources for controlling and monitoring the agriculture of the entire territory of Lithuania

3. Key success factors

- Engagement with innovative companies via GovTech Lab
- Centralised funding and support for innovation procurement (design contest method)

4. More information

n/a

Lithuania | platform for identifying illegal work

Relevant Key Dimension(s)

Transparency

Life event

Regular Business Operations

1. Good practice description

A platform was created for State Labour Inspectorate to identify illegal work using publicly available data, which makes it possible to assess risks and detect illegal work automatically.

Main features of the platform:

- The platform provides opportunities to obtain structured information about the risk factors of business entities accumulated in data repositories;
- The platform automatically collects data about business entities, applies rules and determines facts, interprets the determined facts according to the selected methodology and formulates the results of risk analysis;
- The platform provides tools to analyze the results of risk analysis and perform verification actions for risky cases;
- The platform's operational functions are divided into the following groups:
- Definition of analysis;
- Performing Analysis based on artificial intelligence;
- Processing of analyzed cases.

2. Benefits

- Better performance of SLI
- Less adverts for illegal work

3. Key success factors

- Engagement with innovative companies via GovTech Lab
- Successful cooperation with private partners.

4. More information

n/a

Luxembourg | Live estimated waiting time

Relevant Key Dimension(s)

User centricity, Transparency

Life event

Family, Moving

1. Good practice description

Although the majority of services in Luxembourg can be completed fully online, some services require a personal visit to a government office. To make such visits as convenient and efficient as possible, the Municipal Office of the City of Luxembourg displays on its website the estimated waiting time. This is a real-time indication of how many minutes someone is expected to stand in line before someone can pick up an identity card or register a birth.

2. Benefits

- More efficient and pleasant visits for citizens.
- Clear management of user expectations and less service peaks for civil servants.

3. Key success factors

- Real-time data.
- Integration with services that require a personal visit to the municipal office.

4. More information

More information can be found at: <https://www.vdl.lu/en>

Malta | Remote Working

Relevant Key Dimension(s)

User centricity

Life event

Regular Business Operations, Moving Family

1. Good practice description

The Public Service launched a remote working policy which will enable employees to work from anywhere. A pilot project was first triggered months before the pandemic struck. To enable this new paradigm, various solutions based on the lessons learnt from the pilot project were implemented to ensure the smooth transition from the traditional office-based employee to full mobility.

Employees moving to remote and managers whose employees are eligible to apply for remote working must first follow a tailor-made training programme.

An electronic reverse auction procurement method was instigated for the first time in the Public Service to select the most advantageous data plan deal possible. The sim card is plugged into a high specification smart phone which every remote worker is entitled for. The phone is controlled by a tool that provides unified endpoint management. An internet telephony solution integrated with the Modern Workplace environment via Microsoft Teams has been applied to replace the customary desk phone.

The need for face-to-face meetings and for the time being, the need to print a document has been facilitated with the remote workspaces concept. This has been implemented through the opening of various outlets in strategic locations across the island where remote workers can book a desk or meeting room via an app. A tender for a central electronic document management system which will push the Public Service towards a paperless environment is in the pipeline and will eventually diminish the need for printing.

Remote workers log their output in a task management tool which has been developed on purpose to keep management continually updated with their staff work progress.

2. Benefits

- Increase the work life balance
- Mobility increases availability – a Public Service more available to the public

3. Key success factors

- Outcome from remote working pilot project
- Internet services across the whole country

4. More information

More information can be found at: <https://publicservice.gov.mt/en/Pages/Remote-Working-Policy.aspx>

Montenegro | e-Enrollment in preschool, primary and secondary schools

Relevant Key Dimension(s)

User centricity

Life event

Studying, Family

1. Good practice description

On the portal <https://upisi.edu.me/#/loginPage>, during 2020, three new applications have been set up through which a request can be submitted for the enrollment of children in preschool, primary and secondary school.

Service Upisi.edu.me enables electronic enrollment of children in preschool institutions (first enrollment), as well as students in the first grade of primary and secondary school based on data from the Montenegrin Education Information System (MEIS), the Central Population Register and the Social Welfare Information System.

2. Benefits

- Only the child's unique ID number is required to apply for enrollment. All other data are collected from the specified information systems.
- In 2020, in this way, 87% of children are enrolled in preschool institutions, 85% in primary schools, and 89% in secondary schools.

3. Key success factors

- Great interest of students and parents.
- Great facilitation in the work of enrollment commissions and process automation.

4. More information

More information can be found at: <https://upisi.edu.me/#/loginPage>. A clearer picture of this portal can be obtained through the created [video tutorial](#).

Netherlands | Improvement of combined registration for starting a Business

Relevant Key Dimension(s)

User centricity

Life event

Business Start-Up

1. Good practice description

Companies have more ease in the process of the combined subscription with the tax service and the chamber of commerce. The amount of questions is reduced and can be digitally prefilled. The systems of the chamber of commerce and the tax service exchange data.

2. Benefits

- 200.000 entrepreneurs have an increased benefits of the subscription process (*NPS of +59 and CES of 96%.*)

3. Key success factors

- Continues improvement of services

4. More information

More information can be found at: https://www.kvk.nl/informatiebank/vooraf-inschrijven-bij-kvk/?gclid=EA1aIQobChMl0qvZ3Oyj8AIVTPgYCh01iAEuEAAYASAAEgKPkvD_BwE

North Macedonia | The Catalogue of Public Services

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services, Digital by design, Digital by Default, once only principle, Openness & transparency

Life event

Business Start-Up, Studying, Family, Career, Regular Business Operations, Moving, Transport, Starting a Small Claims Procedure

1. Good practice description

The core component of the National e-services Portal (uslugi.gov.mk) is the Catalogue of Public Services, whose data is published on the Portal. The Catalogue is a structured register for entry and management of data for all public services, such as: service description, type of users, category and life events, process documents, process of applying and deadlines, data on payments of fees and taxes and values for special groups, responsible authorities, legal grounds, legal remedies, conditions and proofs (provided ex-officio or owned by user), means for applying, contact points, etc. The Catalogue is available to authorised public authorities' personnel only. Prior to publication, data are entered, verified and approved by the competent authorities and MISA.

2. Benefits

- 789 out of the 1.336 services data entered into the Catalogue of Public Services are published on the National e-services Portal's public section.
- Easy to make various analysis of the services based on the entered data. Used as a base for optimization, guillotine and prioritization, as well as analysis for para-fiscal charges for businesses.
- A register that is independent of the platform (Portal) that presents the data.

3. Key success factors

- The process of filling in the register: entering data, verification of the data, approval by Portal administrative owner, translating data, publishing data.
- Inter and intra-institutional cooperation.
- User manual for the Catalogue published and available on the following [link](#).

4. More information

More information can be found at: www.uslugi.gov.mk (for published data), www.admin.uslugi.gov.mk (the Catalogue)

Norway | DigiHoT

Relevant Key Dimension(s)

User centricity, Transparency

Life event

Health

1. Good practice description

DigiHoT is working to digitalize provision of assistive devices or technology. The starting point is a system with many manual processes, systems that do not talk to each other and paper applications. DigiHoT's ambition is that it should be quick and easy to get the assistive technology when you need, and efficient for NAV (The national labour and welfare authority) and the municipality to process the applications and deliver the assistive devices to the inhabitant/user.

DigiHoT has so far provided solutions that make it possible to apply for the most commonly used assistive devices and services digitally. The applicant can follow the status of the application process and has digital access to information about their assistive devices.

2. Benefits

- The municipalities have reduced the time it takes to complete an application on behalf of the inhabitant/user from 19 minutes to 5 minutes
- The inhabitant/user gets his/hers assistive devices approx. 1 week faster

3. Key success factors

- Agile teams that are interdisciplinary, and with expertise in the assistive technology system well represented
- The team's work is governed by purpose, what problems need to be solved and value created, rather than a predetermined delivery plan. The teams choose how they best can solve the problem by exploring different hypotheses and initiating different initiatives
- Clear alignment for DigiHoT with a decided upon business transformation strategy for the assistive devices and services area of NAV, and corresponding ownership and buy-in with CEO and other key-members of the leadership

4. More information

More information can be found at: <https://www.nav.no/no/nav-og-samfunn/samarbeid/hjelpeMidler/digitalisering-av-hjelpeMiddelOmradet>

Poland | SEPIS - System of Records of the State Sanitary Inspection

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Regular Business Operations

1. Good practice description

SEPIS is a system (registry) of cases from Citizens referred to sanitary and epidemiological stations related to an epidemiology area. In its current form it is intended to handle cases related to COVID-19 pandemic – it gathers all cases of this type.

SEPIS is currently crucial IT system used in Poland in the fight against SARS-CoV-2 infection built from the scratch for GIS (General Sanitary Inspectorate).

The basic functionalities include:

- the possibility of registering a case or suspicion of SARS-CoV-2 virus infection by phone or a dedicated online form (all channels available 24/7),
- automatic quarantine of people infected or in contact with infected,
- information about positive test results, cases history of each Citizen,
- integration with other systems, including key Ministry of Health registers,
- information on adverse post-vaccination reactions, handling epidemiological outbreaks, conducting epidemiological interviews,
- countrywide reporting.

All this is done in real time, on a platform secured by a Trusted Profile (Poland digital ID) and an individual account for employees of 344 stations of the State Sanitary Inspection. The system is constantly being developed and it is planned to include it to handle all matters in the area of General Sanitary Inspectorate operations, not only epidemiology.

2. Benefits

- a system with over 12,000 users;
- more than 2 million cases solved,
- nearly 20,000 reports closed daily, peaks as high as 50,000 per day;
- more efficient and faster handling of cases(most cases handled within 3 hours);
- possibility for Citizens to use the online service without calling the hotline;
- convenient 24/7 operation with the use of various tools (computer, tablet, as well as a smartphone-type mobile phone);
- data transparency;
- no need to log into other systems;
- full service in the area of COVID-19 Citizen support;
- data management in one place - employees do not have to rewrite data to different systems;
- efficient submission of reports and ongoing service.

3. Key success factors

- After launching SEPIS efficiency of GIS skyrocketed, even during third and largest wave of infections in Poland average case handling time per citizen support was below 3 hours);
- Equipping sanitary and epidemiological stations with computer equipment and complete digitization of epidemiological processes;
- Detailed reports in PowerBI allowing to monitor processes on an ongoing basis and make improvements;
- Switching from paper and manual processes to electronic and automatic;
- System open to digitization of other areas of GIS activity.

4. More information

More information can be found at <https://www.gov.pl/web/gov/szukaj?query=sepis>

Poland | Governmental portal related to web accessibility

Relevant Key Dimension(s)

User centricity

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

Minister for Digital Affairs manages the governmental portal <http://www.gov.pl/web/dostepnosc-cyfrowa> where information regarding ensuring web accessibility of websites and mobile applications for public sector bodies are published. Ensuring web accessibility is an obligation for public sector bodies as they have to comply with the Web Accessibility Act of 4 April, 2019, with subsequent amendments.

This portal:

- contains a number of relevant information for IT specialists, web designers and editors about ways of ensuring web accessibility of websites and mobile applications;
- includes a web accessibility guidebook that describes legal and technical aspects of ensuring web accessibility of websites and mobile applications (<https://www.gov.pl/web/dostepnosc-cyfrowa/kompleksowo-o-dostepnosci-cyfrowej>);
- contains a web accessibility checklist, a simple tool for public sector bodies to enable them to check the level of accessibility of their website;
- presents monitoring results i.e. according to the Web Accessibility Act, the Minister for Digital Affairs carries out an annual monitoring of websites and mobile applications and monitoring results are presented to the general public;
- publishes a register of websites and a register of mobile applications of public sector bodies;
- informs the general public about free web accessibility trainings organised by the Digital Competence Development Centre for public sector bodies;
- and provides other relevant information regarding ensuring of web accessibility.

All the above actions are in accordance with the Web Accessibility Act and the EU Web Accessibility Directive 2016/2102 on ensuring web accessibility of websites and mobile applications for public sector bodies.

2. Benefits

- Since information regarding web accessibility is scattered and, in some cases, insufficient, it has been considered as essential to put all relevant and reliable information in one place i.e. on the dedicated website.
- Public sector bodies staff are often not aware on how to ensure web accessibility and the dedicated website enables them to gain relevant information.
- Information published on the website may have a significant impact on the state of web accessibility.
- All information and trainings are free-of-charge and are accessible for all.

3. Key success factors

- Open trainings, approximately five hundred participants each month;
- Open meetings called "Accessible Wednesdays", approximately one hundred participants each month
- All public sector bodies have to ensure web accessibility and information published on the web site is available for them and should assist them to fulfil this legal obligation

4. More information

More information can be found at: <http://www.gov.pl/web/dostepnosc-cyfrowa>

Poland | The Register of Passport Documents

Relevant Key Dimension(s)

User centricity, Transparency

Life event

Family

1. Good practice description

The Register of Passport Documents is a central registry maintained in a teleinformatics system, which is used to handle matters related to the issuance and cancellation of passport documents, which are: passport, temporary passport, diplomatic passport and service passport of the Ministry of Foreign Affairs. The new register was launched on November 13, 2022. The main change concerns the abandonment of the paper form of passport applications, which are henceforth completed and submitted by the official ONLY electronically directly to the Register of Passport Documents. The applicant confirms the data entered in the application and signs it on a special electronic device.

In addition, citizens can with the help of online services without leaving home:

- look at their data collected in the Register of Passport Documents,
- check if their passport or other passport document is valid,
- check if their passport or other passport document is ready for collection,
- confirm receipt of the passport or other passport document, which will be delivered by courier (in the case of a passport application submitted abroad),
- report a lost or damaged passport or other passport document,
- apply for a passport for a child,
- consent to the issuance of a passport (if you are the other parent or guardian who does not apply for a passport).

2. Benefits

- Ensuring an ecosystem of certified data in PESEL, updated in near real time;
- Optimizing operations and data quality in existing registries;
- Reducing the time to issue passport documents by eliminating paper applications from the process;
- Enabling the citizens to quickly access their data through the development of online services;
- Enabling citizens to apply online for children's passports.

3. Key success factors

- The increase in the number of registered applications for biometric documents and positive decisions on them by 44%.
- Reducing passport case processing time by a few minutes to about 12-13 minutes.
- About 26,000 online applications for a child's passport and 47,000 registrations of passport consent (during the two months of the service's operation).

4. More information

More information can be found at: <https://www.gov.pl/web/cyfryzacja/rejestr-dokumentow-paszportowych>

Poland | Portal RP

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Moving, Transport, Health, Starting a Small Claims Procedure, Studying, Family, Career

1. Good practice description

The Portal RP is a central gateway to digital information and services of the state. It has been created and developed by the Ministry of Digital Affairs in cooperation with all central and local government administrations. It contains information materials, multimedia, and acts as a directory of all services, information and entities of the public administration. Portal RP is the core on which the development of Polish e-administration is based.

Portal RP in numbers:

- Migration of 1,792 sites for 915 government institutions and central offices – websites of all ministries, voivodeship offices, units subordinated to ministries and complementary (satellite) websites.
- Migration of 138 local government units – websites of local government units of various levels were migrated to the sister website at samorzad.gov.pl: communes, poviat, social welfare centres, schools and others.
- In 2022 Portal RP had over 672 million views with the average monthly number of users in 2022 equal to 58,237,132.
- More than 550 Service Cards (information sites for e-services available online) were prepared and published.
- Development of the project is carried out with taking into account the research of the user needs and the accessibility principles.

2. Benefits

- Simplification of relations between citizens and entrepreneurs with the administration thanks to easy access to aggregated information, knowledge base on administration and implementation of high-level e-services;
- Centralization and standardization of public administration information;
- Centralization and standardization of e-services;
- Profiling the content and e-services displayed by the citizen on the Portal of the Republic of Poland (proposing targeted services for a given citizen);
- Facilitating the management of website content and the description of e-services;
- Implementation of digital services focusing on various life situations (e.g.: obtaining an extract from the land and mortgage register, reporting voting outside the place of residence, registering the birth of a child, submitting tax returns, etc.);
- Reducing the costs of maintaining, managing and building independent websites of individual public administration units.

3. Key success factors

- Data driven approach presents directions for further improvement;
- Design with the inclusion of Web Content Accessibility Guidelines (WCAG) 2.1;
- Standardization and the maintenance facilitation for administrative units and entities performing public tasks.

4. More information

More information can be found at: <https://www.gov.pl/>

Poland | mCitizen (mObywatel)

Relevant Key Dimension(s)

User centricity

Life event

Moving, Transport, Health, Studying, Family, Career

1. Good practice description

The mCitizen (mObywatel) application has been developed since 2017. Initially in the form of only one document (mIdentity), however, over time it was integrated with other state registers, which made it possible to add further documents and e-services. During the Covid-19 pandemic, the application was extended to include the EU Covid certificate, which was used by citizens in the country as well as when crossing borders. On the other hand, in 2022, Ministry of Digital Affairs introduced a separate document Diia.pl, which could use refugees from Ukraine, to confirm their legal stay on the territory of Poland and to enable them to travel within the European Union, as well as to cross its external borders. This made it possible to provide express and multidimensional assistance to war refugees.

This year, thanks to legislative changes and comprehensive modernization, we are opening a new chapter in the life of the application. From the middle of the year, the mID (mDowód), which will appear in the application, will be a completely new identity document. Our goal is to establish more and more cooperation with other including local government units. Thanks to this, the application, which until now was a document wallet for citizens, will become their digital assistant.

2. Benefits

- Reliable data from state registers.
- Access to a digital wallet containing such documents as: mCitizen, driving license, Vehicle Card, school and student ID, or large family card.
- Access to e-service such as: identity verification, ePrescription, Environmental violations, Pole abroad.
- Partner for local government units in the area of issuing their own documents in the mCitizen
- Ensuring compliance with the eIDAS 2 in progress
- Continuous development of the application and adding more documents and e-services in the future, such as: Temporary driving license, Withholding a PESEL number, ePayments, Powers of attorney.

3. Key success factors

- Number of app downloads exceeded 10 million.
- Increasing number of integrations with public and commercial entities.
- Increasing number of documents and services available in application.

4. More information

More information can be found at: <https://www.gov.pl/web/mobywatel-w-aplikacji>

Poland | Government portal Jobs in Poland

Relevant Key Dimension(s)

User centricity, Transparency, Key enablers

Life event

Regular Business Operations, Moving, Career

1. Good practice description

PracawPolsce.gov.pl is a free government portal with job offers for Ukrainian citizens. The armed conflict in Ukraine has forced millions of citizens of this country to leave their homeland. Many of them came to Poland and need employment. In response to this problem, Poland launched a special government portal - <https://pracawpolsce.gov.pl/>.

Portal connects Ukrainian citizens looking for a job with Polish employers who offer this job. Thanks to this new solution, every citizen of Ukraine looking for a job can share information about their educational background and skills. As a result, they will receive feedback on job offers that may be of their interest, as well as contact details of potential employers. It gives them an opportunity to find a job in their profession, in accordance with their qualifications.

The basic functionalities include:

- free database of job advertisements - the portal is integrated with the largest databases of job offers, including with the Central Database of Job Advertisements (maintained by the Ministry of Family and Social Policy) and Goldenline, HRLink, pracuj.pl, OLX, GoWork. Thanks to this, people who register on the portal have everything in one place and do not have to browse through several portals with advertisements.
- fast and secure registration - when creating a user account in the system, the user fills out a short form (experience, skills and contact details) - it takes about 10 minutes.
- tailored to user needs - based on the data contained in the user's form, users will get an e-mails with job offers tailored to the users' needs. They will receive the first message the next day after completing the form at the latest, and the next one once a week.
- portal users' data is safe - to fully use all the system's functions, users need a trusted profile (Poland digital ID).
- the website "Jobs in Poland" is available in Ukrainian, English and Polish.
- available portal usage instruction
- available helpline consultants - they will help users to fill out the form from Monday to Friday from 8 am to 6 pm. They speak Polish, Ukrainian and English.

2. Benefits

- the system with over 250,000 job listings
- nearly 5200 activated profiles (this number is gradually increasing);
- over 360 registered employers;
- possibility for Ukrainian citizens to use one online service without searching several portals with advertisements;
- data transparency;
- data management in one place

3. Key success factors

- Improving the situation of Ukrainian citizens on the Polish labour market
- Facilitating Polish employers in finding employees and filling the gap in the labour market related to the lack of an appropriate number of employees in individual industries.
- The portal has become an important part when it comes to providing the full service in the area of employment for Ukrainian refugees;
- System open to digitization of other areas when it comes to support refugees from Ukraine and fight against unemployment.

4. More information

More information can be found at: <https://pracawpolsce.gov.pl/>

Portugal | Mosaico (Digital service standard)

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

This common model for designing and creating digital public services provides all the necessary tools to assist government teams in creating the digital public services of the future. Fully centred on citizens and businesses, it presents four main reading vectors depicting its overall structure: Stages, Principles, Profiles, and Technical Area.

Modular and totally flexible, Mosaico adapts to each context or person, depending on their mission and nature - either more strategic or technical.

2. Benefits

Mosaico was recently published and as such there are still no measurable data to support the benefits of its application. However, these are the expected benefits of this digital service standard:

- Standardizes construction and evolution
- Improves the experience
- Simplifies the process
- Facilitates the maintenance of services
- Shares technical solutions
- Protects personal data
- Evolves public services

3. Key success factors

- Displaying all the necessary building blocks to ensure the best possible experience, full promoting interoperability and the once-only principle.
- Interoperability, once only, single digital gateway)
- Offering a Design System for digital public services (<https://zeroheight.com/1be481dc2/p/97181d-gora-design-system>)

4. More information

More information can be found at: <https://www.mosaico.gov.pt>

Romania | The Administrative Code and Telescopes to Commercial European TELESCOPES to COMMERCIAL EU-ROPEAN CIRCUITES

Relevant Key Dimension(s)

The ROSA Agency in Romania The Administrative Code is the major Administrative Entity to sustain THE MARKET. The Scientific Community Promoted with the Coordination of The MINISTRY of Research, Innovation and Digitalization is recognizing life events to contribute to European MARKETS. WebSites are mainly Informational to Research Community. Services will be developed to support future needs. Cross Border Services will be available.

Life event

Research must support Regular Business Operations in National Institutes with results that are increasing Business Sections in Economy. Secured WebSite with European connections in maps with links would promote products and services that are available in Romania The Administrative Code. Researchers develop sections with Products that have to be introduced in EUROPEAN Exhibitions. Moving to these events should be protected – even with ELECTRONIC SERVICES.

Transport in Events and Products mean Member States that collaborate with legal Agreements. European Cards to Researchers have to be available in Member States with support in secured Views and Transactions in aspects with details in Health PROTECTION.

When Products are exhibited the general public have to test them. Incidents should be reported in Small Claims Procedures with a different Value to protect INNOVATION. Business Start-Up are developed with Products that bring benefit to European Economy. In the meantime Students to Study new technology would attend such Events. Understanding new technology represents new Human Resources in Institutes and Business. Family Event is part of Healthy Societies. Children need Researchers as Parents also. Their Protection is relevant to Societies. Career means selection to achieve success. Professional Profiles should be protected electronically.

Electronic Services to these life events have to be developed more than the Informational ones. In Romania, The Administrative Code.

1. Good practice description

Articles in Promoting PRODUCTS represent a manner to introduce Research and Innovation into Electronic Formats. Links in WebSites would develop future portals. Fees to Author Right would be paid to Romania The Administrative Code and to The Autor in Researches – the Values reflect quality. Web-Sites do not include these eServices in this moment.

2. Benefits

- Innovation benefits Economy
- Protection in Electronic Services would be evaluated in number of users with ELECTRONIC PAYMENTS

3. Key success factors

- Products achieve in National Institutes represent a DIFFERENT MARKET
- Their Value support ECONOMY

4. More information

More information can be found at: <https://www.rosa.ro/index.php/en/> and <https://www.rosa.ro/index.php/ro/strategie-spatiala/comunitate-stiintifica>

Serbia | Cloud signature

Relevant Key Dimension(s)

User centricity, Key enablers

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

In 2022, Office for IT and eGovernment started to issue qualified certificates for electronic signature in a cloud, free of charge, to citizens 16 years of age and older and foreigners with registered temporary stay or residence in Serbia.

Users should register at <https://eid.gov.rs>, install ConsentID app on their mobile devices, and enrol using activation codes. Those who already possess eID means of high level of assurance can complete the entire procedure online, and others can get their ConsentID app activation codes at counters of post offices, municipalities and banks throughout Serbia (>1000 locations). Upon enrolment, a certificate for authentication is deployed, and users complete the issuance of cloud-based qualified certificate for electronic signature in a few clicks at <https://eid.gov.rs>.

2. Benefits

- Cloud signature is conformant to international standards for qualified trust services and eID means of high level of assurance and provides for equal level of authenticity and identity assurance as qualified certificates for electronic signature that are smart card-based
- Cloud signature is more mobile and user-friendly than smart card-based certificates - it does not require a computer, card reader nor installation of additional software. Users can access any eGovernment service and sign documents using just their mobile phones with ConsentID app.

3. Key success factors

- High availability - qualified certificates and the entire remote signing service are provided completely **free of charge** and available to both Serbian nationals as well as foreigners.
- For eGovernment, the ability to authenticate and sign document digitally is fundamental, and cloud signature supports those functionalities in a mobile and user-friendly manner. Orientation towards cloud and mobile-based solutions is evident, and it is important that governments adapt to users' needs for mobility without sacrificing reliability, authenticity and identity assurance.

4. More information

More information can be found at: <https://www.eid.gov.rs/en-US/start>

Serbia | SOS for the Deaf

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

In December 2022 the app "SOS for Deaf People" was launched, which allows deaf persons to make phone calls with hearing people. With the help of this application, a deaf person starts a video call with an interpreter from the National Translation Centre for the Serbian Sign Language, who calls the desired phone number and then simultaneously interprets the conversation between the deaf person and the called contact.

Interpreters can easily allocate and select calls according to urgency.

2. Benefits

- it facilitates a solution to communication problems that deaf and hard-hearing persons encounter - by enabling video calls, chat with an interpreter and emergency calls, this app supports inclusion of around 14,000 deaf and hard-hearing persons and makes their lives easier.

3. Key success factors

- "SOS for the Deaf" application is free, available for Android, iOS and web, and thanks to the support of telco providers, internet use for this application is free.

4. More information

Web app is available at <https://soszagluve.rs/korisnik/registracija.php>

Serbia | eCertificates and eConsents

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Moving, Transport, Health, Starting a Small Claims Procedure, Business Start-Up, Studying, Family, Career

1. Good practice description

In Serbia eGovernment users can submit requests as well as obtain certificates from the Central Registry of Births, Deaths and Marriages and Certificates of Citizenship online. Users can choose whether they want a paper-form certificate delivered by post at their home address, or they want digitally signed certificate in electronic form delivered in their eMailbox.

Furthermore, a set of new services was launched which enable online declaration of consent for the issuance of identity cards or passports to minors when one parent is physically absent, admission of minors to citizenship of Serbia, registration of residence of minors, power of attorney to collect passports, consent of real estate owners for registration of the residence of an adult citizen at the address of the real estate of which he is the owner/co-owner, as well as revocation of the declaration of power of attorney or consent.

2. Benefits

- Declaration of consents can be provided fully online, and certificates, including certificates of citizenship, as one of the most requested documents at the counters of municipalities, can now be requested online and downloaded in electronic form or delivered by post at home address. These services save citizens time and money and enable for greater efficiency and effectiveness of public administration.

3. Key success factors

- In order to access these services, means of electronic identification of high level of assurance is necessary. Thanks to the high availability and user-friendliness of ConsentID app supporting 2FA and cloud signature that is issued free of charge, these online services became truly available to all eGovernment users in Serbia.

4. More information

More information can be found at: www.euprava.gov.rs/

Slovakia | Birth of a child

Relevant Key Dimension(s)

User centricity

Life event

Family

1. Good practice description

When a child is born it is no longer necessary to fill in various forms or personally visit various places in order to finish all the paperwork as it was before. We have simplified the procedure down to one form that needs to be filled in by a parent in a hospital –

Agreement on name and surname of a child. This can be done also [online](#). Based on this form the birth certificate will be sent automatically to parents. Child will be automatically subscribed to the health insurance of his/her mother and automatically registered for permanent residence of his/her mother. After the birth certificate is issued, the state will proactively start the procedure for approval of child allowance and it also automatically sends the disposable birth grant. This was done within the Quickwin 3 project and in line with the “once only” principle.

2. Benefits

- This service has been used for 30 000 children since April 2022 and it is a huge time saver for many parents

3. Key success factors

- Intensive communication with other responsible institutions (Ministry of Interior, Ministry of Health, Ministry of Social Affairs and National Centre of Health Information), doctors and Maternity Hospitals – they all were willing to cooperate in order to simplify this procedure for parents

4. More information

More information can be found at: https://www.slovensko.sk/sk/zivotne-situacie/zivotna-situacia/_narodenie-sprievodca/ (in SK only)

Slovakia | “Slovakia in mobile phone”

Relevant Key Dimension(s)

Key enablers, User Centricity

Life event

Regular Business Operations, Moving, Transport, Health, Business Start-Up, Studying, Family, Career

1. Good practice description

- In June 2022 we have launched mobile application “Slovakia in mobile phone”. It enables users to use government services through mobile phone application and mobile ID (it is simpler verification process than through website). It contains calendar with useful deadlines and other electronic services such as request for extract from trade register, registration before traveling abroad, the overview of tax duties, etc.

2. Benefits

- Access for citizens to 400 websites and services through their mobile phones – simplification of process and more user friendly state portal slovensko.sk
- 700 000 log ins without the need to use external devices for authentication (as of December 2022)

3. Key success factors

- The whole process has been managed and executed by state IT company ([Slovensko IT](#)) which was established in 2020 to work solely on state eGov services instead of external companies.

4. More information

More information can be found at: [svm.slovensko.sk](#)

Slovenia | Obtaining a certificate of the number of employees and a list of employees

Relevant Key Dimension(s)

User Centricity, Transparency

Life event

Regular Business Operations

1. Good practice description

To apply for tenders, companies need certificates of the number of employees, including information on disabled employees. Previously, they were obtained manually from the Health Insurance Institute and delivered by mail. Now, the SPOT portal provides e-certificates. Companies also must register employees for social security schemes and reconcile personnel records. To help with this, companies ordered worker lists from the Health Insurance Institute, which were prepared manually and not easily imported into HR systems. The new electronic system on the SPOT portal allows quick and automatic downloading of these lists in XLSX or XML format, with a described structure for easy importing into HR systems.

2. Benefits

- Requesting both types of documents via the SPOT portal allows for a more efficient and simplified process. Instead of waiting for documents to be manually prepared and sent by traditional mail, companies can now obtain them via the SPOT portal.
- The electronic mode provides a more secure and reliable way to obtain these documents, as it allows access to accurate and up-to-date information from the relevant databases. This reduces the risk of errors or inconsistencies in the information.

3. Key success factors

Effective cooperation of all key stakeholders, availability of financial resources.

4. More information

More information can be found at:

<https://spot.gov.si/sl/poslovanje/zaposlovanje-in-delovno-razmerje/socialna-varnost-in-zavarovanja/pridobitev-potrdila-o-stevilu-zaposlenih/>

<https://spot.gov.si/sl/poslovanje/zaposlovanje-in-delovno-razmerje/socialna-varnost-in-zavarovanja/pridobitev-poimenskega-seznama-zavarovanih-oseb/>

Slovenia | Electronic reporting of accidents and injuries at work

Relevant Key Dimension(s)

User Centricity, Transparency

Life event

Regular Business Operations

1. Good practice description

In Slovenia, companies must report workplace accidents and injuries, which previously involved filling out paper forms and manual data processing. Now, the Ministry of Public Administration and other institutions have created an e-application on the SPOT portal, allowing authorized persons to submit applications. The solution includes controls, and the Labor Inspectorate and Institute for Health Insurance receive electronically signed applications in a structured XML format. The personal physician of the injured person can access the electronic application through the Institute for Health Insurance system, providing medical data. The Health Institute then forwards the completed information, along with employer data, to the National Institute of Public Health in electronic format.

2. Benefits

- The electronic application process is faster and more cost-effective than the previous paper-based process, as it eliminates the need for manual data processing and reduces the risk of errors. The electronic solution includes comprehensive controls to ensure the quality of the data entered. It also allows automatic processing and transfer of data between the organizations involved, reducing the administrative burden, and allowing real-time monitoring of occupational injuries.

3. Key success factors

Collaboration between multiple organizations, harmonization of legislation.

4. More information

More information can be found at:

<https://spot.gov.si/sl/poslovanje/zaposlovanje-in-delovno-razmerje/poskodbe-pri-delu/>

Spain | IA en el Hospitalario Universitario Ntra. Sra. de la Candelaria (Gobierno de Canarias)

Relevant Key Dimension(s)

User Centricity

Life event

Health

1. Good practice description

Development of a tool for the artificial generation of 12-lead electrocardiogram (ECG) with real pathology, in order to generate synthetic DataSets for the subsequent training of deep convolutional neural networks and automate the diagnosis of different heart rhythm disturbances on digitalized ECG images of real patients online.

Artificial Intelligence is used for ECG interpretation. It is an automatic diagnostic tool that is also used for the automatic generation of extensive sets of pathological and healthy electrocardiograms that are then used for training the neural network.

Technology in general and artificial intelligence at the service of healthcare systems is one of the disruptive alternatives needed by healthcare systems around the world to gain efficiency and democratize healthcare.

2. Benefits

1. Get the self-learning system to automatically interpret an ECG and incorporate it into daily clinical activity as screening or diagnostic methods. A significant improvement in global health systems.
2. The system generates on demand extensive sets of electrocardiograms with various pathologies that serve to train the neural network.
3. Efficiency and cost reduction are clear and direct, with a simple Internet connection, an automatic interpretation can be made 24 hours a day of an electrocardiogram of all the pathologies with which the network has been trained with the same or higher quality. than a cardiologist.

3. Key success factors

- Make the ECG generation tool available to universities around the world so that it can serve as a training tool for future specialists
- This Artificial Intelligence tool could be used, after its training, for the automatic classification of electros

4. More information

More information can be found at: <https://www.europapress.es/islas-canarias/noticia-hospital-candelaria-aplica-inteligencia-artificial-detectar-retinopatia-diabetica-20190530120034.html> and https://www.vademecum.es/noticia-200720-novartis%2C+la+fundaci+oacute+n+ver+salud+y+el+hospital+universitario+nuestra+se+ntilde+ora+de+la+candelaria+se+unen+para+mejorar+el+cribado+de+la+retinopat+iacute+a+diab+eacute+tica+a+trav+eacute+s+de+la+inteligencia+artificial_14480

Sweden | Digital mailbox (Digimail, eBoks, Kivra and Min myndighetspost)

Relevant Key Dimension(s)

Key enablers

Life event

Business Start-Up, Studying, Family, Career, Regular Business Operations, Moving, Transport, Starting a Small Claims Procedure

1. Good practice description

As per March 2021, more than 4,500,000 individual citizens and business representatives use the Swedish digital mailbox for their communication exchanges with the public sector. This means, nearly half of the population in Sweden receives its official government mail in a digital mailbox solution (Digimail, eBoks, Kivra and Min myndighetspost). More than 4.3 million (96%) of the 4.5 million digital mailboxes belong to individual citizens, the remainder belong to business entities.

2. Benefits

- 52.7 million messages were sent in 2020, saving substantial paper mail.
- The solution creates coherence and overview: all messages are gathered in one place.
- The mail is sent securely and can be opened anywhere and anytime by the person authorised, using electronic identification.

3. Key success factors

- Large coverage of public sector entities: the solution integrates the mail from almost 170 authorities, municipalities and regions.

4. More information

More information can be found at: <https://www.digg.se/om-oss/nyheter/2021/snart-tar-halva-sverige-emot-sin-myndighetspost-i-en-digital-brevlada>

Switzerland | eMovingCH

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Moving, Transport

1. Good practice description

eMovingCH serves to fulfil the personal duty to register when private persons residing in Switzerland move house. By law, you must register in the new municipality of residence no later than 14 days of the date of changing address (Art. 11 RHA). For register and deregister you need:

- Information on your person (information on the registration confirmation, written confirmation of receipt or passport/identity card)
- Social security number (13-figure AHV number, also available on the health insurance card)
- Credit card (MasterCard, VISA, PostFinance Card, Twint) for the payment of any fees

2. Benefits

- Use is voluntary and costs no more than when you register at the counter.
- In the case of a move between communes that are both connected to eMovingCH, the documents are sent electronically to the new commune of residence.

3. Key success factors

- Every day, around 400 residents in Switzerland use the eMovingCH online portal to change their place of residence electronically.
- The electronic change of address notification service is available in 20 cantons and is increasingly being used by residents.

4. More information

More information can be found at: www.eumzug.swiss

Switzerland | EasyGov

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers, Cross-Border Services

Life event

Regular Business Operations, Business Start-Up

1. Good practice description

EasyGov makes the necessary administrative operations easy, fast and highly efficient. The secure and reliable platform enables electronic processing of authorization, application and reporting procedures in one place. Furthermore, the platform helps with finding one's way around, showing which authorities may still need to be contacted in any given situation.

2. Benefits

- The use of EasyGov is free
- saving time and costs for businesses
- The approximate duration of an application or amendment is displayed at the beginning. You can interrupt, save or continue a process at any time.

3. Key success factors

- According to a study (29.03.2022):
 - EasyGov has generated annual benefits of around CHF 8.3 million.
 - The portal currently has already over 55,000 registered businesses.

4. More information

More information can be found at: EasyGov.swiss

Türkiye | My Working Life

Relevant Key Dimension(s)

User Centricity, Transparency, Key enablers

Life event

Career

1. Good practice description

The service was developed under the coordination of the Digital Transformation Office (DTO) of the Presidency of the Republic of Türkiye and is also managed by the DTO. With the service, citizens can carry out all their tasks and transactions related to their employment status from the integrated structure named "My Working Life", by bringing together the services provided by different institutions related to working life and presenting them from a single screen. The integrated services are as follows:

- Starting working life
- Job search
- Farmer operations
- Health-treatment
- Professional competence
- Insurance
- Retirement

2. Benefits

- Citizens can directly access more than 75 e-Government Gateway services related to working life through their own modules from this single service.
- The service was used 379,387,167 times from September 30, 2021, when it was first opened to access, until February 28, 2023.
- This service works in integration with the services associated with more than 10 institutions.
- Citizens can get the Social Security Institution service statement document via the e-Government Gateway as a barcode document within seconds, reachable 24/7, in accordance with the 4a/4a/4c status, instead of going to the relevant institution and receiving it hours later.
- By reducing bureaucratic processes; information transactions such as monthly salary information of retirees, salary deductions, retirement inquiries are made digitally through this service.

3. Key success factors

- The services included in "My Working Life" integrated service are among the most used services of the e-Government Gateway.
- It is an important success factor that the service has been used by 380 million since its establishment.

4. More information

- <https://turkiye.gov.tr/calisma-hayatim>
- <https://www.youtube.com/watch?v=vUyoxlub68I>

Türkiye | Career Gate (Public Recruitment Platform)

Relevant Key Dimension(s)

Transparency, User Centricity, Key enablers

Life event

Career

1. Good practice description

Career Gate (CG), which is integrated with the e-Government Gateway, was developed by the Human Resources Office of the Presidency of the Republic of Türkiye to increase merit, transparency, equal opportunity, efficiency and effectiveness in public recruitment. CG is a platform where all public recruitment phases from application to placement are carried out. CG facilitates the applications for candidates and provides institutions with reliable data from centralized databases through e-Government integration. Following the completion of the pilot implementation of the CG in May 2021, it was rolled out to all public institutions. Since then, all ministries and their affiliated organizations have been using CG for all internship/part-time/full-time job postings in public institutions.

2. Benefits

- As of February 2023, 674 job postings from 131 public institutions were published on CG.
- Merit-based recruitment was ensured by allowing only eligible candidates to apply. Since among almost 6 million people tried to apply for these postings, approximately 3.9 million ineligible applications were automatically prevented by the system checking the verified information provided by the candidates.
- CG increases transparency, accountability and equal opportunity in public employment.
- CG allows all citizens to easily access career opportunities in public institutions through a single platform.
- As all recruitment processes are now carried out through CG, CG allows candidates to follow the application/assessment/placement processes via the system. Applicants who fail to continue any of the assessment stages are transparently informed on the platform with the necessary explanations, including the reason for rejection.
- The efficiency of the public recruitment processes has been increased and a great deal of added value has been created.
- As CG prevents ineligible applications and minimizes red tape in public recruitment processes, the workload of the HR personnel is reduced, the recruitment processes are accelerated and human error is minimized. Similarly, the time and the effort that candidates would have spent in collecting necessary documents from various public authorities was saved. Furthermore, CG was shared with all public institutions free of charge, saving public resources that each institution would have spent to develop its own system.

3. Key success factors

- It was critical to work collaboratively with public institutions and understand their needs to design, develop and improve a comprehensive and effective digital public recruitment platform.
- The Platform is continuously improved with the feedback received from the public institutions using CG. Thus, it can respond to the changing needs of different public institutions and make the use of CG sustainable. Therefore, there is a need for a competent technical team as well as effective and continuous communication.
- Changing the behavior of public employees to use a digital recruitment platform is as essential as designing and developing the Platform. Convincing staff that CG will help them to carry out their recruitment processes in a more efficient and transparent way is key for the acceptance and dissemination of the Platform. The Office supports public employees by providing continuous training and preparing manuals and videos.

4. More information

More information can be found at: <https://isealimkariyerkapisi.cbiko.gov.tr/>

Türkiye | University e-Registration and Documents Services

Relevant Key Dimension(s)

User Centricity, Key enablers

Life event

Studying

1. Good practice description

"University e-Registration" is a service that allows undergraduate and associate degree students placed in higher education programs to register through the e-Government portal. Students who prefer electronic registration do not need to go to universities and re-register. After the electronic registration process, students can start their education by registering for the courses on the date announced by the universities.

Persons studying in higher education institutions can obtain their "Transcript Documents" and "Student Documents" during their university education through the "Transcript Document Inquiry" and "Student Document Inquiry" services via the e-Government portal.

With the end of university life, the "Higher Education Graduate Certificate Inquiry" service allows people who have graduated from higher education institutions to obtain their "Graduation Certificates" through the e-Government portal.

2. Benefits

- In addition to reducing the workload of higher education institutions, electronic registration saves both time and money for students without having to go to the relevant higher education institution for registration.
- The total usage of the "University e-Registration" service in 2022 is over 9 million. It is estimated that the use of this digital service will save at least 1 billion TL in 2022.
- The person can obtain his/her documents and certificate from anywhere with internet access without going to the higher education institution where he/she is a student.
- In 2022, a total of 8,103,724 transcripts, 11,770,921 student documents and 9,384,322 graduation certificates were issued.
- The documents obtained as verified with the Barcode / QR Code can be used by students in applications and transactions to be made to individuals, institutions and organizations.

3. Key success factors

- In 2022, all state universities (129 Universities) and 60 foundation universities were included in the application, which was put into service in 2014.
- While in Türkiye, 85.5% of students who could register electronically preferred electronic registration, this percentage was 43.2 for students at foundation universities. In total, this rate was 79.5%. The electronic enrolment rate for students attending a university in a city other than their city of residence was 86%.
- Another gain from the service was that the information on graduates from higher education institutions is kept centrally at the Presidency of the Council of Higher Education.
- In addition, a single point of access was provided to the services offered to citizens through the E-Government Gateway.

4. More information

- <https://turkiye.gov.tr/yok-universite-ekayit>
- <https://turkiye.gov.tr/yuksekogretim-kurulu-transkript-belgesi-sorgulama>
- <https://turkiye.gov.tr/yok-ogrenci-belgesi-sorgulama>
- <https://turkiye.gov.tr/yuksekogretim-mezun-belgesi-sorgulama>

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