European Commission

SCIENCE FOR POLICY BRIEFS

Public Sector Modernisation for EU Recovery and Resilience

Summary

- Covid-19 has painfully exposed shortcomings in the public sector's digital capabilities.
- Public sector modernisation is one of the flagships of the EU's Recovery and Resilience Facility that will help Europe emerge stronger and more resilient from the current crisis.
- Evidence created at the Joint Research Centre, the European Commission's Science and Knowledge Service, proposes 12 essential recommendations for a public sector modernisation that is transformative, impactful, ethical, and democratic.

Context: Emerging Stronger and more Resilient

The global coronavirus pandemic has hit European economies and societies hard, and exposed governments' limits to react to this unique challenge. In response, the EU has set up the Recovery and Resilience Facility to help it emerge stronger and more resilient from the current crisis. €672.5 billion will be made available in loans and grants to support reforms and investments undertaken by Member States. At least 20% of these funds have to be used to foster the digital transformation. Digitally enabled public sector modernisation is one of seven flagship areas for investments and reforms. Getting public sector modernisation right will be crucial for Europe's future.

Goal: Creating Public Value

We have come a long way in the last years and decades, from the initial steps in e-government to transforming our governance systems with the help of technologies, such as artificial intelligence. At a policy level, this development can be traced from the 2009 'Malmö Declaration on e-Government', through the 2017 'Tallinn Declaration on e-Government', to the 2020 'Berlin Declaration on Digital Society and Value-based Digital Government'. Across these different stages, one thing has remained constant. Any innovation in the public sector, including those innovations enabled by digital technologies, should have one ultimate goal: the creation of public value. This also holds true for recovery and resilience in Europe. From this perspective, digital technologies can contribute in the following way[1].

[1] Mergel, I. (2021): Co-value creation in digital service transformation, forthcoming report under H2020 Co-VAL project, grant agreement No 770356.

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- **Economic value**: Digital technologies can help make the public sector more efficient. This does not necessarily lead to overall budget savings. More commonly, digital technologies can free up human resources or can allow for the expansion of a service with the same budget.

- **Administrative value**: Digitalising the public sector can improve administrative processes and make the public sector more effective. It can do so, for example by tapping into more and better data for service provision. Beyond mere digitization of processes, it can also have a non-technical, disruptive dimension that transforms governance.

- **Democratic values**: Digital technologies show great potential for contributing to democratic values. They can help increase transparency, for example through open data portals, or improve public participation ranging from consultation to co-design and decision making. It can furthermore contribute to a fairer society, for example by helping to close the rural-urban divide.

- **Citizen values**: Digital technologies can also benefit citizens and businesses at an individual level. They can, for example, improve accessibility to services, make them more user friendly, and speed up lengthy processes. These benefits of digital technologies, or lack thereof, were felt especially during the first wave of the coronavirus pandemic in 2020. Digital technologies can also help getting the right vaccine to those that need it most, when they need it and where they need it.

Challenges: Transformative, Impactful, Ethical, and Democratic

The digital technologies to transform the public sector are out there and often already well established in the private sector. However, adopting them in the public sector is more complex due to its specific characteristics. Therefore, the digital transformation of the public sector for recovery and resilience in the EU will face four main challenges:

Making the use of digital technologies in the public sector *transformative*.
Despite the potential offered by digital technologies, research shows that actual transformation is less often the case than small incremental changes. While slow and steady can get the job done in other situations, we need to go beyond simply digitising the bureaucracy. To let Europe emerge stronger from this crisis, bold changes should be aimed for. This requires a holistic governance approach and a vision about where we want to go.

Making the use of digital technologies in the public sector *impactful.*
Using digital technologies in the public sector to recover from this crisis has to focus on lasting and impactful change. Investment decisions should focus on technologies and areas where significant improvements of public value can be achieved for citizens and businesses. This also requires an understanding of how to measure impact in the public sector.

Making the use of digital technologies in the public sector *ethical.*
Using digital technologies raises important ethical questions concerning European values such as privacy, transparency, accountability, fairness, and trust. The acceptance of digitally enabled public sector modernisation among society depends greatly on the perception of ethical standards. Furthermore, technology can be used to do good and to do harm. It is what we make out of it that represents our values and vision for the future. Europe has to emerge from this crisis as a world leader in human-centric use of digital technologies in the public sector and beyond.

The research underlying this briefing

This Science for Policy Brief is based on ongoing and completed research projects at the Joint Research Centre's Digital Economy Unit (B.6). The INNPULSE research project contributed with evidence on Innovative Public Services, New Governance Models, and Frameworks for Interoperable Public Services. The Commission's ISA^2 programme supported much of the work in this area. The ENABLED research project provided evidence on data governance and sandboxing. AI Watch, the Commission Knowledge Service to Monitor the Development, Uptake and Impact of Artificial Intelligence for Europe brought their research on the use of AI in the public sector.

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Making the use of digital technologies in the public sector *democratic*

In democratic societies, the use of digital technologies in the public sector needs to follow democratic principles. The use of such technologies has to be perceived as legitimate by the citizens. For the use of artificial intelligence for example, it means that results and decisions are explainable and do not come out of a black box. Democratic control has to be ensured at all stages, from design of a solution, for example through co-creation, throughout adoption, implementation, and evaluation.

Solution: 12 essentials

Transforming the public sector is an effort that requires action by many actors at various levels. Below, we are suggesting 12 action points for regulators and policy makers, public sector managers, civil servants and technicians, and some recommendations that cut across all three levels. These 12 essentials are the combined result of several research projects at the European Commission's Joint Research Centre.

Policy Makers and Regulators

1. Define political objectives

To ensure that digitally enabled public sector modernisation contributes to the creation of public value, it needs to be embedded in a political framework. Be clear about your vision of what you want to achieve with the help of technology and set operational objectives accordingly.

2. Voice your support

Change in the public sector is very difficult to achieve without the backing of political leadership. Inform yourself about ongoing change processes in your sphere of influence and voice your support – especially when the going gets tough.

3. Create an enabling legal framework

Public sector modernisation with the help of digital technologies is shaped and guided by laws and regulations. Especially for emerging technologies, these laws and regulations often lag behind technological development. As regulator, identify drivers and barriers for the use of technology in the public sector. Create an enabling legal framework that finds the balance between providing clarity without stifling technological innovation. Sandboxing can contribute to finding this balance.

Public Sector Managers

4. Define an agile strategy

A public sector organisation that embarks on a modernisation quest with the help of digital technology needs to answer the Why and the How of this process. As public sector manager, you need to define and implement a strategy that answers to these questions and gives direction, while leaving room for agility and experimentation. Co-creating this strategy with stakeholders can help in this regard.

5. Invest in people, not just technology

A digitally enabled public sector modernisation is not just about technology. It requires the right knowledge and skills among staff, including technical skills as well as organisational, communication, and innovation skills. Therefore, invest in people, their motivation, their training and their skills, as well as in technology.

6. Manage change in your organisation

Modernising the public sector is not completed with the development or acquisition of technology. It requires, sometimes even as a pre-requisite, adapting organisational structures, changing processes, reorganising services, and more. Actively manage that change in order to yield the transformative potential of digital technology in your public sector organisation.

Civil Servants and Technicians

7. Build on reusable solutions and data

It can make sense for public sector organisations to develop their own bespoke solutions. However, this is not always necessary as many reusable solutions and building blocks are already available across Europe. As civil servants and technicians, you should utilise these reusable solutions when developing digital innovations in the public sector. This will save time and resources, and allow you to benefit from the experience of others to facilitate interoperability and service integration. Also, keep an overview of what is happening across and beyond your organisation.

The future of digital technologies in the public sector

Technology develops at a rapid pace. This offers new opportunities for the public sector, but also creates the challenge to adapt to new and unknown dynamics. Automated services, law as code, virtual digital environments, new ways of human-machine interaction, and other trends, will pose unique new questions. The public sector needs to anticipate these developments to stay ahead of the curve, its investments today need to be oriented towards the future, and the public sector needs to guide and regulate technological developments. The Berlin Declaration, signed in 2020 by all EU Member States, shows the path to a digital transformation of society and government that is based on European values.

8. Use standards and specifications where appropriate

Standardisation bodies at national, European, and global level are continuously working towards developing standards for digital technologies. These standards can help the public sector to develop safe, reliable, and interoperable solutions. Participate in the creation of these standards to ensure their suitability for the needs of the public sector. See if there are mature standards available for the technologies you want to use and understand how they relate to your organisation's plans.

9. Work towards political and organisational goals

Innovating with digital technologies can lead to interesting results. However, when such an innovation is disconnected from the rest of the organisation, it cannot fulfil its potential for creating public value. Therefore, make sure the use of digital technologies is always linked to achieving political and organisational goals. Adopt indicators and metrics to measure this alignment.

Cross-cutting recommendations

10. Communicate and engage with stakeholders

Modernising the public sector with digital technology is only partially a technical issue. It is mostly an issue of governance, of organisational change, and of changing roles of people affected by that change. Therefore, whether at the political, managerial, or implementation level, public sector modernisation requires dedicated communication and stakeholder engagement to be successful. This involves also the establishment of strategic partnerships, for example with other public bodies and businesses. Including citizens and citizen developers can at times significantly improve a service.

11. Ensure interoperability by-default

Public sector organisations are constantly exchanging data and information. Therefore, modernising the public sector with digital technologies should not lead to the creation of new silos. Legal, organisational, technical, and semantic interoperability should be ensured at all levels, across departments, organisations, and countries. The European Interoperability Framework gives guidance for how to ensure interoperability between different public administrations and across Member State borders.

12. Foster a culture of innovation

Using technology to modernize the public sector means doing things differently, and doing things differently is often a challenge for persons, as well as organisations. Innovation also involves taking risks - something that can be particularly challenging for public sector organisations. Therefore, actively foster a culture of innovation that expects, seeks, and embraces change, and accepts failure as part of the journey. This innovation mindset needs to be build and encouraged over time, using small and incremental steps and success stories. Reaching out, exchanging and learning from others can help in this process.

A researcher's note of caution

A 12-step programme to modernising the public sector with digital technology? Sounds too good to be true, doesn't it? The aim of this brief however, is not to provide a definite and conclusive guide to public sector modernisation. Instead, it is an invitation to discussion, learning, and further research. The recommendations made in this policy brief were selected, because they are supported by several research projects at the JRC. We consider them essential. However, there are many questions and issues in the context of digitally enabled public sector modernisation that go beyond what we presented here. While acknowledging the obvious limitations of this policy brief, the recommendations presented here are a solid starting point, based on independent scientific evidence.

The way forward

The next few years will be crucial for Europe's recovery and resilience. Public sector modernisation will play an important role in this effort to allow Europe to emerge stronger and more resilient from the current crisis - from speeding up and making vaccination efforts effective, to ensuring high-quality public services. We invite governments and public administrations across Europe to take this policy brief as a starting point to modernising the public sector with the help of digital technologies. The most important resource we have at our disposal in this effort is working together. Work together with the European institutions, cooperate across departmental boundaries and national borders, involve civil society and businesses, and make use of what science has to offer. And lastly, keep in mind why we are doing all this. To create value for citizens - the people we ultimately serve in the public sector.

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