

UAE Public Policy Forum

Accelerating SDGs Implementation Future Policy Roadmap

Case study

eGovernment and the SDGs: How Estonia's Digital Government Contributes to Achieving the SDGs



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The views expressed in this report are those of the author and do not necessarily reflect those of the trustees, officers and other staff of the Mohammed Bin Rashid School of Government (MBRSG) and its associated entities and initiatives.

Executive Summary

The digital society has increased expectations from e-service delivery among citizens and businesses and consumers, who reportedly want more from their public administrators (European Commission; 2017). At the same time, there is a push for governments to make services more efficient and cost-effective within their operations especially when administrations are increasingly pressured to maximize the use of public finances, which account for almost half of GDP across the EU (European Commission, 2017). The good news is: E-governance offers a number of positive, new solutions.

The promise of such solutions has catalyzed a global drive for the digital transformation of government, a new movement of accountable, transparent, and efficient public service. With its experimental approach and continued success, Estonia has come to be the leading example for the e-government movement. This report will serve as a case study on Estonia's e-government transition, helping administrations and ministries understand the demands and benefits of transitioning to the digital delivery of public services.

While the e-government movement is growing, many who have yet to participate in an e-society may consider the following questions: Will reduced costs and efficiency outweigh the costs of citizens' perceived loss of privacy, possible data breaches, and trust in the government? Can various jurisdictions create a digital bridge, rather than a divide? Will there be inclusiveness and access to all? Will the key stakeholders actually use these services? As many governments and legislators globally are still at the early stage of e-governance, there needs to be effective operational frameworks to ensure protection for all stakeholders. To that end, better understanding Estonia's e-government can provide a useful blueprint for officials who have the goal to create a digital society that serves the local populace.

Europe is the Leader in E-Government Development

According to the United Nations E-Government Survey 2018: "European countries lead e-government development globally; the Americas and Asia share almost equal standing in high and middle e-government index levels, and many African countries continue to struggle to improve their e-government standing."¹ In addition, the report noted the importance that "local governments recognize the importance of e-Government in order to achieve sustainability and resilience."¹

Indeed, countries in all regions of the world are continuing to make strides in their efforts to improve e-government and to provide public services online, according to a report launched by the United Nations Department of Economic and Social Affairs.² For instance,

1. https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2018-Survey/E-Government%20Survey%202018_FINAL%20for%20web.pdf

2. <http://workspace.unpan.org/sites/Internet/Documents/UNPAN98558.pdf>

data contained in the report indicated that almost two thirds of 193 United Nations Members States demonstrated a high level of e-government development. It also showed that “all 193 Member States of the United Nations had national portals and backend systems to automate core administrative tasks, and 140 provided at least one transactional service online.”² The three most commonly used services, according to the report,² were: payment for utilities (140 countries), submitting income taxes (139 countries), and registration of new business (126 countries), and there was noted improvement in e-government and public services online. Further, the UN² indicated that more countries are providing online services targeted to the most vulnerable groups. It said that “Europe continues to lead in online service delivery for all vulnerable groups reaching almost universal coverage across the region or over 80% of all European countries.”² Indeed, Estonia, known as the most digital country in the world, has 99% of its public services available online 24/7 and uses a government cloud solution.³ One of the benefits of e-governance is that it has proved to create cost efficiencies while facilitating the ease of transactions. For instance, Estonia has calculated 800 years of working time saved due to e-governance. This includes efficient I-Voting, a secure internet-based electronic voting system that saved 11,000 working days in the last election as well as a state e-services portal, where citizens can access everything from filing taxes in three minutes online to establishing a business in 15 minutes and online access to prescription and health records. Estonia also has a central information system for the courts called e-justice, blockchain technology, school record keeping through e-school, and e-cabinet, which facilitates efficient record-sharing and keeping.

Digital Divide: The Haves vs. The Have Nots

Yet, despite some gains and major investments in e-government development made by many countries, the digital divide persists. For this reason, there needs to be greater emphasis on bridging the divide. Fourteen countries out of sixteen with low scores are African and belong to the least developed countries group. The regional average index scores for countries in Africa and Oceania are significantly lower than the world average EGDI of 0.55, comprising 0.34 for Africa and 0.46 for Oceania. “This indicates that the digital divide could deepen between people who have access to Internet and online services and those who do not, jeopardizing the vision of the 2030 Agenda for sustainable development for leaving no one behind,” a report noted.⁴

For the governments that utilize e-government services, the 2017 eGovernment Benchmark report revealed there has been improvement in user centricity (benchmark rated score of 80%), usability (89% score) and online availability (82% score). Also, it found half of public service websites are mobile friendly; however, the UN’s 2012 E-government user survey⁵

3. <https://e-estonia.com/solutions/e-governance/>

4. <http://workspace.unpan.org/sites/Internet/Documents/UNPAN98558.pdf>

5. <https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2012-Survey/unpan048065.pdf>

indicated a number of EU citizens have yet to widely accept e-governance (European Commission, 2017). “Attitudes can be the most rigid barrier” to using eGovernment services (p. 274). The eGovernment Benchmark survey revealed 80% of those surveyed were “not willing to use online services. They either preferred personal contact, expected to have things done more easily by using other channels, believed that personal visits or paper submission were required anyway or did not expect to save time. Furthermore, 11% stated they did not trust the service, because of concerns about protection and security of personal data. Given these groups are drawn from a survey of regular Internet users, this is a cause for concern. Two-thirds of non-users of online services stated they preferred to have face-to-face contact with officials in the administration. The benchmarking study found that this is partly because their expectations are colored by their experience with private service providers, such as internet banking, while by contrast public e-services do not always reach the same standards. The answer lies in building confidence among these active non-users that have taken an informed decision, as well as the ‘hidden’ non-users who will utilize online services in the future (p. 274)”

This sense of trust between e-governments and constituents will be important for e-governance on a global scale. In the EU, the eGovernment Benchmark survey found that as far as transparency is concerned, governments could be doing more for their citizens. This area of transparency, which refers to openness, accountability, and trust, obtained a score of 59% out of 100%, with the lowest scores in personal data: three out of four public services don’t provide information on who consulted personal data.

Another issue is cross-border acceptance, which the eGovernment Benchmark survey found is still in a premature stage, receiving an overall score of 22% out of 100%. It also found that there are more online opportunities for businesses than for citizens to use eDocuments across borders, which is another roadblock for wider acceptance of e-governance. Although many public services are online, interoperability can be a challenge, according to the European Commission report (2017; p. 264). The report cited the solution being seven Large Scale Pilots (LSPs) selected as projects for funding under the Competitiveness and Innovation Framework Programme (CIP), run largely by and/or with Member State administrations: eID: STORK (Secure idenTity acrOss boRders linKed), which “enable[s] citizens and government employees to use their national eIDs securely in any Member States.” Further, the report explained that STORK “delivered a common set of specifications and a common platform for interoperability of eIDs, including a Europe-wide Quality Authentication Assurance Scheme, and was demonstrated through six operational pilots. A follow-up LSP, STORK 2.0, was launched in 2012 to extend the authentication to legal persons (private sector), with a special focus on SMEs, and four new pilots: eLearning and academic qualifications; e-Banking, public Services for Business, and e-Health.”

Creating a Digital Bridge

The EU eGovernment Action Plan for 2016-2020 aims to “remove existing digital barriers and to prevent further fragmentation arising in the context of the modernization of public administrations.” (European Commission, 2017). Further, a 2017 eGovernment Benchmark report revealed significant improvement cross-border availability of digital public services with the top five overall performers being Malta, Denmark, Sweden, Estonia and Norway⁶. Within the context of Europe 2020, the Action Plan is guided by the following vision: By 2020, public administrations and public institutions in the European Union should be open, efficient and inclusive, providing borderless, personalized, user-friendly, end-to-end digital public services to all citizens and businesses in the EU.

Why the push for cross-border mobility in e-governance? “Achieving cross-border mobility across Europe will on the one hand offers more opportunities for citizens to work, live, and study in any European country; on the other hand, it will enable businesses to set up shop anywhere across Europe, thus boosting Europe’s attractiveness and competitiveness as location to invest and conduct business in,” the eGovernment Benchmark 2017 report noted. This cross-border acceptance is crucial since Estonia has found a new method of attracting business to the country. It offers an e-residency program, a government-issued digital identity available to anyone in the world that allows one to start and run a 100% online global business based in the country. Estonia is the only country in the world where 99% of the public services are available online 24/7.

“Attracting immigrants is just not an option for us. People would rather choose Sweden or Norway,” Taavi Kotka, Estonia’s chief information officer and government lead on the project, told The Guardian. “Physically, we’re not able to improve our population [growth]. So why not do it online?” (Shearlaw, 2016).

Another part of the e-government’s allure is that Estonia’s e-residency benefits are big for entrepreneurs and small business owners with limited capital. The online application processing period is only 30 days and it costs only EUR100. Once the ID is obtained in Estonia, all contracts can be signed digitally, avoiding the need for paper and travel. It also allows business owners to take full advantage of the EU Single Market and legal framework. Although the program is small, slightly over 5,000 companies were established under e-residency as of May 2018, it has big implications for countries aiming to attract businesses and tax revenue.

6. <https://www.capgemini.com/consulting/wp-content/uploads/sites/30/2017/11/2017-egovernment-benchmark-insight1.pdf>

Data breaches and Government Trust

Based on its e-governance advancements, Estonia has set an example of the future of government in the digital age. It is quite noteworthy that Estonia launched its e-ID in 2002 and had a data breach in the early years, although it was able to successfully overcome this and regain the public's trust. How did the government do this? According to a government website, "after Estonia's experience with the 2007 cyberattacks, scalable blockchain technology was developed to ensure integrity of data stored in government repositories and to protect its data against insider threats. Estonia became host to the NATO Cooperative Cyber Defense Centre of Excellence and the European IT agency." However, there is a long way to go for others within the EU to match Estonia's success with e-IDs. The eGovernment Benchmark 2017 EU survey found that users can only use an eID as electronic identification in one out of two government services, which reinforces the notion that it isn't truly efficient if it can't fulfill half of the needs a citizen might encounter.

Further, the eGovernment Benchmark report noted the "vital importance" of eIDs on government agendas. "With the eIDAS Regulation coming into full force as of 29 September 2018 [the data for the benchmark was collected end of 2016], it might be that Member States will expand the application and recognition of notified eIDs in cross-border services starting already from the next measurement," the report noted (p.30).

Another key area that supports the need for an efficient eID system is voting. In 2005, Estonia became the first country in the world to hold electronic voting in its national elections and it was the first country to use i-Voting in parliamentary elections in 2007. The government estimates that in the case of i-Voting, the cumulative time saved in the last Estonian elections was 11,000 working days. Because of its convenience and ease of use, electronic voting could boost citizen engagement in electing public officials. However, one must also address the possibility of electronic systems being used to improperly influence public opinion. The most recent example is the citizen lawsuits and federal investigation that has arisen from Cambridge Analytica being able to breach Facebook's system to gather information on millions of users, and ultimately claim that it influenced the 2016 U.S. presidential election. Can digital governance be truly impartial? That particular data breach could indicate otherwise as well as the vulnerabilities of using an i-Voting system.

Do the Negatives Outweigh the Benefits to Society?

One of the unanswered questions is: do the negatives outweigh the benefits to society? As far as Estonia is concerned, it appears that the benefits of the electronic age, and e-governance, win. In the report: "Government as a Platform: What can Estonia Show the World?" Helen Margetts and Andrew Naumann examined the success of the Estonian digital government, which she said "prioritized over the more 'bottom-up' principles, such as experimentation, leading to a centrally driven, rational, data efficient model that has benefitted from sustained

leadership.” In contrast, she said, “the UK government and (from 2011) the Government Digital Service has embraced the more informal principles of experimentation, a ‘hacking’ culture and data mining, but has struggled with openness, simplicity and participation, and is now challenged in its central leadership role (p.1).”

In order to promote the openness that governments need in the digital age, the authors noted the idea of Tim O’Reilly solution: a platform (GaaP), which “offers to encapsulate the use of digital technologies to support the resolution of collective action problems at various levels (city, county, national, regional) through shared software, data and services — and thereby improve the efficiency and effectiveness of government and governance, doing more for less (p.1).”

Indeed, governments can use e-governance to solve collective problems and can use the EU framework as a guide in its checks and balances in building an e-government.

Lessons Learned from Estonia’s Approach to the Sustainable Development Goals

With Estonia’s expanding e-government approach comes new opportunities and feasibility to leverage data to measure social progress and development. A core difficulty has been knowing how to adequately conceptualize areas for social and sustainable development. Estonia is no stranger to sustainable development, having launched the sustainable development act in 1995, followed by a 1996 sustainable development commission, and the 2005 Sustainable Estonia 21 program.⁷ These form part of a larger trend in Estonia’s governmental approach called knowledge-based management – the effort to better understand resources and mitigate the impact of interest based decisions (p. 73).⁸ This approach concerns not only the creation of indicators, but the overall approach to understanding resources and resource usages, chief among them being the distribution of intellectual resources behind all other allocations.

The Sustainable Estonia 21 program held the simple, but effective, strategy of projecting core values forward to 2030 and considering what should and should not be troubling Estonia at that time. One such core value being the viability of Estonian cultural space, with the need to call to embrace virtual Estonianhood by leveraging digital means to secure records and archives, as well as making them openly accessible (p. 15).⁹

To that end, the sustainable development goals (SDGs) have served to organize common ground in identifying shared problems along 17 areas for any nation looking to improve the standards of living for their populace. The SDGs serve as means to not only align national

7. <https://sustainabledevelopment.un.org/hlpf/2016/estonia>

8. https://www.riigikantselei.ee/sites/default/files/content-editors/Failid/estonia_sds_2005.pdf

9. https://www.riigikantselei.ee/sites/default/files/content-editors/Failid/estonia_sds_2005.pdf

interests, but potentially align interests among any stakeholders by organizing common ground for understanding what positive and negative trajectories for development look like.

However, the SDGs are only one piece of the puzzle. For while they serve to conceptualize areas, they underperform as metrics. There is a fundamental gap between the current use of sustainable development indicators and their measurability. The Estonian Statistics Office initial review of 231 sustainable development indicators demonstrated that only 14% of such indicators are measurable in Estonia.¹⁰ As Peter Drucker famously noted, “what gets measured gets improved.” In social areas, the larger the goal, the more nuanced the metrics and indicators need to be.

To this end, e-governments should consider matching social development goals with the social progress index. The SPI creates a platform for local actors to aggregate data along more than 50 social metrics. It is the data aggregation process that should be considered. Creating partners for data collection and review from multiple sources, public and private, helps to create improved data collection, as well as improved access for stakeholders to review whether the data shows progress, or not. With multi-stakeholder problems comes need for multi-stakeholder input and evaluation.

An E-Government is a data driven government; with new data capture and usage comes new means for accountability to improved standards of measurement. More fundamentally, with improvements to e-government comes a parallel demand in improving access to digital resources for citizens; otherwise, any such e-government activity will segment society along digital access.

This digital reliance follows with improvements to manufacturing through digital manufacturing, education through digital education, and on and on; the reliability not only of access to digital means, but of means to become fluent with them, needs to be considered a core indicator of sustainable development and effective e-government.

Countries embracing digital transformation of government and sustainable development goals should consider Estonia as a testcase for expanding stakeholder input on establishing indicators and leveraging government as an open innovation platform to embrace and understand solutions. Sustainable development’s digital transformation demands a knowledge-based approach to organize and understand competing interests under increasing demand for more neutral measurement.

The shift to data driven and knowledge-based management can be unduly influenced by actors with disproportionate experience in creating and using data driven indicators; governments pursuing Estonia’s strategy without policymakers experienced in data and knowledge-based management should consider external review boards for proposals to help avoid the influence of special interests.

10. <https://www.sei.org/featured/qa-first-steps-on-implementing-agenda-2030-in-estonia/>

A Framework to Support eGovernment

According to The Tallinn Ministerial Declaration on eGovernment, signed in Tallinn, Estonia on October 2017, all EU Member States and European Free Trade Area Countries have agreed that the design and delivery of their services will be guided by specific principles of user-centricity. This effective guide of recommendations includes, but is not limited to:

- “Service standards for citizen/business interaction with public administrations
- Digital Interaction: To have the option to digitally interact with their administrations
- Accessibility, security, availability and usability
- Principles of universal design have been applied to the setting up of the services and that the websites are simple to read and easy to understand
- That the authenticity of digital public services is secured and can be recognized in a clear and consistent manner
- Reduction of the administrative burden That public administrations make efforts to reduce the administrative burden on citizens and businesses
- Not to be asked to provide the same information to public services more than once
- One-stop-shops and multi-channel service delivery
- Digital delivery of public services: Public services can be fully handled online, as much as possible and appropriate
- Digital means are used to empower citizens and businesses to voice the views, allowing policy makers to collect new ideas, involve citizens more in the creation of public services and provide better digital public services Incentives for digital service use
- That the barriers to use digital public services should be effectively removed, including by extending and promoting the benefits of, for example, higher confidence, speed, effectivity and reduced costs to individuals who are able to use them
- Protection of personal data and privacy
- Make redress mechanisms available online so that citizens and business have access to complaint procedures online

With this framework in place, governments can begin to design electronic governance in an effective way, increase accessibility and promote wider adoption of use of efficient technologies as well as further bridge the digital governance divide.

Beyond these recommendations, a fundamental point of consideration should be that digital government is not the goal in and of itself, but rather a means to secure concrete improvements to public service delivery. Without the latter, the former is meaningless; to that end, Estonia will continue to serve as a primary example of positive development of e-government approaches.

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Acknowledgements

The author wishes to express personal appreciation to the following individuals for their input to the different stages of producing this report and for providing essential input and assistance into the report and its related materials:

Lama Zakzak

Engy Osman

Marouen Ghezal

Shuaib Kunnoth

Ghaith Yagan

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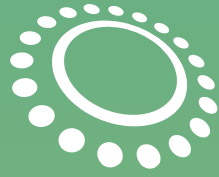
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