



Digital Government Review of Norway

Boosting the digital transformation of the public sector

Assessment and recommendations



OECD Digital Government Studies

Digital Government Review of Norway

BOOSTING THE DIGITAL TRANSFORMATION
OF THE PUBLIC SECTOR

ASSESSMENT AND RECOMMENDATIONS

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Assessment and recommendations

On the path to digital transformation in Norway

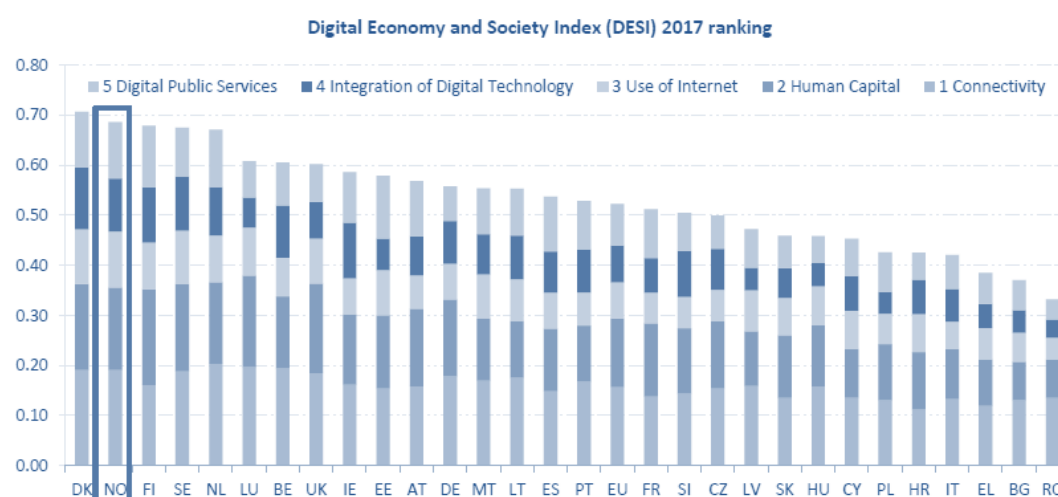
Background: Capitalising on a privileged context

Norway, together with other Nordic countries, is well placed on the path to digital transformation, when compared with its European peers. That position is reflected in several international monitoring instruments, namely the European eGovernment Benchmark¹ and the UN E-Government Survey (see also Figure 0.1).² OECD instruments such as the OECD OURdata Index (which benchmarks open data policies across OECD countries and partners) have also placed Norway among the top-ten OECD countries on open government data (see Figure 0.2).

The sustainability of this self-earned, privileged positioning in international rankings would require, however, not only the continuous development of structural conditions demanding permanent improvements, but also building a sense of urgency within the Norwegian context to maintain the drive for further advancing the overall digital transformation of the public sector. This would be necessary to better respond to the continuously evolving needs and expectations of digitally sophisticated and “ready” businesses and citizens, and to strategically tackle future challenges related to welfare financing, social inclusion and economic growth. Building up this sense of urgency would also contribute to strengthening Norway’s position in relation to its participation in regional collaboration mechanisms, such as the Nordic Council and the European Economic Area.

The public sector is no exception to the digital transformation that is permeating and spreading across the Norwegian economy and society. In this context, the challenge for the Norwegian government is neither to introduce new digital technologies into public sector activities nor to adopt technology within the framework of traditional public sector business models.

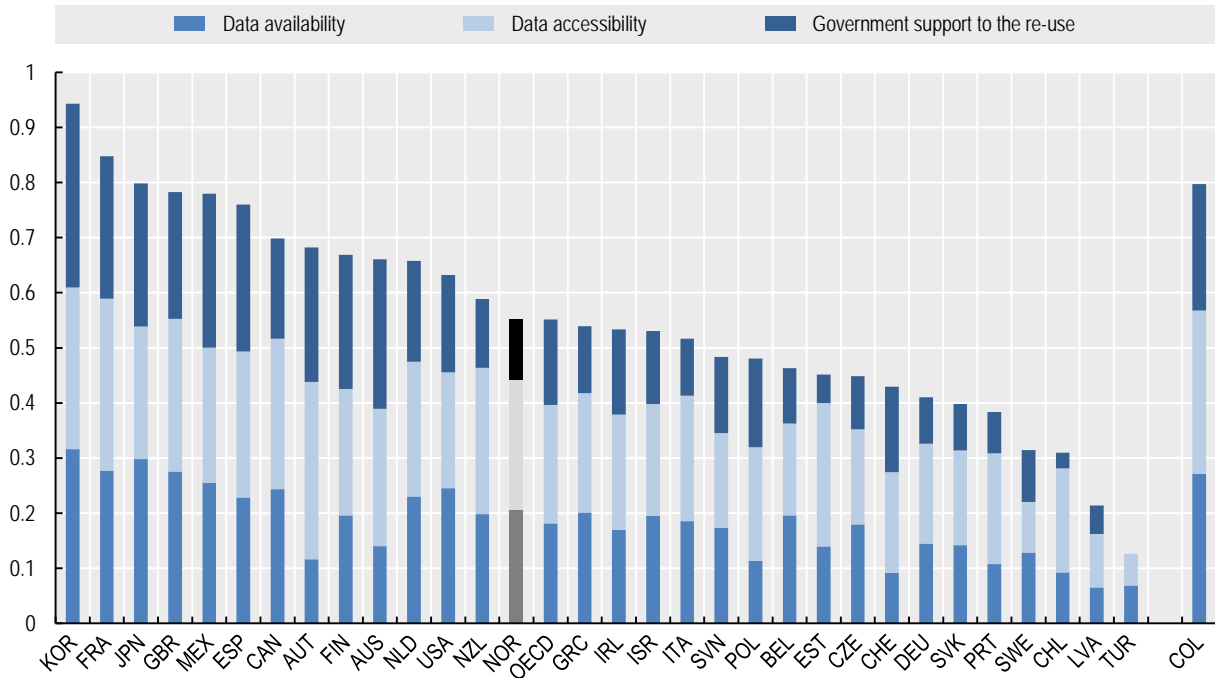
Figure 0.1. **Digital Economy and Society Index (DESI) 2017 ranking: Norway**



Source: European Commission (2017), “Digital Economy and Society Index 2017: Norway”, Digital Single Market, <https://ec.europa.eu/digital-single-market/en/scoreboard/norway>.

Figure 0.2. Open-Useful-Reusable Government Data Index (OURdata), 2017

OECD countries and partners



Notes: Data for Hungary, Iceland and Luxembourg are not available. Denmark does not have a central/federal data portal and is therefore not displayed in the index. Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Source: OECD (2017), *Government at a Glance 2017*, OECD Publishing, Paris, http://dx.doi.org/10.1787/gov_glance-2017-en.

Key and strategic actions should focus on further integrating digital technologies by design into the government's modernisation efforts. This would require transforming the working dynamics and processes of public administrations across all policy areas - and at all levels of government – and drive organisational change in close collaboration with citizens, businesses and local governments.

As a result, the Norwegian government could progress towards a public sector capable of delivering innovative services and opportunities digitally by default, which would further increase public sector efficiencies, and respond to the demands of a society and an economy that are ready for them.

In order to achieve the transition from e-government to digital government, Norway (as an early implementer of e-government) should overcome legacy problems and improve the coherence of a digital landscape often characterised by the coexistence of digital services and points of access to the public that appear to be littered.

The digital transformation of the Norwegian public sector should take place at all organisational levels

Norwegian public sector institutions, politicians, policy makers and public managers - at the central and local levels - should capitalise on technological developments. To do so, these actors would need to experiment with new technologies (e.g. prototyping) while also using citizens' inputs as drivers of organisational learning and knowledge-based institutions. A cross-cutting strategy to fully reap the opportunities of technology with a more efficient and systemic approach would need to be implemented. Such an approach to the maximisation of digital technologies would also streamline the use of those digital platforms already in place.

Stakeholders from the public sector should acknowledge themselves as agents of transformational change

From this perspective, the Norwegian ministries and agencies would benefit from further exploring and exploiting technology to increasingly engage with networked actors (e.g. citizens, institutions and businesses), rely on inter-operable machines, systems, processes (e.g. machine learning, open source) and data sources (e.g. linked data, big data, inter-institutional and cross-border data sharing). As a whole, these strategic actions would contribute to advancing the digital transformation of Norway's public sector.

The challenge for Norway is to avoid fragmentation, leading to duplication and incoherence

Siloed and decentralised governance models can lead to multiple access points for government services across public sector agencies (e.g. sectoral or domain-specific online platforms, electronic mailboxes, electronic identification system [eID] tools) that, while providing innovative "solutions" that respond to citizens' and businesses' demands, create duplication and limit opportunities for synergies and integrated service delivery.

Leveraging a sense of urgency

General agreement exists among public, private and social stakeholders on the relevance of the current digital agenda as a driver that can help Norwegian public sector institutions realise and fully capitalise on digital technologies - namely in terms of policy making and service delivery effectiveness, efficiency, and inclusiveness. Nonetheless, there is also a lack of a sense of urgency among public sector officials to capitalise on the ecosystems' digital maturity in order to advance digital transformation a step further.

Severe economic crises, leading to scarcity and instability, often function as drivers of change, while administering and managing change in wealthy and healthy environments may require a proactive approach towards the identification of incentives for transformation. The economic crisis that recently affected most OECD member countries – and which has created the sense of urgency in many instances - was not deeply felt in Norway. This is a result of effective "cushion" macroeconomic policies against external shocks, and considerable oil wealth to manage (OECD, 2016).

Similarly, the good level of the existing online public services has not created high levels of dissatisfaction among users so far, as proven by Norway's good placing in international rankings (as mentioned earlier).

The aforementioned results emanate from the contextual advantages and a solid basis in Norway that do not seem to be leveraged at the moment (e.g. high mobile penetration, good examples of data use in the education sector, integrated service delivery in municipalities)

There seems to be a general feeling among stakeholders that the sense of urgency may come soon. Three key examples illustrate some of the concerns and general feelings shared by several stakeholders during the OECD peer review mission to Oslo (26-30 September 2016):

1. **Increasing societal expectations:** Citizens and companies have growing expectations regarding their service experience. Used to top information and communications technology (ICT) service providers like Google, Facebook, Amazon or Uber, public service users expect the same kind of service simplicity, user friendliness, effectiveness and quality that ensure high levels of trust.
2. **Vendor dependence:** The limited efforts in place to co-ordinate ICT procurement in the public sector are generating some vendor dependency problems (e.g. supply-chain risks) at central and local levels.
3. **Unsustainable performance in international rankings:** Although Norway remains in good position in several international rankings, a general concern can be found about the lack of sustainability of the mentioned positions, since other countries are making greater efforts and more strategic investments to advance their digital government performance.

At the same time, the participation of Norway in Nordic-specific co-operation mechanisms underpins the need to do better - from the city to the supranational level.

Regional programmes such as the 2017-20 Nordic Cooperation Programme for Regional Development and Planning and the 2014-17 Nordic Cooperation Programme for Innovation and Business Policy raise, directly or indirectly, issues related to the digital transformation of the public sector.

Data-driven business innovation and entrepreneurship, digital skills, smart cities, smart governments and the sharing economy are widely addressed as part of a common Nordic policy agenda that is clearly levered by digital evolution. The development of shared building blocks such as cross-national and shared services, e.g. eID, and open, sharable and inter-operable government data are at the core of this ambitious agenda.

Leveraging synergies between Norway and other Nordic countries in areas such as digital welfare or business innovation calls for the definition and implementation of specific policies and standards, common to all concerned countries

This would require the Norwegian government to move from procedures that – even when ICT-enabled – were often analogue in design, to the transformation of public sector business models based on the opportunities offered by digital technologies. By doing so, Norway would be able not only to better respond to the demands and needs of the Norwegian population, but could also contribute to maintaining the overall leadership of the Nordic region in terms of digitalisation, and construct a joint leading role for the Nordic countries in relation to the European Single Digital Market.

Governing the digital transformation of the Norwegian public sector

Key assessments

Between 2005 and 2017, Norway adopted several information society and/or digital government agendas (e.g. eNorway plans). While each of these policy documents stressed a different focus, they reflected different policy angles based on changing political priorities, and defined diverse goals; they also drew upon each other's advancements and challenges. As a result, this inter-connected model has created continuity in the policy design and implementation process, which has been useful in placing Norway among the top-ranking countries on digital government policies.

The current Digital Agenda for Norway (2015-16) (also known as the “White Paper”) stresses the need to use digital technologies to modernise, simplify and improve public sector processes and external outputs. To make the lives of citizens and businesses easier and enhance their productivity, the White Paper identifies the following government priorities (KMD [Ministry of Local Government and Modernisation], 2016):

1. **User-centric focus:** Use technologies to support a user-centric public administration that provides seamless and integrated public services to its constituents, and simplifies day-to-day life.
2. **ICT as a significant input for innovation and productivity:** Digitise public operations in ways that support the productivity of economic agents, overall digital innovation and business competitiveness.
3. **Strengthen digital competence and inclusion:** Continuously improve digital competence and inclusiveness throughout all life phases, and across all population groups (e.g. migrants, refugees).
4. **Effective digitisation of the public sector:** Embed digital technologies in public sector reform efforts to reduce the complexity of the administration and deliver user-friendly digital services. Develop common solutions and foster their use in the central and local government and facilitate interoperability with European solutions.
5. **Sound data protection and information security:** Conceive data protection and security as integrated elements of ICT development and use. Citizens should, as far as possible, have control over their own data. Ensuring ICT security to maintain trust in digital solutions.

Digital government issues are deeply relevant to the current Digital Agenda, reflecting the commitment of the Norwegian government to address the digital transformation of the public sector. However, an autonomous strategy could bring substantial advantages to the capacity to co-ordinate and monitor the development of

digital government. A stand-alone strategy would also benefit from a clearer identification and increased usage potential by the digital government ecosystem.

Improving overall governance

The OECD Recommendation on Digital Government Strategies highlights the need to define clear institutional roles and responsibilities as one of the basic preconditions for sound governance and to sustainably develop and support the digital transformation of the public sector. Considering the complexity of the task to be undertaken, and the need to establish a governance model that enables and strengthens collaboration and co-ordination and tackle silo-based approaches, roles and responsibilities should be clear to all stakeholders involved in the digital transformation process to secure adequate leadership.

Besides the clarification of roles and mandate – supported by adequate power distribution, policy instruments and levers - the establishment of appropriate mechanisms for co-ordination and collaboration are also necessary to ensure multi-stakeholder co-operation and engagement, as well as the co-responsibility of public, private or civil actors. This is also essential to create shared ownership of results, which supports joint and integrated efforts.

A sound governance framework – inclusive of institutional set-up, co-ordination mechanisms, soft or hard policy levers – facilitates decision-making processes in consensus-based organisational cultures, the adoption of agreements within decentralised decision-making and policy-implementation environments, and the co-ordinated definition, observance and enforcement of guidelines in digital government domains

What emerged during the OECD peer review mission was a general consensus among different stakeholders about the central policy co-ordination role of the Ministry of Local Government and Modernisation (KMD) and the strategic, instrumental role of the Agency for Public Management and eGovernment (Difi) in boosting the Digital Agenda for Norway. Significant agreement about the adequacy, urgency and level of ambition of the policy objectives identified also exists, which reflects a high level of maturity of the digital government ecosystem.

However, the results of the peer review mission showed that a governance framework with additional clarity on responsibilities and stronger leadership seems to be required; this view appears to be shared by many stakeholders, including user representatives and private sector institutions, e.g. suppliers.

For instance, the division of responsibilities between KMD (responsible for co-ordinating ICT/digitalisation policies and steering Difi, an agency within the KMD) and the Ministry of Trade, Industry and Fisheries (NFD) (responsible for the Brønnøysund Register Centre, which administers among other things, the Altinn platform) has led to disperse leadership and overlapping roles between these public bodies in areas of utter relevance to the effective implementation of Norway's digital agenda.

The role of Difi is also considered fundamental in the Norwegian public sector, but some doubts exist regarding: 1) its current capacity to provide the right support and

leadership at the central and local levels; 2) the agency's levers to lead and sustain progresses in the digital transformation of the Norwegian public sector; and 3) its overall capacity to rapidly internalise and foresee the opportunities brought by the fast-paced digital era.

Difi assumes a central role in setting priorities, tackling the implementation of the digital agenda and developing cross-cutting guidelines and common components (e.g. public sector ICT architecture). However, besides its technical-pedagogical role, Difi lacks some strategic instruments (e.g. evaluation of ICT projects, ICT funding) to better leverage digital government development in Norway.

At the same time, the role and capacities of SKATE (the inter-institutional steering and co-ordination mechanism on digital government chaired by Difi and integrated by 12 public sector organisations) and the Digitisation Council (a multi-stakeholder advisory group providing by-request guidance on ICT projects' cost-benefit analysis and risk management) (see the section, Improving ICT management and strategic planning in Norway, later in this chapter), appear limited to support a coherent policy and effective collaboration in its implementation. For instance, according to some of the SKATE's members interviewed during the peer review mission, the spaced regularity of its meetings and its consensus-based nature makes it a very useful forum for information sharing, but with limited co-ordinating powers.

The limitations of its current governance framework may negatively impact Norway's capacity and opportunity to fully benefit from undergoing digital transformation efforts

The governance framework in place is not the most adequate to provide the right leadership required for supporting effective co-ordination, collaboration and shared efforts within the public sector. This governance model also limits the effectiveness of ministries' intentions and actions (including the impact of specific projects and investments), since fragmented and unarticulated public initiatives tend to respond in a limited way to citizens' and businesses' needs.

A stronger mandate - which could imply and provide, for instance, clearer and stronger responsibilities and levers - and the increase of resources for Difi is fundamental to reinforcing its co-ordinating powers at the national level, but also with respect to the 19 counties and 426 municipalities. Stronger co-ordination seems necessary, moving beyond setting policy objectives and priorities to enable the more effective steering of joint actions towards the achievement of common results and overarching government goals.

Although there isn't a "one-size-fits-all" model to country-specific digital government governance needs, experiences across the OECD provide evidence that the formal identification of a position equivalent to a Government Chief Information Officer (and/or Chief Digital Transformation Officer) could be considered as one of the possible alternatives. This would also help fill the gap mentioned during the peer review mission with regard to a visible "champion" of digital government within the Norwegian public sector.

The scenario above is also relevant with regard to open government data. While Difi holds key responsibilities within the framework of open data policies (e.g. developing open data guidelines), Norway lacks a formal Chief Data Officer in charge of providing

strategic guidance on open data policies and initiatives across the country. As a result, this may have direct and indirect negative impacts on the achievement of key overarching policy objectives (e.g. spurring business innovation and furthering the digital economy).

Developing a strategic, system-thinking approach

Developing a system-thinking administration should be at the core of the development of digital government, and assumed as a central priority for the Norwegian public sector. This objective should be pursued by identifying public sector agencies with good examples to replicate, aligning the incentives and the organisational objectives, monitoring practices' alignment to overarching goals, and identifying long-term needs and shared solutions for the whole Norwegian administration.

Encouraging horizontal knowledge sharing is neither an unknown nor a new challenge for the Norwegian public sector. The verticality, top-down and decentralised policy implementation approach of the Norwegian public sector has created "innovation clusters" within leading agencies – often strong and autonomous - and within specific policy sectors (e.g. health, tax, loans). This has led to an unbalanced availability of competencies and capacities across and among ministries and agencies.

A strategic, horizontal knowledge sharing in line with central objectives is also needed. While local governments have given the Norwegian Association of Local and Regional Authorities (KS) a role in order to better co-ordinate on issues related to digital government and innovation (similar to the Dutch Local Governments' KING model), vertical co-funding issues and discrepancies in policy priorities seem to exist between the central government, counties and municipalities. As a result, local governments may make decisions based on their own priorities, thus weakening the capacity of the co-ordinating body to steer a multi-level and structured approach to better achieve national priorities.

Developing a cross-sectoral system-thinking approach would strengthen the Digital Agenda for Norway as a strategic tool to steer decisions and better align priorities with the national political agenda and key policy goals across the whole administration

Norwegian policy makers could benefit from further understanding that digital transformation can only be the result of the interaction and interconnection between public sector institutions, citizens and businesses – relations that are indeed eased and facilitated by digital technologies. Such a collaborative approach should also be considered as a strategic effort to bring "all the voices" to the table, enabling the more structured involvement of citizens, companies and general interest groups, and moving beyond the traditional citizen-centred approach to an evolving citizen-driven approach.

A pervasive strategic system-thinking approach can also accelerate the awareness of the digital journey among public leaders to overcome vertical thinking and increase awareness around the networked role of ICT. Together with a stronger, clearer and more coherent governance framework, this approach could ease the endeavour to ensure the sustained commitment and support of the digital transformation from top political leadership within the central government. Clear fundamental governance and control mechanisms, such as the following, should accelerate the digital journey:

- Orchestrated development and use of key **building blocks** (e.g. eID, eAuthentication, ePayments, eDelivery, eDocuments, eForms, etc.).
- Further **adoption of common standards**, architectures and norms.
- Development of a **common ICT procurement strategy**, aggregating the demand for stronger negotiating power, enabling savings and promoting the adoption of more interoperable solutions across the central and local level public sector institutions.
- Adoption of **common guidelines to support shared efforts** regarding digital service delivery, encouraging the development of more citizen-centred platforms, under the leadership of an existent agency adopting this mandate or role *de facto* (e.g. Difi).
- Strengthened **oversight capacities and mandates** to ensure systemic, strategic, efficient and accountable investments in ICT projects, and discourage siloed and inefficient expenditures. This is highly relevant, particularly in light of potential risks related to economic growth as a result of lower oil revenues and greater need for well-financed and sustainable welfare services.

OECD member country experience in strengthening system-thinking approaches to digital government is very diverse. For some countries, the adoption of effective soft approaches is easier thanks to the consensus culture generally in place in their public sector. Other countries tend to use harder approaches as an answer to more vertical or/and competitive cultures.

Depending on the experience, specific context, policy goals and expectations underway, one of the forthcoming challenges for Norwegian authorities is to adopt a clear and effective governance model – inclusive of the relevant tools and mechanisms - that can help design strategic decisions on policies and investments based on system-thinking dynamics in the public sector, while involving external actors in the process

Proposals for action

Governing the digital transformation of the Norwegian public sector

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 2 of this review, the Norwegian government could consider implementing the following policy recommendations:

1. **Consider the development of an autonomous digital government strategy**, to strengthen the political relevance of the digital transformation of the public sector and to be used as a policy instrument to align decisions and investments to overarching strategic goals, aggregating the commitment, ownership and efforts of the entire digital government ecosystem. A stand-alone strategy can bring several advantages in terms of co-ordination, management and monitoring, namely:
 - *Reinforce the focus and coherent actions with regard to key strategic issues, goals and priorities* for the development of digital government, while securing the proper alignment with other relevant strategies, e.g. sector reform, innovation and digital economy.
 - *Secure the inclusiveness of the policy process* in the design, development and management stages of the strategy. The involvement of public, private and civil society stakeholders can help reflect different needs and perspectives in the strategy and will also reinforce the commitment, sense of ownership and the development of a system-thinking culture.
2. **Ensure an updated legal and regulatory framework, aligned with the changing needs and increasing expectations of citizens and businesses.** The Norwegian government should maintain its commitment to adapt and advance the regulatory framework for digital government with a system-based rather than a topic-oriented approach, i.e. decisions on laws and regulations are supported by a holistic and cross-sectoral view so that they reach the government as a whole (whole-of-government approach). The assessment of regulatory challenges based on topic-oriented and sector-driven efforts have somehow hindered the faster advancement of the digital agenda in the country (e.g. the Cloud Strategy), which is why Norway would gain from paying particular attention to specific policy areas, such as public sector data governance as a whole (see Chapter 5) to find joint and more efficient solutions to systemic problems.
3. **Consider the development of an impact assessment methodology** based on the expected outputs, outcomes and impacts of the suggested stand-alone digital government strategy. This approach can support a more consistent use of cost-benefit analysis approaches, a structured management of projects consistent with the overarching strategic priorities and an accurate and transparent reporting of the public sector's efforts for digital government development.

Setting up a sound institutional framework for stronger leadership

The Norwegian government should consider implementing the following recommendations relevant to the **development of a clearer, more solid and more structured governance framework**, which would support stronger leadership and the definition of clearer roles for the different actors. This governance framework should:

- involve and commit the relevant actors across the public sector
- outline the diverse attributions for the different actors playing a key role in the governance framework, in particular to strengthen the clarity of roles and the efficiency of the co-ordination between KMD and its subordinate agency, Difi, that would improve synergies and help overcome potential confusion, or current gaps, in terms of responsibilities
- engage with, and communicate efficiently, the responsibilities, as well the progress underway, to key stakeholders across the public sector, the private sector and civil society.

Proposals for action (*continued*)

In line with the above, as well as with relevant OECD member country experience, the Norwegian government may consider implementing the following strategic actions:

4. **Consider the establishment of a national Government Chief Information Officer (GCIO) formally recognised as a public “champion” with a clear mandate and powers to lead the digital transformation of the Norwegian public sector, supported by the adequate governance framework.** The role of the GCIO should be focused on supporting the strategic use of technology within the public sector, driven by efficiency and effectiveness gains, and prioritising user-driven approaches for better value creation to the Norwegian economy and society. The government of Norway could consider:
 - *Establishing the post of national GCIO* in the Ministry of Local Government and Modernisation (KMD) with the responsibility to define the digital government strategy for Norway and co-ordinate its implementation, and with a ranking level that would enable direct reporting to the minister. The responsibilities of the national GCIO would include co-ordinating with, and monitoring, the not-yet available position of the Chief Data Officer (CDO), whose establishment is put forward by this review (see Chapter 5). This would ensure that the proposed strategy for the management and governance of the public sector data value chain is at the core of the digital transformation of the Norwegian public sector.
 - *Envisaging an agile organisational structure supporting the GCIO*, e.g. the Department of ICT Policy and Public Sector Reform (AIF), or a special taskforce within this department, fulfilling this role.
 - *Reinforcing the mandate of Difi* as the agency/directorate responsible for carrying out the implementation of the digital government strategy (and overall digital transformation) of the public sector as defined by KMD. The supporting instrumental role of Difi in the operationalisation of the strategy could be strengthened by undertaking the following actions:
 - Assign to Difi the mandate to support the GCIO in the development of a national Digital Government Strategy - based on an inclusive approach bringing on board all relevant actors and stakeholders.
 - Allocate the formal monitoring responsibilities to co-ordinate the implementation of the above-mentioned digital government strategy.
 - Increase the human and financial resources allocated to Difi to enable it to lead and support the development of digital government in Norway, and in particular, to co-ordinate the implementation of the strategy.
 - Broaden the scope of the responsibilities of the Digitisation Council, of which Difi is the secretariat, with regard to the evaluation of ICT projects. The Council should be responsible for evaluating strategic ICT projects - focusing in particular on medium-sized projects - according to common ICT standards and guidelines, to ensure their alignment with the overarching strategic goals set in the national digital government strategy, the efficient commissioning of goods and services and fostering re-use of systems.
 - Consider the establishment of a new mechanism for ICT project evaluation for projects below NOK 10 million. The mentioned mechanism, that should be agile, online-based and non-mandatory, would help the Norwegian government to better follow ICT project development. Under the leadership of KMD, Difi should be responsible for developing and implementing this new mechanism.

Proposals for action (*continued*)

- Reinforce and consolidate the advisory and co-ordination role for strategic ICT procurement, allowing for better alignment of requisites (e.g. common norms and standards) and the exploration of synergies for demand aggregation, in line with the efforts underway with the Government Procurement Center (Statens innkjøpssenter).
 - Increase the available funding mechanisms, namely through the expansion of Difi's Co-Financing Mechanisms (Medfinansieringsordningen), enabling the agency to better support and influence the development of strategic projects in the public sector in line with the digital government strategy.
 - Assign the mandate to co-ordinate the implementation of a national policy for digital service delivery, to be designed by the GCIO, reinforcing the agency's role in the development of more citizen-driven public services, taking into account that even user-centred approaches are not constantly available across the entire public sector (see the section, Building a data-driven public sector in Norway, later in this chapter).
5. **Reinforce the involvement of relevant stakeholders from across the public sector in the development and implementation of the digital government strategy.** The Norwegian government should consider establishing a new body (e.g. a committee, council, etc.) to secure the regular engagement of key actors from across and within levels of government with the role to steer public sector efforts towards digital transformation. The mandate of the new body would include:
- *engaging in the design and in the co-ordination of the implementation of the national digital government strategy*, through the participation in regular meetings that could be held at a higher political and/or top-management level, or at a more operational one, given the specific focus of the meeting's agenda and level of discussion required
 - *following the development of strategic ICT projects*, i.e. key enablers for digital government development (e.g. digital identification, interoperability and data exchange among base registers, one-stop-shops for digital service delivery), or initiatives with a transversal nature, issuing recommendations for their development.
 - *following up on the activities of the Digitisation Council*, discussing the recommendations issued by it.
6. In order to ensure the inclusive development of the digital government strategy, **establish a body (e.g. advisory council) that includes representatives from the private sector, academia and civil society** in order to guarantee the integration of more pluralistic views for digital government development in Norway. Meetings should happen regularly, allowing its members to better follow the national efforts underway and contribute, as relevant.
7. **Strengthen the co-ordination and synergies with the local government** through more regular and stable co-ordination mechanisms. This can be achieved by reinforcing local governments' engagement in the development of the Norwegian digital government strategy. The following mechanisms can support better co-ordination across levels of government:
- *reinforce the involvement of KommIT* through the regular participation of direct representatives of different municipalities in the meetings of the *possibly newly established body* (see Recommendation 5 above) to secure proper representation of the municipalities
 - *better promote the use of key enablers across the municipalities* (e.g. digital identification, interoperability, integrated central-local one-stop-shops for digital service delivery), increasing the capacity of Difi to orient and support the necessary efforts at local level (see the section, From user-focused to user-driven service delivery in Norway, later in this chapter).

Improving ICT management and strategic planning in Norway

Key assessments

The strategic planning and efficient management of ICT investments and projects require organisational knowledge, and the availability of specific skills and competencies among public sector officials. Technologies are becoming increasingly complex, with multiple cost structures and dependencies, connected to more and more diverse variables. Business skills and different business models can be mobilised to guarantee constant organisational learning, develop public sector intelligence and support strategic choices on technology for the overall sustainability of the digital transformation process. The use of business case methodologies to better plan and decide on ICT investments in line with political priorities (side by side with the need to ensure the availability of project management skills) has been assumed by OECD member countries as a fundamental factor in nurturing and sustaining the shift from e-government to digital government (Mickoleit, 2014).

A more frequent use of common business case and project management approaches and tools across an administration can also have a positive impact on better mobilising financial resources and better linking and pooling different funding sources, particularly for joint projects (or for projects requiring process integration and or/sharing). As a result, this could help to prioritise public investment in critical policy sectors (e.g. health, welfare and education), spot and lever potential synergies and encourage an approach to sharing and integration, which is at the core of the digital transformation.

The limited use of common practices to formulate the value proposition for ICT investments, and to manage projects across the Norwegian public sector, inevitably leads to additional hurdles to strategically justify investments

This also limits the capacity to point to tangible benefits for the public sector (at the macro, meso and micro levels), for citizens and businesses. The lack of these common practices can lead to unnecessary and duplicated efforts, to untapped opportunities for synergies with negative consequences in terms of public ICT investment efficiency and effectiveness.

Reinforcing the “cost-benefit” approach

SKATE (the inter-institutional steering and co-ordination mechanism on digital government chaired by Difi) was conceived as a horizontal co-ordination forum for the identification of common needs, actions and solutions across the public sector, with a focus on the prioritisation and coherence of ICT investments. The Digitalisation Council was created to provide advice to public sector agencies on ICT projects. The involvement of stakeholders from the public (at all levels), private and third sectors has been useful to build a strong basis for further capitalising on common synergies, implementing co-ordinated efforts, and ensuring better coherence in terms of priorities to be followed, standards to be applied and goals to be accomplished.

The Norwegian government has put in place the Budget Investment Proposal programme (Statsingsforslag) as an effort to draw upon the provision of additional financial funding (provided by the Ministry of Finance with KMD's strategic advice) to align ICT and digitalisation projects at the ministerial level to central policy goals. In order to obtain these additional funds, government ministries are required to provide "proof" (by filling out a form) of the measurement processes used to assess projects' costs-benefits and benefits realisation. KMD's advice and the information provided by ministries are then used as decision-making elements by the Ministry of Finance to prioritise specific ICT project proposals.

Building capacities across public sector institutions for the widespread use of business cases and/or value proposition approaches (e.g. cost-benefit analysis) can contribute to strengthening ICT project planning and management

Isolated examples of these practices are already available across different policy sectors, with positive impact reported in terms of projects' efficiency, coherence with broader national goals and sustainability. For instance, the Brønnøysund Register, responsible for managing the Altinn platform – that provides important services to citizens and businesses – reported always using business cases methodologies to plan and prioritise investments. Nevertheless, a consensus seems to exist among stakeholders within the Norwegian public sector, namely among the members of the Digitisation Council, on the need for a more structured and articulated approach in this respect.

The existence of mechanisms capable of guaranteeing projects' scrutiny and quality assurance is fundamental to assure adequate coherence of ICT projects and the necessary articulation among public sector stakeholders. Experiences across OECD member countries are diverse in this respect. While in some countries more centralised models are in place - with more linear and institutionalised co-ordination - other countries have adopted more decentralised models, mostly based on consensual and compromise-oriented approaches. In Norway, the second option prevails.

The current *ex ante* evaluation mechanisms of ICT projects in Norway do not seem adequate enough to hold decision makers and implementers fully accountable for ICT investments and results:

- The current threshold (over NOK 750 million) set for the mandatory *ex ante* project cost-benefit assessments (known as KS-ordningen or Quality Assurance Scheme) carried out by the Ministry of Finance (with the support of external consultancy firms) is only applicable to major-scale ICT projects.
- For those ICT projects between NOK 10 million and NOK 750 million, public sector institutions are recommended - yet not obliged - to seek the advice of the Digitisation Council,³ a multi-stakeholder group chaired by Difi to support agencies on the definition and implementation of cost-efficient ICT projects. Nevertheless, stakeholders highlighted the limitations of this mechanism during the OECD peer review mission as the final recommendations of the Council are neither mandatory nor have a specific impact on the final allocation of resources for ICT projects. Since it is not an obligatory mechanism, the number of projects submitted for review is still substantially low.

In order to address the issues above, the Norwegian government put in place two financial incentives in 2016 to encourage public sector bodies to perform cost-benefit assessments:

- **Difi's co-financing mechanism:**⁴ This mechanism aims to reinforce Difi's capacity to better pursue a systemic quality management approach for ICT projects by providing additional budget (up to 50%) for ICT projects with a total cost ranging from NOK 5 million to NOK 50 million. Difi's co-funding is limited to a maximum financial contribution of NOK 15 million.
- **KMD's 2016 Digitalisation Memorandum:**⁵ In the 2016 Digitalisation Memorandum, KMD defined a set of actions in key areas (e.g. cloud computing, common components) to be prioritised by public sector organisations with regard to digitalisation. These actions were embedded in the KMD's distribution of the Digitalisation Memorandum that is distributed among ministries and agencies on a yearly basis. The 2016 Memorandum, which superseded a prior memorandum published in 2015,⁶ also requires ministries and agencies to use a best practice project management model for projects with a total cost of more than NOK 10 million in order to ensure the cost efficiency of ICT projects. The memorandum recommends the use of Difi's "**Project Wizard**" **project management platform** (www.prosjektveiviseren.no). The Agency for Financial Management (DFØ)'s guidelines for cost-benefit analysis and benefits realisation have been embedded within the framework of Difi's platform.

Difi's co-financing mechanism and the 2016 Digitalisation Memorandum are evidence of KMD's decision to strengthen its co-ordination capabilities and the levers at its disposal (e.g. financial and legal instruments) to improve the quality of institutional ICT projects. Nevertheless, Norway, like other OECD countries, is striving to find a balance between leveraging the further adoption of cross-cutting, structured ICT project-management approaches and tools, and the need to avoid limiting the agility, rapidity and flexibility required in a context of digital transformation within a highly decentralised public sector.

Enhancing the more frequent use of financial approval mechanisms to strengthen the alignment of projects (e.g. Difi's co-financing model) with national strategic objectives is an opportunity to be fully tapped

The further use of financial policy levers, used in several OECD member countries, can significantly improve the systemic governance of ICT projects, and generate positive impacts regarding project coherence and alignment. In addition, the use of Difi's project management platform should be leveraged to contribute to the implementation inter-institutional, standardised and comparable management practices. This would avoid the proliferation of ICT project-management models that draw upon different project-management frameworks.

As mentioned earlier, establishing a central ICT procurement strategy (comprising the aggregation of demand of ICT products and services, e.g. the "government as a single customer" approach in New Zealand) is also a viable strategy to create stronger public sector negotiating power in relation to private provision of ICT goods and services.

Such a procurement strategy should be framed within a broader, common, standardised and well-structured ICT supply chain strategy that draws upon strategic policy implementation and comprises additional public management elements. For instance, private-public partnerships, knowledge sharing, public sector innovation, risk management, co-responsibility and organisational learning. This common supply chain strategy can lead to considerable improvements in terms of efficiency, and it would indeed enable a more coherent approach to ICT procurement that would result in savings, and stronger negotiating power, leading to better prices offered by vendors and improved alignment with common norms and standards to be followed.

Improving organisational learning on project management

The implementation of ICT projects' common monitoring mechanisms is a fundamental instrument to improve organisational learning across different policy sectors and levels of government. Consolidated metrics can be useful to better follow outputs and monitor the outcomes and impacts of policies underway. Knowledge-sharing practices can also help leverage and spread experiences across different areas of the public sector, and encourage synergies to the extent possible.

Leveraging and sharing organisational knowledge on successes and failures across different sectors and levels of government is pivotal to creating an environment that promotes and enables the digital transformation of the public sector

This requires the capacity of different actors to work together, share and integrate processes and resources, leveraging existing assets (e.g. systems, people, data). KMD has given Difi the task of examining how an ICT project catalogue can be created. The objective is to explore how the availability of an ICT project catalogue would contribute to building the government's knowledge of ongoing digitisation projects and improve organisational learning on project management. However, while there are several examples of good project management practices, interviews held during the peer review mission pointed at the existence of disarticulated practices, and duplicated efforts at the agency level.

This fragmentation and lack of inter-agency co-ordination is visible also within the same ministries. While some ministries have tried to implement a more structured approach in order to better control and monitor projects (e.g. the Ministry of Justice), this is not common practice across Norwegian ministries. As a result, the existing heterogeneity in terms of project management and oversight undermines effective co-ordination and, as a result, leads to missed opportunities of collaboration, efficiencies and synergies.

The above-mentioned incoherent and unarticulated environment is able to create virtuous cycles among those institutions that succeed, generating front-running examples and practices of digital government. However, in the cases of those institutions that don't succeed, a negative cycle is easily generated: lack of required skills, limited leadership capacities and few instruments available to generate, capture and maintain knowledge bring serious limitations to the digital transformation of the public sector.

KMD's Digitisation Memorandum is a sign of the Norwegian government's commitment to improve the public sector performance and will contribute positively to the necessary shift in this area. The requirement to use Difi's "Project Wizard" platform (www.prosjektveiviseren.no) should create new opportunities for coherence, knowledge sharing and synergies among ICT public sector projects.

Developing internal capacities vs. outsourcing

Several OECD member countries prioritise the need to find the right balance between public and private efforts in the promotion of the digital transformation. The lack of ICT skills in the public sector determines that ICT deployment and maintenance mostly rely on external service providers. That creates obvious dependences, namely from big consultancy firms, hardware and mostly software providers.

During the OECD peer review mission to Oslo, Norwegian public officials and private sector actors expressed and stressed concerns about the above-mentioned issues. For example, public officials highlighted the current reliance on external consultancies to assess, conceptualise and prototype ICT projects, whereas private sector representatives underlined, as mentioned above, labour mobility from the private to the public sector. While, in theory, this scenario should have contributed to reducing reliance on external support, the current human resource management (HRM) system in place may lack a strategic ICT-related component that could contribute to building and strengthening public sector institutions' capacities to self-capitalise on technological developments.

The definition and implementation of an effective HRM ICT-focused approach would be useful to attract, employ and retain ICT professionals and champions, and secure the availability of the digital skills required to support Norway's digital transformation

These professionals would bring the right set of skills and competencies to actually build further ICT project management capacity across the whole public sector, while bringing a fresh, forward-looking vision about the opportunities of new technologies to transform public sector activities.

Yet, evidence from the OECD mission also points to the public sector's frequent reluctance to contract external service providers, despite the lack of capacity, in areas where private sector advantages are typically clear (e.g. software development, general information technology [IT] maintenance). This organisational culture may also have a negative impact on the willingness of the Norwegian government to outsource and partner with private sector organisations to ensure timely access and efficient provision of key government services in areas such as welfare and health.

The sustainable digital transformation of the Norwegian public sector would require further clarification of the areas where the government wants to maintain a leading role, and build specific capacities for such a purpose, and those where private sector intervention could broadly and actively contribute to the achievement of specific policy goals (e.g. project design vs. development of technical solutions)

Proposals for action

Improving ICT management and strategic planning in Norway

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 3 of this review, the Norwegian government could consider implementing the following policy recommendations:

8. **Reinforce the role of the Digitisation Council (Digitaliseringsrådet), strengthening its position as a widely recognised public collective body responsible for guaranteeing a sound and agile evaluation of ICT projects.** The Council should continue to be recognised as a crucial body with the mandate to foster coherency, effectiveness and sustainability of ICT projects across the Norwegian public sector. The following actions could reinforce its role in the digital government ecosystem:
 - *better promote and advertise the responsibilities of the Digitisation Council* across the Norwegian public sector, clarifying its mission and demonstrating the benefits of the assessment for projects' alignment, efficiency and effectiveness, but also for the public administration as a whole in relation to its capacities to coherently implement digital government
 - *shift from a non-mandatory to a mandatory approach for reviewing ICT projects (between NOK 10 million and NOK 750 million)*, given the dimension of the projects assessed and their potentially large impact on the Norwegian public sector
 - *assure the proper financial and human resources* to support the activity of the Council, and its reinforced mandate.
9. **Reinforce the applicability of general ICT standards and guidelines through ICT project evaluation**, namely the following topics:
 - digital identification and digital signatures
 - common standards and architectures
 - clear language and user involvement
 - information and data openness for transparency and re-use purposes
 - information security and personal data protection
 - digital first and universal design

ICT project evaluation should be assumed as a strategic policy lever to support a consistent and coherent implementation of the digital government strategy – i.e. currently the Digitalisation Memorandum and eventually a stand-alone digital government strategy across the Norwegian public sector.
10. **Establish a standard business-case model** for mandatory use for ICT projects across sectors and levels of government. The model should be flexible, applicable to different types and sizes of ICT projects and should be properly connected with the Norwegian standardised ICT project management model.
11. **Leverage the use of Difi's project management platform - Project Wizard** – to contribute to the implementation of inter-institutional, standardised and comparable management practices. The use of the platform should not be considered mandatory, but incentives could be provided for its use while also ensuring that public stakeholders are aware of the advantages of using it, avoiding the proliferation of ICT project management practices. The consolidation of Difi's Project Wizard should also be connected with the development of a standardised ICT business case model for the whole Norwegian public sector.

Proposals for action (*continued*)

12. **Increase the level of priority conceded to the development of leadership and digital professional skills across the public sector** through the adoption and strategic management of an ICT human resources policy. The need to satisfy the internal demand for ICT professionals capable of responding to the rising complexity of users' needs and associated with the rapid uptake of digital technologies and associated working methods (e.g. data analysis) should be reflected in the national Digital Agenda or in a specific digital government strategy. Specific policy actions should be developed, namely to:
 - map needs across the administration regarding digital skills' development in line with the changing needs associated with the digital transformation of the public sector
 - promote the permanent updating of the digital skills of public officers, bearing in mind the cross-cutting nature of the digital transformation of the public sector
 - encourage leadership skills for the development of digital government across sectors and levels of government, in particular through specific training sessions targeting public sector senior officials.
13. **Consider improving the attractiveness of the profiles of civil servants playing various roles in relation to digital government and with different functions.** This would include better working conditions for more traditional ICT professionals (e.g. ICT architects, programmers) but also for profiles increasingly demanded in a context of digital transformation (e.g. data scientists, or civil servants with horizontal functions), as well as clear communication about the positions requested to address the changing demands of the Norwegian public administration.
14. **Consider the development of a specific policy to attract highly ICT-skilled workers from abroad,** helping the country's economy, particularly its public sector, to address shortages of ICT professionals and to sustain the competitiveness of the Norwegian ICT sector.
15. **As part of an overarching digital government strategy, define a clear vision to better balance the public and private responsibilities for Norway's digital government development.** The vision should clarify the areas and aspects (e.g. general IT maintenance and support, software development, IT prototyping) the government considers fundamental to maintaining its leading role, and those to be outsourced to the private sector. The vision should be reflected in Norway's Digital Agenda - or in a specific national strategy for digital government development. The design process of the vision should benefit from the involvement and engagement of the private sector and civil society, securing a transparent and inclusive approach to better seize the digital transformation of the Norwegian public sector, bringing different perspectives and angles to the table.
16. **Develop a specific strategy for the commissioning of ICT goods and services in the public sector.** Building on the key projects and initiatives already in place, like the Government Procurement Center (Statens innkjøpssenter), the Database for Public Procurement (Doffin) and the State Standard Agreements (SSA), the strategy should leverage the importance of coherent and aligned approaches and processes to commission ICT goods and services , strengthening the government commitment through the following drivers:
 - *expanding demand aggregation processes to several ICT areas (e.g software development, IT assistance, cloud computing services)*, exploring synergies and increasing the public sector's negotiating capacity with ICT private suppliers
 - *reinforcing the adoption of existing common standards*, assuming them as clear criteria to guide the public administration's purchasing processes

Proposals for action (*continued*)

- ***strengthening transparency and accountability***, allowing civil society to better track public ICT expenditures, reaping the full benefits of proactive ways to explore the Freedom of Information (FOI) Act.
17. **Consider the development of a public, single digital marketplace in Norway**, learning from other country experiences (e.g. Australia, United Kingdom). This kind of initiative is a strategic policy lever for an intelligent and sustainable ICT public procurement process, which supports the rationalisation of spending, encourages the re-use of solutions, embedding strategic approaches (e.g. open by default), creates space for collaboration and sharing across the administration (e.g. open source and codes sharing). Difi should be responsible for the development and management of this initiative.

From user-focused to user-driven service delivery in Norway

Key assessments

New technological trends like social media, mobile communication and other technology-enabled approaches, such as Open Government Data, allow more simple and direct interactions between citizens/businesses and the public sector. Used to top experiences in terms of usability and friendliness provided by main ICT providers like Google, Facebook, Amazon or Uber, citizens expect public service delivery to be in line with, and up to the level of, these general technological trends.

Citizens and companies expect public services to be designed and delivered in a simple and intuitive way, embedding a user-driven perspective, using life events approaches, re-using information previously provided, and being available in multi-platform alternatives. A proactive public administration is required to serve all users in an efficient, effective, integrated and coherent fashion.

This new digital service delivery culture also raises requisites in terms of security and privacy protection. In a digital world, in which citizens' and companies' data is probably one of the public sector's biggest assets, trust is the key that sustains government legitimacy to manage and take full advantage of this asset. However, a government that embraces new technologies, to be able to operate up to the level of sophistication of a digital economy and society, will have to adjust its approach to risk management. This will imply shifting from the expectation to be able to fully ensure security and privacy to being ready to negotiate an acceptable trade-off with users.

Integrating user preferences into the design of public services

The development of a user-centred public administration is not a new concept. On the contrary, it is a goal and a mindset found in the digital strategies of OECD member countries over the last two decades. However, integrating user preferences into the design of public sector processes requires new ways of reaching out, engaging and involving users in services' design and decision making ("engagement by design").

Moving from a user-centred to a user-driven perspective that places users (and their input) at the centre of public service delivery strategy is required across the whole public service process (e.g. prototyping, delivery-model selection, design, trial, implementation, feedback and redesign)

Several sectors of the Norwegian government have embarked on advanced digital service delivery approaches, aiming to increase user satisfaction. Numerous services available in the Altinn, Norway.no or MyHealth portals are good examples of an ambitious public service delivery commitment. However, there is a significant fragmentation of efforts and models, demonstrating that the public administration perspective is prevailing over a citizen perspective – this, letting aside the adoption of the even more advanced user-driven approach. When questioned about the users' involvement in the design of service delivery processes, most public sector stakeholders assumed that it was not a current practice in Norway. The same applies to the use of life event approaches to facilitate the user experience when interacting with public services.

In Norway, user input and feedback are relevant to measure user satisfaction (e.g. surveys), but not to inform or drive the design of public services. This seems to be leading, in general terms, to a government-centric culture and approach where citizens' needs are inferred and, as a result, not widely met.

A strong consensus was found concerning the need and usefulness to develop, implement and enforce the use of common reference models in terms of online accessibility and usability. Citizens (e.g. including specific population groups, such as the elderly, migrants and the disabled) and businesses would benefit from common design and standardised approaches for public websites. This approach could also be assumed as an opportunity to leapfrog some stages in terms of digital service delivery and to spread citizen-driven approaches across the public and private sectors. This would contribute to the overall and cross-sectoral digital services design policy of the Norwegian government, while decreasing learning curves, significantly increasing the efficiency and effectiveness of services, and improving the overall user experience.

Better integrating digital service delivery

Although countless developments related to improving online service delivery processes are common to OECD member countries, segmented or sector-specific approaches still seem to prevail. Public agencies appear to maintain their own portals, with their own navigation schemes, proper visual identity, specific authentication mechanisms and different usability experiences. A fragmented and, sometimes competitive, agency-specific approach is still more frequent than a citizen-centred or citizen-driven approach; and Norway is not an exception.

In Norway, existing sectoral online one-stop shops can already be considered a significant improvement for citizen interaction with the public sector. In addition, the mechanisms and level of sophistication of these platforms are evidence of Norway's long-time policy to improve public service delivery.

A strategy for a single “look and feel” and integrated channels’ management should be further pursued in Norway

Citizens’ needs and input could be further placed at the core of public sector priorities for the development of a public services strategy - beyond the citizen-centred policy discourse, thereby letting users drive advances in public service delivery. This integrated strategy, assumed by an existing public sector agency with a clear mandate and enough levers to achieve it (e.g. Difi), would also be an excellent opportunity to explore:

- a coherent use of ICT key enablers (e.g. eID, ePayment), in order to further improve the relationship with users and allow for substantial gains in terms of efficiency and effectiveness (e.g. Difi’s ID-porten tool was developed to provide citizens with a co-ordinated/common login solution to public services⁷ and reduce the burden that different eID systems impose on them)
- an ambitious and structured mobile digital government approach, reaping the full benefit of one of the highest levels of adoption of smartphones world wide
- an open and engaging approach in terms of public service design and delivery, involving different segments of citizens/service users and integrating their inputs and needs right from the start in the design of services.

Proposals for action

From user-centred to a citizen-driven public administration in Norway

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 4 of this review, the Norwegian government could consider implementing the following policy recommendations:

18. **Establish an integrated service delivery policy** within a new digital government strategy, as a policy instrument to reinforce the coherence, effectiveness and sustainability of the Norwegian public sector’s efforts to deliver high-quality services to its economy and society. A Norwegian service delivery standard applicable to all Norwegian public websites, in line with the experience of New Zealand and the United Kingdom, should be developed, highlighting explicitly the following domains:
 - **one-stop shop** by default policy (known as “single point of entry”), prioritising the access to services for citizens and businesses through single platforms to increase users’ convenience, favouring synergies in the delivery of public services
 - **life events** approach, assuring that services are always displayed and provided based on citizens’ and businesses’ everyday needs and according to life situations (e.g. having a child, losing and finding a job, creating a company)
 - **multi-channel** imperative, guaranteeing that services are provided in several digital formats (e.g. online platforms, mobile apps, kiosks, application programming interfaces [APIs]), but also using face-to-face or telephone channels
 - **once-only principle**, as a mechanism to increase users’ convenience and to promote the re-use of data and information across sectors and levels of government
 - **user engagement and citizen-driven** approaches, placing the users at the core of service design, development and delivery processes

Proposals for action (*continued*)

- *common usability and “look and feel”* standards, increasing the coherence and friendliness of users’ interactions with public services.
- 19. **Establish a leadership and governance model for an integrated public service delivery policy**, reinforcing the mandate of the Ministry of Local Government and Modernisation (KMD) and Difi, and providing them with the necessary financial and human resources to fulfil this cross-government co-ordinating responsibility (see Recommendation 4).
- 20. **Consider developing Norway’s role as promoter of cross-border services among Nordic and Baltic countries**, through the country’s active support for the development of a common area for cross-border digital services in the public sector. For this, cross-border delivery should be increasingly assumed by Norwegian public services as a standard requisite in the delivery of new services, and the government should consider assuming a more active leadership of this item as a main priority of its agenda for Nordic-Baltic co-operation, as this could deliver value to Norwegian constituents as well as to citizens and businesses across the region.

Building a data-driven public sector in Norway

Key assessments

The relevance of digital technologies, which are increasingly becoming an integrated part of citizens’ everyday lives and private sector’s business models, is reinforced by the exponential progress in terms of production, storage, processing and sharing of data. In the digital era context, data has been assumed as a strategic commodity, and the public sector, while permeable, is struggling to react to, leverage, and capitalise on this current trend. Several OECD member countries are today developing data-driven approaches for the public sector and supporting enhanced data management processes to improve the design, delivery and impact of public services policies. The expectation is to be able to create an environment that will fully enable governments to capture the strategic value of government data as core vector for the digital transformation of their public sectors.

The opportunity faced today by governments around the world is to fully reap the benefits of data (i.e. produced, collected or commissioned by government institutions or non-governmental stakeholders) (Ubaldi, 2013) by developing policies and a governance framework for the public sector value chain that can boost data openness, interoperability, processing, exchange and re-use across all policy sectors and levels of government, and actors from the public, private and third sectors. These efforts and commitment can contribute to improving public sector intelligence, allowing for more informed policy making and policy implementation processes, citizen-driven approaches enabled by digital technologies and data, and data-driven economic development and business innovation.

Governing the public sector data value chain in Norway

Given the maturity of the digital environment across the Norwegian public sector, a considerable amount of data is already being collected and stored. A significant

conscience seems to exist among public sector stakeholders concerning the potential this reality represents for improving organisational efficiency, foresight capacities to design better policies and services, to deliver public value and to monitor performance. This may lead to developing better service delivery mechanisms and boosting capacity to forecast and predict trends, supporting more proactive initiatives within the public sector.

However, the willingness to develop a data-driven public sector in Norway seems to be mostly more a long-term, forward-looking desire than a reality at the moment, despite the clear achievements of the Norwegian government in this domain (e.g. Difi's Information Governance model, standards and guidelines) and the availability of inter-institutional co-ordination mechanisms. Interesting examples of data exchange and re-use within the public sector can already be found (e.g. Altinn portal, MyHeath portal, Statistics Norway), but efforts are mostly running in parallel, reflecting a lack of system-thinking approaches and a stronger governance framework and leadership at the central level - supported by data stewardship at the institution level - that can reinforce and move forward the implementation of the public sector's digital transformation, as well as the management and governance of the public sector data value chain agenda.

The development of a data-driven public sector in Norway is an untapped opportunity, considering the high level of digitalisation of Norwegian society, economy and the public sector

The Norwegian public sector has developed a mature network of basic data registries, with clear definitions about who is responsible for each of the key tasks associated to the government data management, ownership and value chain.

This data infrastructure is supported by a mature legal and regulatory framework governing the management of the data value chain in the country where only some regulatory challenges prevail. However, the Norwegian government should ensure the availability of an adaptable and sustainable legal and regulatory framework for data governance in the long term.

The existence of clear institutional responsibilities in relation to the management of the registries, of which different public sector institutions, such as the Brønnøysund Register (the entity that manages several public registers) provide good examples, has set the perfect backbone and foundation for a solid governance to develop a data-driven public sector. In this sense, there's an urgent need to further exploit the untapped potential of basic public data registries in Norway and streamline data-sharing processes in order to advance progresses and further develop a data-driven public sector that is supported by automated and cross-sectoral data-sharing organisational models.

The big untapped opportunity: Open government data

Evidence from the OECD peer review mission to Oslo showed that open government data (OGD) as a driver of innovation, economic development, competitiveness and citizens' engagement is untapped in Norway. The need to develop an ambitious, structured and co-ordinated OGD policy is commonly recognised by Norwegian public and private sector stakeholders as a priority that should be better addressed. However, it seems that strategic action has been mainly driven by the implementation of

EU directives and not by clear internal objectives that link OGD to the achievement of national goals.

Despite the adoption of EU directives on public sector information, the availability of a national open government data portal, and numerous good examples of data re-use at the central and local level, an “open by default” data policy is still not being fully assumed as a clear priority by most central level actors. The business case for open government data should be further developed across public sector institutions in order to increase institutional buy-in.

In general terms, the Norwegian public sector remains as the absent player within the data ecosystem, despite its stated willingness to spur data-driven innovation, as included in the Digital Agenda. There is a strong need to reach, collaborate and engage with potential and current OGD users. An open government data ecosystem still needs to be fully developed with the active participation of ministries and agencies to boost data re-use, drawing upon closer collaboration with, and the engagement of, the broader community of data re-users (e.g. businesses, entrepreneurs, civil society organisations [CSOs]).

Some efforts are already in place pushing for a cultural change to encourage more proactive and forward-looking data management and openness in the public sector. Nevertheless, the current and most general commitment still seems to be primarily focused on making data publicly available, sometimes by charging fees. The role and participation of external data users in this context is unclear.

Further public sector efforts are required to respond to data-demand, promote data re-use and engage data users in order to draw upon OGD as an input to foster business innovation, competitiveness and economic development in Norway

More than assuming open government data as an isolated or even autonomous policy issue to be addressed on its own, clearer linkages should be established with ongoing efforts related to data governance and management (e.g. data catalogue for the public sector), as part of the overarching goal to advance the digital transformation of the public sector. Further synergies can be found once an open-by-default policy is fully assumed as a ruling principle in the general management of public sector data and information.

Solid synergies should be established between the open government data efforts underway and the priorities and sense of opportunity identified in the development of a data-driven public sector, capable of leveraging big datasets already managed by the government to create and co-create public value.

Open government data should be assumed, at the political and policy-making level, as part of a broader data-driven public sector policy, a building block of the overall digital transformation of the public sector, and a driver of the digital economy in Norway

Developing data skills for a trustworthy data-driven public sector

There is a clear alignment between the goals of the digital agenda and the willingness of public sector institutions to capitalise on the availability of new technologies (e.g. data analytics, big data) to design data-driven policy solutions and public services, but a stronger skills base should be built for this purpose.

Taking the Norwegian public sector to the next level with regard to the use of new technologies for data management and re-use would also require building the right skills and competencies across public sector institutions

The development of a data-driven public sector in Norway should also focus on the fundamental need to build and maintain citizens' trust. The government should sustain and mobilise its best efforts to demonstrate that citizens' data is, and will remain, securely managed, deeply respecting principles on data protection and personal privacy.

Following several OECD member country experiences, one of the best ways to improve public confidence in this area is to establish mechanisms that can allow citizens to access their personal data held by the public sector, and to know at any time who within the public sector is accessing it and for what purpose. At the same time, there is a need to establish co-shared responsibility mechanisms between government and citizens to ensure that citizens also take ownership of, and control how they share, their data, and with whom.

Proposals for action

Building a data-driven public sector in Norway

In light of the key assessments exposed above, which draw on the main findings and analysis included in Chapter 5 of this review, the Norwegian government could consider implementing the following policy recommendations:

21. **Develop a formal strategy for the management and governance of the public data value chain, placing it at the core of the proposed digital government strategy. This would connect all components of the data value chain, including open government data for the achievement of strategic goals around priority policy areas.** Both strategies should be clear sub-components of the Digital Agenda in order to avoid the propagation of isolated, not connected, and fragmented policy documents. As part of the development of a formal strategy for public data management and governance, the Norwegian government could consider the following actions:
 - The development of an overarching data governance strategy would benefit from using Difi's Information Governance (IG) model as the starting basis. It is necessary to connect the current efforts on information and data management (e.g. Difi's information management model) to open government data and data-driven public sector initiatives under a whole-of-government data governance strategy for the public sector.

Proposals for action *(continued)*

- The data strategy would integrate the development of digital skills among public officials for the construction of a smart government as mid- and long-term policy goals.
 - Involving all stakeholders at all levels and using the OGD portal as a consultation mechanism would be beneficial to design an inclusive and comprehensive data strategy, taking into consideration and reflecting the needs of all actors involved in the ecosystem, including actors from the public, private and social sectors.
22. **Strengthen the institutional governance framework to support the implementation of the proposed data strategy and achieve national and supranational goals.** The instrumental and technical support role of Difi, and the contributions of the SKATE and the Norwegian Data Protection Agency (Datatilsynet) have helped to rule, find consensus and co-ordinate the current policy goals defined by the KMD. Yet, while some of the responsibilities of chief data officers (CDOs) across OECD countries are currently part of Difi's mandate, or shared between Difi and the KMD, the specific and dynamic role of a CDO is absent in Norway. It is also not clear if, beyond the strategic use of registries, there is a common vision and leadership for data management and governance in Norway (e.g. including specific policy areas such as open government data). As part of the development of a formal strategy for the management and governance of public data, the Norwegian government could consider the following actions:
- *Consider the creation of a formal CDO office that co-ordinates with, and responds to, the proposed GCIO's office. The role and mandate of Difi could be strengthened in this regard in order to ensure that the agency evolve to a dynamic driver of data-driven innovation within the Norwegian public sector as an operational way to achieve the objectives set by the digital government strategy, in which case the CDO role could be established within Difi.*
 - *Use the CDO office as a de facto or formal data-driven innovation lab* and bring in entrepreneurs, academics, and other actors when needed to crowdsource ideas and jointly solve policy challenges in collaboration with public sector institutions, while continuing to build in-house capacities through Difi.
 - *Strengthen the availability of data stewards* across the public sector: A data-driven public sector requires bringing in or identifying data champions that can help take Norway to a higher level of sophistication of a data-driven public sector and connect overarching policies to technical matters (such as the relevance of data catalogues). Leverage the role of the public sector and attract and retain talent.
23. **Keep investing resources to ensure that the legal and regulatory framework in the country is aligned with the goals of the Digital Agenda, such as open government data, the 2016 Digitalisation Memorandum, and with key digital government principles such as the once-only principle and open by default.** This would contribute to reducing the current limitations for public sector institutions to share and re-use data, thereby contributing to the construction of a data-driven public sector, providing support to the ambitious goals of the Digital Agenda, leveraging regional efforts in the Nordic area, and support the implementation of public sector data and information-related EU directives. To do so:
- *The creation of an administrative simplification taskforce (led by KMD's relevant bodies) in charge of carrying out or commanding an in-depth assessment of the current legal and regulatory framework affecting data governance and management in the country, and streamlining data-sharing processes within the Norwegian public sector.* Actions should be taken to perform a regulatory assessment and administrative simplification exercise mapping existing data-sharing practices among government institutions, beyond sectors to break down silos and agency-level solutions, streamline existing practices and enable a more efficient public sector data-

Proposals for action (continued)

sharing model. These actions could be gradual: sector-specific measures could be taken to address regulatory and simplification challenges within policy areas in the short run with the long-term objective of developing automated inter-sectoral data-sharing practices whenever possible.

- ***In the long term, the creation of a permanent regulatory oversight body within the KMD could be considered, with the responsibility to monitor and perform ex post regulatory assessments related to data governance, digital government and the digital transformation of the public sector.*** Strengthening the governance of digital government in Norway requires the availability of regulatory control bodies and mechanisms that ensure the continuous monitoring of the regulatory environment for digital government, therefore securing the readiness and adaptability of the regulatory framework in relation to digital disruption.
- ***Sustaining the use of sunset practices for those primary laws and regulations with an impact on data management and governance, and on digital government overall,*** would contribute to ensuring the sustainability of a favourable regulatory environment for the digital transformation of the public sector in Norway.

Specific policy recommendations to improve the governance and management of the public sector data value chain include:

- ***Data security: New risks require new technological responses for risk management.*** The Norwegian government, through the KMD and Difi, could further explore the benefits of these technologies as part of the upcoming digital agendas in the country, highlighting the importance of citizens' awareness and co-responsibility in the responsible management of their own data.
- ***Registries: Connecting open data efforts with other data-sharing efforts across the public sector*** would contribute to breaking down data silos and enable further organisational efficiency inside the public sector as well as data re-use by external actors. These actions should be aligned with the needs of the actors for quality data. Therefore it is necessary to ensure that data is discoverable, understandable and interoperable. This would require: 1) running a centralised and one-stop data access portal (e.g. leveraging the OGD portal, data.norge.no) as the default indirect access portal connected to the institutional and/or sectoral access portals for the registries; 2) making the registries available as open data whenever feasible; and 3) ensuring the provision of the necessary metadata, standardised semantics and APIs by default.

Moving open government data policies and initiatives forward in Norway

24. **Defining and co-creating a formal open data strategy (part of the data governance and management strategy) in collaboration with private, public and third-sector actors** is necessary to take open data to the next level and achieve specific policy goals of the Norwegian Digital Agenda related to economic development and business innovation. Yet open data should be understood as an inter-connected and not isolated element of the whole data governance strategy. Further:
 - ***The strategy requires defining a clear roadmap for open data and key delivery milestones beyond the responsibilities defined in the 2016 Digitalisation Memorandum.*** Ensuring the participation of Difi as the instrumental arm of the policy, and involving other leading public sector actors, such as the Norwegian Mapping registry, in the early policy development stages is crucial to ensure the alignment of the strategy with current and future policy goals.
 - ***Use organisational efficiency as the main driver supporting the development of OGD initiatives at the agency level.*** Open data is not a priority for public sector institutions because the benefits are not clear. It is necessary to strengthen the business case for open data among ministries and agencies in order to build a common vision under the leadership of the CDO. Open government data should

Proposals for action (*continued*)

be understood as a tool to contribute to organisational efficiency at the agency level in order to increase buy-in among agencies for the development of open data initiatives. Scaling up initiatives such as the “hack4no” initiative in order to build greater take-up and involvement by other public sector actors would contribute in this respect.

- ***Develop a formal open data infrastructure for the country, drawing upon the current data categories identified by the Norwegian government as a priority for publication*** (government spending, geodata (in line with EU directives), transport, research, and culture data. However, the development of the open data infrastructure should take into consideration the inputs of current and potential data users; therefore, the infrastructure should be developed as the result of a consultation process.
- ***Move from the current reactive approach to data publication - such the use of FOI requests to inform and prioritise the publication of OGD - to a more dynamic, proactive and user-driven publication.*** The implementation of consultation exercises at the sectoral level is necessary to ensure the sustainability and impact of open data efforts in Norway. It is necessary to exploit the potential of the OGD portal as a consultation and collaboration platform.
- ***Link the open data policy to broader policy areas, such as public procurement, to support the use of open data as a driver of more accountable and transparent public procurement processes.*** The publication of open contracting data in a standardised fashion and across the whole public procurement process would also contribute to using data to strengthen institutional and social knowledge in relation to public procurement processes. Ensuring that the data available on Norway’s public procurement portal, doffin.no, is published as open data would ease the access and analysis of open data pools of public contractors and the analysis of procurement results by auditing bodies, by public entities to spot opportunities for more strategic approaches to the commissioning of ICT services across the administration., and by social actors for public accountability purposes.

Setting the basics: Skills and competencies for a data-driven public sector

25. **Define a roadmap for the development of a data-driven public sector as a core element of the digital government strategy and as a backbone for the overall public data governance and management strategy in Norway.** To do so:
 - ***capitalise on the synergies resulting from the willingness of the central government to explore the use of data science and big data as drivers of public sector efficiency and the opportunities that public sector institutions see for the development of data-driven services and foresight activities, and explore the contribution of the private sector in this respect*** (e.g. procurement and private provision of cloud-based or data analytics services)
 - ***formalise strategic partnerships with universities and other actors in order to develop skills inside public sector institutions for open data and a data-driven public sector, and link these initiatives with the overall strategic actions to attract skilled human resources for digital government*** (see Chapter 3).

Notes

1. In the 2016 edition of the *eGovernment Benchmark*, Norway integrates the Mature Cluster, side by side with Denmark, Finland, Iceland, Netherlands and Sweden. This group of countries has the “highest level of penetration and a high level of digitisation, displaying a successful process of innovation, making it possible to exploit the opportunities offered by ICT. The Mature Cluster also achieves quite a high level of satisfaction, showing a market-oriented approach that succeeds in meeting users’ needs. Use of eGovernment services and online interaction with governments in these countries might be the most mature in Europe, but are not close to 100%. Similarly, there is still more that can be done to digitise the internal processes and harmonise both between government tiers as well as across borders.” (European Commission, 2016)
2. In the 2016 edition of the *United Nations E-Government Survey*, Norway ranks 18th world wide (United Nations, 2016).
3. For more information, see www.difi.no/fagomrader-og-tjenester/digitalisering-og-samordning/digitaliseringsradet.
4. For more information, see www.difi.no/fagomrader-og-tjenester/digitalisering-og-samordning/medfinansiering-av-digitaliseringsprosjekt.
5. For more information, see www.regjeringen.no/no/dokumenter/digitaliseringsrundskrivet/id2522147/.
6. For more information, see www.regjeringen.no/no/dokumenter/digitaliseringsrundskrivet/id2462793/#kap3.1.
7. For more information, see <http://eid.difi.no/en/id-porten>.

References

- European Commission (2017), “Digital Economy and Society Index 2017: Norway”, Digital Single Market, <https://ec.europa.eu/digital-single-market/en/scoreboard/norway>.
- European Commission (2016), *eGovernment Benchmark 2016*, European Commission, Brussels, http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc_id=17855.

- KMD (Ministry of Local Government and Modernisation) (2016), “Digital Agenda for Norway in brief: ICT for a simpler everyday life and increased productivity”, English version, KMD, www.regjeringen.no/en/dokumenter/digital-agenda-for-norway-in-brief/id2499897/sec1.
- Mickoleit, A. (2014) “Social media use by governments: A policy primer to discuss trends, identify policy opportunities and guide decision makers”, *OECD Working Papers on Public Governance*, No. 26, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jxrcmghmk0s-en>.
- OECD (2017), *Government at a Glance 2017*, OECD Publishing, Paris, http://dx.doi.org/10.1787/gov_glance-2017-en.
- OECD (2016), “Executive Summary”, in *OECD Economic Surveys: Norway 2016*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_surveys-nor-2016-3-en.
- OECD (2014), “Recommendation of the Council on Digital Government Strategies”, OECD, Paris, www.oecd.org/gov/digital-government/recommendation-on-digital-government-strategies.htm.
- Ubaldi, B. (2013), “Open government data: Towards empirical analysis of open government data initiatives”, *OECD Working Papers on Public Governance*, No. 22, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k46bj4f03s7-en>.
- United Nations (2016), *United Nations E-Government Survey 2016*, UN, New York, <https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2016-Survey/Executive%20Summary.pdf>.

Further reading

- OECD (2016), *Digital Government in Chile: Strengthening the Institutional and Governance Framework*, OECD Digital Government Studies, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264258013-en>.
- OECD (2016), *Open Government Data Review of Mexico: Data Reuse for Public Sector Impact and Innovation*, OECD Digital Government Studies, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264259270-en>.
- OECD (2016), “OECD Digital Government Toolkit”, www.oecd.org/governance/digital-government/toolkit/.
- OECD (2015), *Open Government Data Review of Poland: Unlocking the Value of Government Data*, OECD Digital Government Studies, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264241787-en>.
- OECD (2005), *OECD e-Government Studies: Norway 2005*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264010680-en>.



OECD

BETTER POLICIES FOR BETTER LIVES

For further information:



@OECDgov

www.oecd.org/gov/digital-government