

OECD Digital Government Studies

Digital Government in Chile – A Strategy to Enable Digital Transformation



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Foreword

Government leadership, especially in overseeing the strategic use of data and technology, is critical if countries are to reap the benefits of the digital revolution and improve social well-being.

The study, *Digital Government in Chile – Making the Digital Transformation Sustainable and Long-Lasting*, assesses the evolution, achievements and challenges in the design and implementation of digital government strategies in Chile since 2004. It aims to support the Government of Chile in framing and implementing future strategic decisions and developing digital capacity throughout the public sector. In particular, it looks at how Chile can build a whole-of-government approach to embed digital approaches into everyday government operations.

The study builds on the 2016 OECD publication, *Digital Government in Chile: Strengthening the Institutional and Governance Framework*, which delivered the policy recommendations that guided subsequent reforms to the institutional framework for digital government in Chile. These reforms were critical in underpinning the current ambitions to promote greater digital maturity across the Chilean public sector.

Chile is a widely recognised leader in Latin America when it comes to digital government. This achievement reflects the commitment to establishing a sound governance framework, developing an ambitious Digital Transformation Strategy and upgrading the country's legal framework.

Nevertheless, to ensure the sustainability of this progress, Chile should work towards shared ownership of, and responsibility for, the digital government strategy throughout the public administration. To do this the study highlights the need for engagement and coordination within and between government institutions, the importance of building technical leadership and digital skills in recruitment and training as well as proposing new approaches to funding and the evaluation of delivery. Above all, for Chile's digital government approaches to increase citizen well-being through more responsive, protective and trustworthy government, the study calls for developing service design and delivery approaches that prioritise user research, recognise the value of data and foster digital inclusion.

This study was requested by the Ministry General Secretariat of the Presidency (*Ministerio Secretaría General de la Presidencia*, MINSEGPRES) and the Ministry of Finance (*Ministerio de Hacienda*). It is based on the OECD Recommendation of the Council on Digital Government Strategies and draws on the insights gathered through the comparative assessment of the design and implementation of digital government strategies in several OECD member and non-member countries.

This study also contributes to the global policy debate on the digitalisation challenges and opportunities across different policy areas, including digital government. This work is part of the Going Digital Project, which is the OECD flagship initiative designed to address this important policy issue.

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The study was drafted by Rodrigo Mejia Ricart, digital government policy consultant under the supervision of, and with contributions from, Benjamin Welby, Digital Government Policy Analyst, Reform of the Public Sector Division, OECD. The authors are grateful to Liv Gaunt for editorial support.

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Executive Summary

The age of digital transformation has come and, as other technological revolutions before, it is profoundly changing models of production, communication, and socialisation. This revolution is however unprecedented in terms of breadth, depth and speed. The digital revolution is deploying and embedding technology into our lives at a faster and faster rate. As it does so, it affects the structures and operations of both private and public organisations.

Governments have little choice but to provide the necessary leadership in using data and technology to maximise the potential for improving social well-being. If they fail to do so, they risk significant policy failures or delivering outdated services that do not respond to citizen needs. To meet citizens' current expectations and to maintain or reinforce public trust, governments must change how they operate.

This study explores the strategic questions facing the Government of Chile in its efforts to advance the digital transformation of the public sector. It provides concrete and actionable policy recommendations to help the country achieve further progress in digital government. In particular, it underscores the importance of developing a robust strategy and building the consensus needed to provide for its continuity and sustainability.

Chile is committed to making its digital ambitions a reality. The Government of Chile has engaged with the OECD Secretariat to work on the core elements that will support its transition to a digital government. The Chilean Ministry General Secretariat of the Presidency (*Ministerio Secretaría General de la Presidencia*, MINSEGPRES) and the Chilean Ministry of Finance (*Ministerio de Hacienda*) have demonstrated their awareness of the sense of urgency and the vision to build a government for the 21st century. The Government of Chile has worked with the Secretariat to review and redesign the institutional and governance framework of digital government in the country and the strategic framework, which fed into the development of the new Digital Transformation Strategy. This study is the outcome of that strategic review effort.

This study concludes that Chile, while substantively ahead of regional digital government performance, must continue to strive for excellence in its transformation efforts. In particular, it should take decisive steps in building a common sense of ownership and embedding this strategic approach within the public administration to become more agile, open, and responsive in an age of digital disruption. This will be crucial in avoiding setbacks caused by inaction or changes in political leadership and securing greater and long-lasting benefits for citizens and businesses. The country's new institutional framework, the political support and development of new resources serve as necessary underpinnings for this ambition over the longer term.

Key policy recommendations

- Ensure operational agility of the digital government strategy through continuous engagement and feedback from key stakeholders, including subnational governments. This will help the Executive Council of State Modernisation adjust on the go, reprioritise and reallocate resources to maximise delivery and returns.

Such an approach will support continuous consensus building around the strategy and its approach and long-lasting results.

- Consider the establishment of a body for the operational co-ordination of the national Digital Transformation Strategy. This new body, composed of agency CIOs and supported by technical working groups, would focus on the technical questions requiring answers in order to achieve successful implementation of the strategy.
- Promote the new *Sistema de Evaluación Técnica de Proyectos TIC* (Technical ICT Project Evaluation System) to capture and analyse increasingly granular ICT project data and secure projects' alignment with key strategic objectives.
- Look into the development of a digital government implementation index to benchmark public institutions and progressively lay the foundations for an impact evaluation.
- Consider the establishment of centralised funds to finance strategic ICT projects. Competitive centralised funds provide incentives for public institutions to comply with new standards and guidelines, and to align their efforts with the government's strategic objectives.
- Develop a comprehensive strategy of ICT investments and procurement.
- Develop a strategy for upskilling, reskilling and attracting new talent into digital, data and technology roles. This should include a focus on digital government, as well as considering the skills needed for public sector innovation.
- Create a structured programme for the development of digital leadership including those outside traditional ICT related roles. This programme could aim to further the understanding of senior public sector management of digital services and their strategic implications for public organisations.
- Review cross-government and institutional recruitment frameworks and guidelines to ensure they support the public sector's talent development capabilities for roles where knowledge of digital, data and technology is essential. In particular, these frameworks should test candidates for relevant skills and allow the public administration to make decisions and make offers relatively quickly.
- Consider the development of a service standard and overarching end-to-end service design and delivery principles, guides and other requirements that provide teams with a framework to implement service transformation.
- Adopt a wide and complementary mix of user research techniques. These should include background research of existing literature and practices, quantitative and digital/data-driven approaches, ethnographies, focus groups and simple conversations with service end-users.
- Develop a comprehensive strategy and/or policy for public sector data and its value chain, covering data governance, public sector data assets and data sharing, data security and privacy, data infrastructure, data skills, fostering demand for data-driven decision-making, prioritisation of data investments and making public sector data open by default.
- Develop an impact assessment methodology in the medium term, for evidence-based policy-making.

-
- Focus on fostering digital inclusion, through continuous modernisation of the digital infrastructure, doubling down digital literacy and making the usage of government services easy while nudging users towards digital channels.
 - Ensure collaborative approaches and shared strategies between the Laboratorio de Gobierno and the DGD.

Assessment and recommendations

Over the last 20 years, digital technologies have arguably become the single most transformational factor of economies and societies. The digital revolution has seen the rise of highly disruptive technologies, such as machine learning algorithms, artificial intelligence, cloud computing, the internet of things, mobile technologies and incredibly powerful network effects (Ubaldi et al., 2019^[1]). As the industrial revolution did for our ability to use physical force to enhance societies' industrial capability, the digital revolution has exponentially augmented our ability to produce, store, share and process information and data, leading to a dramatic transformation of our species' analytical and co-ordination capabilities. By progressively embedding ICTs into the physical world, human societies are increasingly able to come up with smart solutions for today's most pressing challenges.

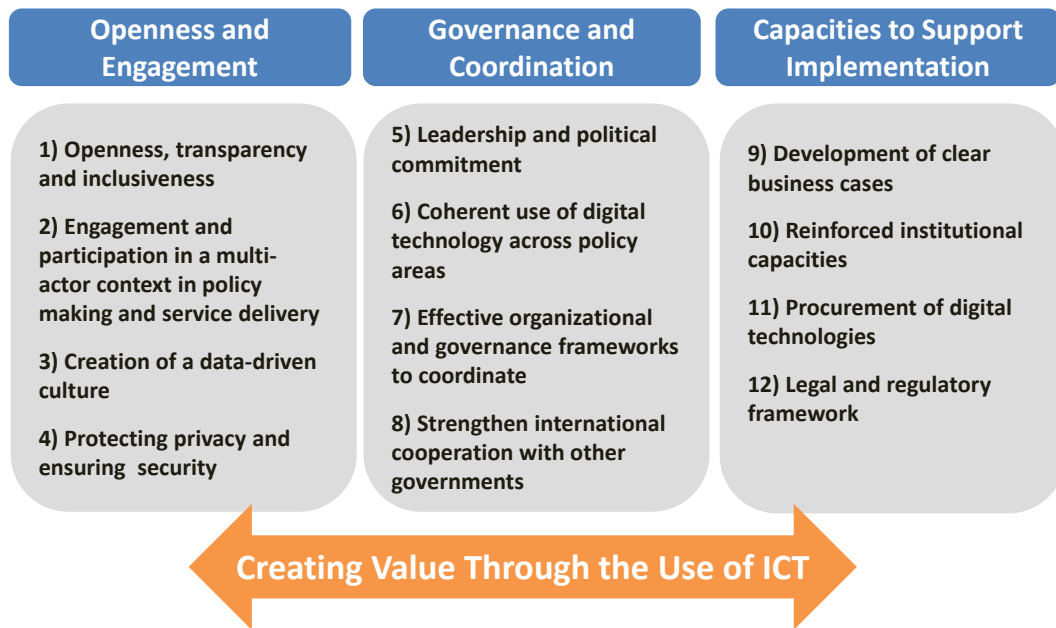
These new processing capabilities, paired with unprecedented levels of connectivity and its associated network effects, are driving innovation and productivity gains across the economy. They are also transforming citizens' everyday lives as well as their expectations regarding the public sector and public services (OECD, Forthcoming^[2]). These transformations bring about a wide range of new opportunities for more robust policy outcomes and greater social and economic well-being. Indeed, governments' ability to design sound policies and services will be enhanced by using massive amounts of data and computing power to draw new insights. The ability to develop better policies will also be strengthened by enhanced coordination of a great diversity of stakeholders through the interoperability of information systems. These new technologies also allow governments to deliver better and more tailored services at a fraction of the cost, including to remote areas through new mobile applications.

Nevertheless, to seize on the opportunities of the digital revolution governments themselves will have to undergo a significant transformation. Analogue organisations cannot serve digital economies and societies. This will start with a shared vision or strategy with broad ownership and complemented by robust institutional frameworks and the development of the State's capacity to support the strategy's implementation. This *Digital Government Study* looks at Chile's context, current efforts and the Government needs as it seeks the full transition towards a Digital Government.

This *Digital Government Study* has also assessed specific strategic content and areas of opportunity that can support the business process transformation of the Chilean public sector in favour of more strategic and system thinking decision-making throughout the public administration.

The framework of reference for formulating the proposals for action is provided by the *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014^[3]), which contains 12 key recommendations that seek to guide policy-makers in the design and implementation of digital government strategies and policies (see Figure 1 below). Together, these key recommendations provide an analytical framework that supports the digital government strategies and technology deployments that foster public value creation.

Figure 1. Synthesis of principles contained in the Recommendation of the Council on Digital Government Strategies



Source: OECD based on the Recommendation of the Council on Digital Government Strategies (OECD, 2014^[3])

Governance arrangements: coordinating the design and implementation of a common vision

Chile has made consistent progress in setting up the institutional and governance framework for the successful implementation of digital government. For instance, the creation of the Digital Government Division (DGD) within the Ministry General Secretariat of the Presidency (*Ministerio Secretaría General de la Presidencia*, MINSEGPRES), providing it with higher political standing and additional resources is at the core of these efforts. In addition, ensuring the participation of Head the DGD in the Committee of the State Modernisation Programme has been instrumental in embedding digital efforts into the broader public sector reform agenda. Finally, the current Government of Chile has pushed forward an ambitious digital transformation agenda, which includes a new Presidential Instructive on the Digital Transformation of the State Administration (Presidente de la República, 2019^[4]), a project of a Digital Transformation Law (MINSEGPRES, 2018^[5]) and a renewed Digital Transformation Strategy for the Government (MINSEGPRES, 2019^[6]).

Despite the progress made, the government has so far found challenges in ensuring the continuity and sustainability of efforts in digital government. Indeed, political cycles and changing administrations have often meant changing directions and priorities on initiatives meaning the full potential has not always been realised.

In addition to insufficient continuity in high-level political orientation of digital government efforts, it has also been challenging for Chile so far to achieve the degree of inter-institutional co-ordination, particularly at the operational level, that effectively translates national digital government strategies into concrete transformation of how government conducts its work. Chile has sought to address this through the creation of a

new high-level institutional set-up supporting the steering of the design and implementation of the strategy. However, it seems like the level of technical co-ordination and working groups could be useful to help operationalise the strategy. Finally, it seems like top-down siloed approaches continue to be predominant in the Chilean public sector, requiring efforts in favour of a cultural change. Continuing down the path of recent significant efforts to enhance coordination and synergies will be important to sustain the development of a collaborative, integrated and interoperable public sector.

The design of digital government strategies

The review of the strategy development process across 10 advanced OECD members and partners suggests that governments might benefit from ***longer deliberative and inclusive approaches*** as a way of building strong consensus, with shorter and more agile cycles for the development and implementation of action plans based on changing realities. These action plans, however, would benefit from the political steering of the new bodies of governance, the Advisory Council and the Executive Council on State Modernisation.

Despite these important institutional underpinnings helping the government deliver on its digital government strategy, the operational co-ordination between agency CIOs would benefit from being formalised. Indeed, CIO Councils or Committees are often a useful way to find the best way forward in implementing key strategic projects and initiatives. Whilst they foster the sharing of good practices and approaches for improved collaboration it would be valuable to define a methodology for systematising their findings, discussions and learning.

Furthermore, a culture that sustains top-down and siloed approaches seems to still be predominant in the Chilean public sector, which may hinder consensus building. It also undermines that more collaborative and horizontal approaches which support digital, user-driven organisations.

Finally, when compared to 10 advanced OECD countries serving as a benchmark, the lack of collaboration with subnational governments has stood out in Chile. Whereas in most countries used in this benchmark involved local governments in the development of the national digital government strategy, this was not the case in Chile. The level of digitalisation of Chilean municipalities (Alcalá Consultores, 2015^[7]) – and the opportunities for digitisation they represent – calls for greater collaboration to help them leapfrog their way forward.

Making it happen: the governance of digital government strategies

The benchmarking of OECD members shows that governments usually leverage two levels of governance to ensure that the digital government strategy is successfully implemented and embedded into public sector operations: (1) a body for strategic co-ordination, and (2) a body for operational co-ordination.

With the creation of the new Executive Council for State Modernisation and its adjacent Advisory Council, Chile has secured a robust strategic co-ordination on digital government. However, following these reforms and with the adoption of the new Digital Transformation Strategy, Chile will need to redefine its operational co-ordination mechanisms.

In addition to the abovementioned need for bringing together Agency CIOs in a formal setting, the operationalisation of the new Digital Transformation Strategy may benefit from technical working groups that help the government address bottlenecks in the

implementation of the strategy. These groups are often focused on key technical areas, such as document management, interoperability, digital identity, or service standards.

Oversight

Under the new Digital Transformation Strategy, the continuity of the oversight and monitoring of the Executive Council for State Modernisation will be critical. In addition to tracking progress, frequent meetings of the State Modernisation Team to assess unmet needs, strategic adjustments needed and resource reallocation will provide the Digital Transformation Strategy with the operational agility that will help it meet international best practices. Indeed, research shows that the most successful digital strategies in major companies review and analyse data, reassess their digital portfolios, review business models and reallocate resources much more frequently than less successful firms (Bughin, Catlin and LaBerge, 2019^[8]).

The overall monitoring system of the strategy is robust. Two important areas of improvement have been identified that provide opportunities going forward. First, ***the ability to collect more granular project data could help strengthen strategic planning and implementation of digital government initiatives***, helping co-ordinating bodies and functions to identify early on drivers of project failure and success and progressively build intelligence about ICT project performance.

The second area of opportunity concerns the ***assessment of the impact of the digital government strategy***. Colombia provides an important example of putting in place and progressively perfecting a robust system for assessing the implementation of its digital government strategy in the form of the GEL Index (*Índice Gobierno en Línea*). This index allowed the central co-ordinating unit to assess and rank the implementation of digital government policies by all public institutions, both at the central and subnational levels of government. The publication of the index helped nudge institutions into compliance and providing incentives for strategic alignment and compliance.

Funding mechanisms

Virtually all countries used to benchmark Chile in this *Digital Government Study* stressed the strategic importance ***centralised ICT funds to co-finance strategic projects*** and create incentives that foster compliance with existing norms, guidelines and digital government objectives established by the strategy. Indeed, such financing tools and funding models are seen as key levers enabling the successful implementation of the strategy.

In this light, it is encouraging that the current Administration is making efforts to provide DGD with additional resources that will allow it to deliver on key strategic projects that can be highly catalytic.

Functional ICT Leadership: linking digital government with broader strategy and policy objectives

The strengthening of the political leadership of DGD was an important step in empowering digital stewardship in government. Furthermore, including the Head of DGD in the Strategic Committee of the Modernisation Programme and its successor, the Executive Council of State Modernisation, marked a clear move towards putting digital at the core of public sector reform and broader public sector strategies. This has provided for a robust strategic alignment in government reform efforts.

However, Chile – as most countries - faces the important challenge in ***decentralising and scaling up digital leadership***. In supporting the emergence of a new kind of public sector leader that will embody the values and character of a digital culture. This will be a critical factor in achieving a whole-of-government approach. In face of a new technological revolution, and its implications for the production of goods and services, it seems like a sensible time to think about a structured approach to nurture and incentivise the kind of leadership the public sector needs to deliver on citizen needs.

Leaders also play a crucial role in the articulation of a clear messaging, helping internal and external stakeholders understand what the administration is trying to achieve. They are also expected to help establish goals citizens can relate to, objectives that are politically sound and can support the government’s broader agenda. This is not a minor challenge, since technical issues can be hard to translate into tangible outcomes for the administration or the users. All of these trends suggest that ***both senior leadership in public organisations and their chief digital officers would benefit from working closer together.***

Proposals for action

Based on the assessment advanced above, Chile might benefit from considering the following actions:

- ***Consider the establishment of a body for the operational co-ordination of the national Digital Transformation Strategy.*** This new body, composed of agency CIOs, would focus on the technical questions requiring answers in order to achieve successful implementation of the strategy. Furthermore, this operational co-ordination might in turn benefit from the use of dedicated, thematic working groups in areas such as interoperability, digital identity, and service standards, among others.
- ***Ensure operational agility of the digital government strategy by leveraging continuous engagement and feedback of key stakeholders.*** This will help the Executive Council of State Modernisation learn on the go to adjust, reprioritise and reallocate resources to maximise delivery and returns. Moreover, such an approach will support continuous consensus building around the strategy and its approach.
- ***Consider strengthening partnerships and collaboration with local governments.*** Chilean municipalities show uneven, yet generally low levels of digitalisation. Most notably, they have not played a significant role in the development or implementation of digital government strategies in Chile. Given their number and political diversity, transaction costs of developing agreements can prove difficult. An opportunity may lie in working with the national association of municipalities, or a similar federation, as representative of their interest (*Asociación de Municipalidades de Chile*). Such a dialogue can lead to productive efforts, jointly developed, to create common, open source solutions that municipalities can reuse as a form of accelerating their digitalisation process. These efforts could be linked with the government’s *Public Software* initiative and efforts in using GitHub and GitLab for collaborative development.

- ***Leverage the new Sistema de Evaluación Técnica de Proyectos TIC (Technical ICT Project Evaluation System) to capture increasingly granular ICT project data.*** This will prove to be a valuable resource not only for the purposes the creation of an ICT Project bank or data repository but, most importantly, to draw insights on the drivers of failure and success of ICT projects, helping the Administration to continuously improve on ICT project management.
- ***Look into the development of a digital government implementation index to benchmark public institutions and progressively lay the foundations for an impact evaluation.*** Consider the development of a digital government index to assess the maturity of public institutions in implementing digital government policies. The index would assess and rank public institutions on a yearly basis, providing evidence of their progress in the implementation of digital government policies, regulations, norms and standards. The publicity of these results creates incentives that can help drive compliance with digital government policy-making through a soft, but powerful lever. In peer countries, the comparative performance has helped align incentives in favour of digital government implementation. Moreover, as these monitoring systems are put in place, it is important to think about the data needed to carry out an impact assessment of digital government policies. In particular, these should consider input, activities, output and outcome data.
- ***Consider the establishment of centralised funds to finance strategic ICT projects.*** Competitive centralised funds provide incentives for public institutions to comply with new standards and guidelines, and to align their efforts with the government's strategic objectives.
- ***Create a structured programme for the development of digital leadership including those outside traditional ICT related roles.*** This programme could aim at furthering the understanding of senior public sector management of emerging digital technologies and their strategic implications for public organisations. In addition, they could provide a general understanding of new digital tools and ways of working, such as agile, data-driven and collaborative approaches. These programmes would also benefit from fostering closer partnerships and working relations between senior management and the digital teams in their organisation.
- ***Partner with the National Direction of the Civil Service to update guidelines for the recruiting of senior managers,*** including in the technology sector, highlighting the important role of collaboration and engagement with other areas of the administration as a key attribute
- ***Partner with the National Direction of the Civil Service to develop and share good practices in hiring for horizontal leadership and digital teams.*** These should be aimed at empowering HR teams to appreciate, test and hire the right talent for nurturing digital culture and capabilities in the public sector, and establish multidisciplinary teams.
- ***Develop awareness campaigns*** addressed at senior management to sensitise them on the strategic importance of digital government

initiatives, how they work and the relevance of a co-ordinated, whole-of-government approach.

Strategic areas for digital government development

In addition to the process of strategy development and its functional role as a governance tool, this study takes a deeper dive into specific strategic areas, and certain trends and themes included in the digital government strategies of the selected and countries for the benchmark.

Start with user needs

Digital government strategies have the distinctive ability to set the public administrations' goals and priorities when it comes to digitalising government. One of the critical characteristics of digital government is to put the focus on user needs. This change of focus is critical as they encourage and empower digital teams across the public sector not to simply digitalise paper-based procedures, but to focus on process re-engineering.

Several countries have developed design principles, standards, guides and other requirements that provide digital teams with a framework to support service transformation. These tools have been powerful in boosting digital transformation and provide digital teams with a principle-based approach to service design, focusing on user needs first, and empowering them to leave behind obsolete rules that make little sense in the digital age (Bracken and Greenway, 2018; Bracken *et al.*, 2018). Moreover, these tools have helped embed user-driven approaches and the need for user research in national administration, which have not been traditionally commercially incentivised to understand the user experience and respond to their needs.

In Chile, DGD has developed two important guides to support public servants in their digital delivery: a guide to designing web interfaces and a guide for designing digital services.¹ Meanwhile, the Laboratorio de Gobierno (Government Lab) has developed a tool that helps public servants to innovate in the public sector.² This tool lays out how to adopt user-focused approaches in service and process design. It is hard to overstate the relevance of the work of the Laboratorio de Gobierno, DGD and the Modernisation Programme in sensitising public sector organisations to the importance of the user's experience and their impact on delivering services in ways that are simpler and more effective and that as such increase adoption.

Despite those important steps, Chile has yet to adopt a service standard in the same way other peers have. The experience shows that these standards provide the public sector with a robust framework to decide whether something is good enough to go on the portal or not, thus serving as quality control, in particular when combined with governance frameworks that accelerate adoption.

Data as a strategic asset: towards a data-driven public sector

Today's digital technologies have drastically increased our ability to capture, store, share and process data to support more robust decision-making. Tools like sensors and technologies of the Internet of Things, paired with big data analytics, machine learning algorithms and artificial intelligence are today able to draw insights from massive amounts of data by identifying underlying patterns that could not otherwise be perceived. In a data-

driven public sector, governments recognise the importance of data in preparing for the future, designing and delivering policy and services, and managing performance (van Ooijen, Ubaldi and Welby, 2019^[9]).

Towards a new public sector data strategy in Chile

Chile's interest has not lagged behind OECD peers. The Government has put emphasis in strengthening interoperability and promoting digital integration of the public sector to facilitate data sharing and integrated service delivery in the public administration. In addition, Chile has recently launched an initiative on the digitalisation of the civil registry which could have a massive impact on data sharing and data governance in the Chilean public sector and a revamped digital identity for users (OECD, Forthcoming^[10]). However, ***continuous and stronger efforts to improve data governance and management in the country's public sector*** would help it prepare for the advent of increasingly sophisticated data-processing capabilities, such as artificial intelligence.

Chile's push to move to a paperless administration that makes the *once only principle* effective relies on a number of key digital government infrastructure projects. These initiatives have benefitted from a level of continuity across administrations. As these projects come to maturity, they have the potential of becoming a mission-driven effort that can help drive a significant transformation of public sector operations. These initiatives are critical as they enable the timely access to relevant data by decision-makers.

The decision to make data a critical part of public sector modernisation shows that Chile is aware of the strategic value of data. The question now is how to ***enable, incentivise and nurture a data-driven culture in the public sector that is ingrained in public sector operations, strategic priorities and policy objectives***.

One first challenge for public administrations is to look beyond the hype and develop a problem-driven approach to data investments (Díaz, Rowshankish and Saleth, 2018^[11]). Data science skills are scarce and in high demand, making them expensive. To achieve maximum impact, the public sector must allocate its limited resources strategically.

Effective use of data starts by specifying the problem that needs to be solved. The business, policy or strategic questions, not the hype, should drive the data efforts made by the Chilean public sector. The assessment reveals that a more solid data governance in the Chilean public sector would require encouraging and expanding the implementation of data-driven techniques in highly strategic ways through frameworks, incentives, guidance and capacity building.

Another important challenge is embedding a data-driven culture into the fabric of the state. This can only be achieved by stimulating broad demand from senior management and business units.

Unleashing the power of data

The OECD's 2018 Open Government Data Report shows that a majority of OECD countries have adopted an "open by default" approach to the disclosure of government data in machine-readable formats (OECD, 2018^[12]). This means that government data is systematically opened unless issues of privacy, security or other legitimate concerns apply. Chile has yet to reflect this trend as it seeks to enable digital and data-driven innovation in the country.

The OECD's Open, Useful and Re-usable Data Index, a composite index to monitor OECD members' efforts to improve data availability, accessibility and re-use, shows that Chile lags behind other peers in open government data implementation. The government of Chile might benefit from efforts to strengthen all three dimensions, with a particular emphasis on data availability and efforts to foster data re-use.

The launching of renewed efforts on Open Government Data by the Government of Chile provides an opportunity to ensure that robust frameworks are put in place, important between open government data and broader data governance and management are identified. It would also provide the public sector an opportunity to prioritise data efforts and investments in terms of data capacity (skills, infrastructure, standards) and identification of high-value datasets.

Building capabilities for delivery

Digitalisation is shaping the future of work, requiring new skills in every sector and industry (Chui, Manyika and Miremadi, 2015^[13]; Manyika and al, 2017^[14]). Government does not escape this fact. In most cases, decades of outsourcing ICT project delivery and maintenance weakened the public sectors' digital capabilities. The digital revolution is only starting and is likely to accelerate. In face of this reality, Chile must put in place structured efforts to reskill, upskill and acquire new talent in order to realise its digital vision.

The Government of Chile is preparing to launch its new Digital Academy, an e-learning platform providing civil servants with online courses on strategic areas for the digital transformation of government, such as service design, data science, cybersecurity, technological trends among other. While this is an important part of upskilling civil servants, these activities, on their own, will likely not have the scope or scale needed to respond to the challenge of the digital age.

It is important for the Government of Chile to clearly differentiate between the talent and skills that it may need to acquire externally, and the capabilities it can build internally with existing staff. ICT project managers can be retrained to identify digital opportunities and use agile or DevOps methodologies instead of waterfall project management relatively easily. However, highly specialised areas, such as data science, machine learning, artificial intelligence or even human-centred design require very specific skillsets, backgrounds and experience that can be difficult to transfer (Bughin, 2018^[15]). Furthermore, skills in these areas are scarce and in high demand, introducing significant challenges to ensuring this foundational contributor to a successful digital transformation programme.

One important consideration for the Chilean public sector is to encourage informal collaboration between those in similar digital professions or with similar interests in transforming government. Cross government networks of product managers, designers, user researchers, engineers and technical architects that share the work they're doing and support one another in their professional development can play an important role in augmenting formal efforts to build capability. These networks should be open to anyone with an interest in the area and prioritise the sharing of experience with regular meetups. In this way, Chilean public servants will build a sense of shared mission that crosses organisational boundaries and helps to mitigate the risks associated with working in siloes.

The experience in OECD countries underlines the importance of empathy and engagement skills with external stakeholders to enable a user-driven culture and public administration. These collaborative skills help senior managers and civil servants better grasp user needs, even if it means challenging common assumptions, by focusing on outcomes and the co-

design of solutions and policies with end-users. Moreover, with the growing role of data, data science and machine learning capabilities are becoming critical areas of expertise for drawing insights on public policy and service design and delivery.

Adopting ICT commissioning approaches to transform the public sector

The development of digital government happens in part because of the contribution suppliers make in deploying new technologies to and delivering for the public sector. As a result, one of the most significant levers for impacting the transformation of government is the commissioning of digital, data and technology goods and services.

The commissioning of ICT can drive coherence, interoperability, resource sharing and the overall co-ordination of digital government implementation. A comprehensive, holistic and strategic approach to public sector commissioning of ICTs can foster openness, user-driven approaches, efficiency and digital integration of the public sector.

Strategies for ICT procurement

In Chile, the public procurement authority, ChileCompra, in collaboration with the DGD of MINSEGPRES has issued a directive that provides guidance for public institutions to effectively manage issues such as the formulation of technical requirements, the risk of vendor lock-in, threats of information security, risks related to the continuity of public services, as well as threats against free competition (ChileCompra, 2015^[16]).

In addition, ChileCompra has developed a digital marketplace with framework agreements which aims to simplify the process of ICT acquisition. Currently, these agreements allow the Chilean Administration to procure hardware and software, data centres and related services.

Moreover, the DGD will play a growing role in the transformation of ICT procurement. Through its consulting activities, the development of tailored solutions and the development and operations of shared ICT services, as well as reviewing the existing frameworks for ICT projects and requiring shorter agreement periods and a focus on project outcomes rather than time procured, DGD will be increasingly able to influence public sector ICT commissioning and acquisitions.

Some of the current challenges faced by Chilean public authorities in the implementation of ICT projects in the public sector include ***the scarcity of the skills required to manage ICT projects for agile delivery, insufficient guidelines on the procurement of ICTs and insufficient user engagement and research in the formulation of ICT projects and the structuring of provider contracts*** (OECD, 2017^[17]). The ***legal and regulatory framework for public procurement and weak inter-institutional co-ordination*** are also perceived to be outstanding obstacles for effective ICT project implementation (OECD, 2017^[17]).

Structure contracts that respond to user needs

A user-driven administration must ensure that government effort and investment starts from an understanding of user needs. If the administration does not understand users' needs, there's a good chance that it will not deliver the right things. Procurement-led approaches have failed to develop a deep understanding of what users need and therefore how digital, data and technology products or services can best be deployed and, consequently, do not deliver strategic, efficient or effective results. Procurement-led initiatives can also lead to

a closed shop of a relatively small number of generally larger suppliers with long-term contracts (OECD, 2017^[18]).

Despite the successes of Chile's efforts to modernise ICT project governance and management, there is still room for improvement in terms of mechanisms that help embed user needs into project formulation, management and delivery.

Procuring technology based on existing assets

The OECD Recommendation of the Council on Digital Government Strategies (OECD, 2014^[3]) calls on governments to procure digital technologies based on an assessment of existing assets. However, OECD member states generally lack a sufficiently comprehensive view of their digital, ICT and data assets and their respective lifecycle. Chile has in place a repository of ICT contracts that is searchable by all citizens but Chile is also in the group of OECD members that lack a database of ICT assets in the public sector or of previous supplier performance available to public institutions. This prevents data-driven analysis to support strategic decision making in ICT procurement.

Openness as a source of transformation for ICT commissioning

Open Standards³ play a significant role in the transformation of commissioning, as does the championing of open source software and collaborative coding. By reducing the power of software suppliers and diminishing the impact of vendor lock-in whilst encouraging greater involvement of national, and international, developer communities, government is able to reuse existing solutions, unlock opportunities for innovation.

The restructuring of Chile's DGD, its new mandate and increased capability provides a great opportunity to revitalise the country's public software (*Software Público*) initiative. The public software initiative sought to develop open source applications that could be reused and tailored by different parts of the Chilean public sector, however its adoption and the number of solutions available remain relatively limited. The use of open standards and open source solutions by the DGD, making solutions publicly available through the softwarepublico.gob.cl website can help Chile accelerate and strengthen the quality of public sector digitalisation relatively quickly. This initiative has clear synergies with the growing use of GitHub and GitLab by the DGD as means of collaborative development.

These efforts seem particularly interesting in providing support to the digitalisation of Chilean municipalities which often lack resources and the technical capabilities to maximise these opportunities. Municipalities are an important component of the digital ecosystem of citizens and businesses, and because of their responsibility for similar services they can benefit from sharing and reusing existing solutions made available through open source or shared ICT services.

Developing a robust business case for ICT projects

Recommendation 9 of the OECD Recommendation of the Council on Digital Government Strategies (OECD, 2014^[3]) identifies the development and common use of a clear business case methodology as critical in preventing ICT project failures. ICT business cases solidify government decision-making when it comes to carrying out a project and lay out key variables for its effective management (OECD, 2018^[19]). ICT business cases formulate projects and their rationale, ensure the strategic alignment of the initiative, and provide a detailed assessment of their risks and benefits. They clarify the linkages between the investment proposed and the governments' broader strategic objectives. As such, business

cases are built upon an understanding of a problem, of organisational strategic and operational objectives, and a theory of change to which the project contributes.

While Chile has yet to develop a full business case methodology for ICT projects, it has made important improvements in enhancing the assessment of the value proposition of large ICT projects. The new ICT Project Technical Evaluation System established a process for ICT projects to be approved based on an assessment of total public value and a more complete consideration of its costs (total cost of ownership is considered for the latter). The methodology is applied to all ministries to ensure more robust project planning and structuring to improve investment decisions. In 2019, 554 projects were assessed for a total amount of USD 216 million. This initiative was led by the Ministry of Finance in collaboration with MINSEGPRES.

However, it is important that any business case methodology is enforced, and allows for use alongside agile development practices in responding to the iterative evolution of a project such that the document does not become a bureaucratic hurdle and remains a dynamic and useful management tool throughout the process (OECD, 2018^[19]).

Digital inclusion

Connectivity and access to information and communications technology in Chile performs satisfactorily in comparative terms. It stands above the LAC and OECD averages in terms of share of the population using the internet and mobile subscriptions per 100 people. Given the diverse and complex geographic reality of the country this represents an outstanding feat and provides a robust basis for the development of digital government. However, what the data also seems to suggest is that there is a gap in terms of the population that has access to the internet and the number of individuals who choose to transact with the public sector digitally. Chile's National Survey of Socioeconomic Characterisation (*Encuesta de Caracterización Socioeconómica Nacional*, CASEN) finds that 30.8% of the population used the internet to complete a government procedure over the last year (MIDESO, 2017^[20]).

Notwithstanding the levels of connectivity achieved, the Government of Chile has made an important push to continue to expand and modernise digital infrastructure, laying the foundations for the digital transformation of the economy and society. This is sensible, especially in consideration of the fact that Chile currently lags behind peer countries in terms of broadband penetration, which hinders the country's ability to effectively design, deploy and use sophisticated digital services.

The development of digital skills is also a crucial element of digital inclusion. As it has been mentioned before in this report, the pace of technological change can be expected to accelerate. Ensuring the Chilean population has access to the required skills is fundamental to ensure the country is prepared for the transformations ahead. The *Digital Agenda 2020* put an important focus on the upcoming generation, taking measures to improve digital capabilities of teachers and students in schools. However, changes in the economy are bound to rapidly change the skills in demand in the labour market. As such, the Country might benefit from a comprehensive plan to promote continuous upskilling and reskilling of workers to help them develop the digital skills they need in a rapidly changing economy.

Finally, another important point in Chile's digital government agenda is encouraging use and adoption of digital government services. Despite the Government's efforts to digitalise public services, usage remains relatively low in the country. The Government of Chile is looking for ways of ensuring more inclusive digital service delivery for example, through

the provision of self-service kiosks at *ChileAtiende* locations where people can access 15 procedures with the support of an agent. In the 2018 pilot phase, 220 000 transactions were carried out in 39 locations with the plan being to reach 105 in 2019.

Digital strategy and public sector innovation for improved public service delivery: what relations between the two agendas?

Public sector innovation is to a large extent an emerging sector. Most OECD countries do not have a national public sector innovation strategy. Even within the selected countries for the benchmark, only 40% have in place a national public sector innovation strategy or policy. Today, public sector innovation occurs mostly through *ad-hoc* structures and initiatives.

In Chile, the *Laboratorio de Gobierno* was created as a government innovation unit that explores and tests new solutions for outstanding policy problems and as an institution responsible for fostering innovation in the public sector. These solutions may at times entail digital initiatives or areas that fall under the competence of the DGD. However, most of the scope of digital government cross-institutional services and policy-making falls clearly under the responsibility of DGD. In addition, MINSEGPRES – home of DGD - sits at the Directive Council of the *Laboratorio de Gobierno* which helps ensure coherent and collaborative approach.

The DGD and the *Laboratorio de Gobierno* have a history of successfully collaborating together and should continue to work together to develop common approaches and strategies for diagnosing and addressing problems.

Proposals for action

Based on the assessment advanced above, Chile might benefit from considering the following actions:

- ***Consider the development of a service standard and overarching design principles, guides and other requirements*** that provide teams with a framework to implement service transformation. These tools have proven to be effective in shifting the focus to user needs, helping public organisations leave behind obsolete rules that make little sense in the digital age (Bracken and Greenway, 2018; Bracken et al., 2018).
- ***Adopt a wide and complementary mix of user research techniques.*** These should include background research of existing literature and practices, quantitative and digital/data-driven approaches, ethnographies, focus groups and simple conversations with service end-users. The idea is to create a thorough categorisation of users, their backgrounds and their service journeys (following them from start to finish in accessing and completing a service). User research approaches aim to gain a better grasp of their experience of the service, the difficulties that may arise and foster empathy. The project lead should not make assumptions about the user, but experience his or her journey, while remembering that what users ask for is not always what they need or want.
- ***User research would benefit from considering both primary and secondary users.*** Primary users are those closest to day-to-day relationships (i.e. digital teams), whereas secondary users are those helping deliver the value (i.e. procurement and commercial teams).

- ***Develop a comprehensive strategy and/or policy for public sector data and its chain value.*** This data policy would be made robust by covering:
 - ***Data governance.*** Establishing an authority responsible for developing and coordinating an overall strategy for public sector data, identifying key data assets and gaps, establish standards for data management, strengthening the overall data value chain for the public sector. It would also help the public sector build data processing capabilities and feedback loops aimed at improving public sector performance, delivery and forecasting abilities.
 - ***Public sector data assets and data sharing.*** Support the identification of public sector data assets, registries and interoperability nodes, and help conceive their governance and data sharing architecture to protect sensitive data. The framework, supported by the new data authority, would be designed to foster data sharing within the public sector, starting with the areas that would be most impactful in terms of public sector efficiency and digital innovation.
 - ***Data security and privacy.*** Ensure the highest standards in terms of data security and privacy in public sector operations. Ensure users have as much control over their data as possible, considering measures such as data portability. In addition, aim to design mechanism for consent of data use that are clear and easy to understand. The design of consent mechanism should avoid broad brush strategies, allowing the user to specifically highlight for what purposes he consents his data be used for, while providing the user with the opportunity to decline providing consent for the use of his or her data for other ends.
 - ***Data infrastructure.*** Work with all relevant authorities in the development of a data infrastructure development strategy and investment framework, helping public institutions leverage their economies of scale to develop shared infrastructure and services that strengthen the public sector data initiatives with an eye on future developments (i.e. greater role of algorithms and artificial intelligence).
 - ***Data skills in the public sector.*** As the digital revolution takes hold and continues to evolve, the public workforce will require a new set of skills. The civil service of the future will have to be increasingly data savvy. As such, the Chilean sector might benefit from a revision of public sector competency frameworks and job profiles considering the public sector present and future data needs and pair it with a strategy to develop, attract and retain such skills.
 - ***Demonstrate the value of data for business units and operations by working with them to improve their performance and operations.*** These efforts should acknowledge the contribution of business units and operations as to ensure that demand for data-driven approaches scales up and takes root in the core of the business of government.
 - ***Deploy data-driven efforts strategically to tackle clearly defined policy or operational problems.*** Efforts to use data science for decision and policy-making should be focused, driven by a clear objective and using fit-for-purpose tools. Consider high impact interventions, such as predictive infrastructure maintenance.

- **Make public sector data open by default.** The public sector has a major role to play in the creation of a data environment and ecosystem that is conducive to digital and data-driven innovation. The data suggests that Chile would benefit from a more robust open data strategy and policy that improves data access, but puts a particular emphasis on data availability and government efforts to promote data reuse within and outside of government as a source and driver of innovation. At the same time, these efforts would benefit from collaborative approaches that focus on solving specific and relevant policy problems.
- **Impact assessment methodology.** In the medium term, Chile might be interested in developing an impact assessment methodology that can help it identify where to concentrate its efforts to achieve the highest possible impact of its policies in public sector performance and the general public's well-being
- **New competency frameworks for digital government authorities** that reflects the relevance of collaboration in effective delivery. This framework would be most impactful if used for regular performance appraisals.
- **Develop a strategy for upskilling, reskilling and attracting new talent.** For that, the Government of Chile must first identify which skills can be effectively learned by existing staff, and which require very specific backgrounds and skills. For the latter, a tailored approach or framework to attract them might be needed in order to quickly build capabilities in the public sector.
- **Review recruitment frameworks to ensure they support the public sector's talent development capabilities.** In particular, these frameworks should test candidates for relevant skills and allow the public administration to make decisions and offers relatively quickly.
- **Develop a comprehensive strategy of ICT investments and procurement**
 - **Work collaboratively** with the Chilean procurement authority (ChileCompra), private stakeholders, CIOs and project managers from all levels of government in identifying the key problems with the current context of government ICT procurement, determine what areas require regulatory or legal reform, and work on a new framework for ICT procurement.
- **Procure technology based on an assessment of existing assets and procurement intelligence.** For this, the Government of Chile should systematically capture data of its ICT procurement processes, including delivery, performance and benefit realisation.
 - **Develop a database of government ICT assets and procurement performance.** Working with the Chilean public procurement authority, build a database with all key government digital assets, including contracts, service agreements, infrastructure. Think of including the lifecycle of assets, supplier performance and benefit realisation of projects. Automate data collection.
 - **Establish an automated system of data analytics to support public procurement intelligence.** Work on the development of a system of analytics that can be used to identify important variables and trends, and inform public procurement processes.
- **Design procurement methods and contracts that support delivery and meet users' needs.**

- ***Use agile, incremental and iterative approaches.*** Introduce procurement arrangements and contracts that provide digital teams with the flexibility to work using agile development, enabling re-prioritisation and iterations. This implies making sure that research, prototyping and testing activities are included in the contract and budget, and that they are used in particular to answer key design questions.
- ***Consider the use of performance and challenge-based procurement,*** which provides public institutions with the opportunity to appraise the ability of the vendor to deliver on institutional expectations.
- ***Study the usefulness of modular contracting*** to workout iterations. Modular contracting is a procurement strategy that breaks up large and complex ICT projects into smaller, well-defined and tightly-scoped projects to implement technology in successive, interoperable increments.⁴ This contracting strategy also helps mitigate the risk of vendor lock-in or excessive dependence and encourages delivery.
- ***Reflect about the use of open standards and open source software.*** Open standards have proven an effective tool in levelling the playing field, developing robust and fair criteria for public sector digital systems, and encouraging competition and innovation in technology acquisition and deployment. Furthermore, the use of open source software allows for collaborative development, tapping on external talent to develop software, and enables public institutions to share their code with other national and international institutions for them to reuse or improve.
- ***Leverage the potential of open source software to help drive the digitalisation of municipalities.*** Work together with a representative from municipalities to decide on and prioritise the development of solutions that can be reused by municipalities to help drive the digitalisation of local government processes and procedures.
- ***Leapfrog on the back of good international experiences.*** A number of digitally advanced countries have made important efforts in ICT commissioning reform. The **United Kingdom's** Digital Marketplace provides valuable experience in the use of open source, cloud based software, capability sourcing and outcomes focused commissioning to aggregate demand, make procurement more transparent and open, and bring down costs. The U.K. Digital Service Standard has also been a driving force of transformation in the **United Kingdom** and beyond. The U.S. Digital Service's playbook, and 18F's Modular Contracting Toolkit have done a lot to reform technology deployment and delivery in the **United States**. Digital innovation case studies provided by the OECD Observatory of Public Sector Innovation (OPSI) may also assist sparking ideas and replicating successes from other countries⁵. Many existing tools and resources may also be adapted to fit the context in needs in Chile, which can be found in OPSI's Toolkit Navigator⁶.
- ***Focus on the digital skills of the population at large by continuing to modernise digital infrastructure, championing digital tools in the education process and developing programmes for upskilling and reskilling the working age population.*** This becomes particularly necessary as the pace of technological change accelerates and the breadth and depth of disruption touches all industries.

- ***Make the usage of government services easy.*** The digital transformation of government must consider the accessibility of the service for populations with special needs. The actions listed below would considerably improve the appeal of dealing with the Chilean public administration digitally, rather than losing time and money to complete a procedure through alternative channels.
 - Focus on improving *end-to-end user experience* for a standardised, seamless and easy to understand experience.
 - Focus on *government-wide identity management* to facilitate the user's interactions with government by bringing down complexity and facilitate data management. This will also allow the Government to have an integrated view of the user, enabling public authorities to deliver more tailored services.
 - Focus on *government-wide data management* to simplify procedures and improve public service performance.
- ***Nudge users to use digital channels.*** For instance, a thoughtfully designed communication campaign highlighting the time and money savings of digital services over in-person transactions can help drive use. An additional way of incentivising use is to provide promotional offers where services are marginally cheaper through digital channels. Temporary deductions in the cost of services would not only help drive the use of digital channels, but allow the user to get familiar with digital transactions and the digital government environment, making it more likely for the user to use the same channel next time around.
- ***Ensure collaborative approaches and shared strategies between the Laboratorio de Gobierno and the DGD.*** The DGD and the *Laboratorio de Gobierno* have a history of successful collaborative work, for instance in the case of improving the user experience of ChileAtiende. What these successful collaborations have in common, is the determination to develop a shared approach and strategy for diagnosing and addressing the problem. These units can build on those experience to develop future interventions together.

Notes

- 1 Guide for designing web interfaces: https://digital.gob.cl/doc/Guia_de_diseno_de_interfaces_web.pdf and Guide for designing digital services: https://digital.gob.cl/doc/Manual_de_servicios_digitales.pdf
- 2 https://www.lab.gob.cl/uploads/filer_public/bb/fa/bbfa1819-ade4-4dad-9692-a7f305139b7d/bitacora_herramientas_para_la_innovacion_publica.pdf
- 3 Refers to standards relying on consensus, selected transparently using clear criteria.
- 4 <https://modularcontracting.18f.gov/strategies/>
- 5 <https://oecd-opsi.org/innovations>
- 6 <https://oecd-opsi.org/toolkit-navigator>

1. Background

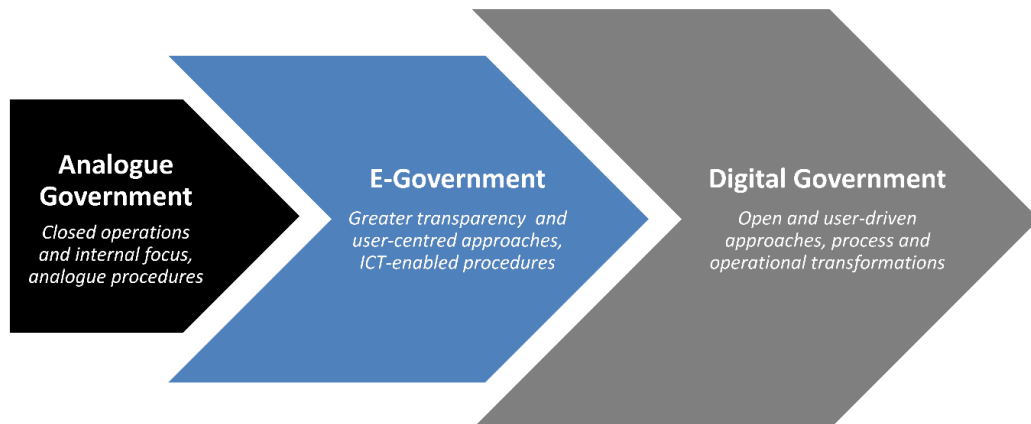
This opening chapter introduces the OECD's work in analysing and supporting the shift from analogue practices, through e-government and into digital government. It highlights the six dimensions of digital government transformation and their importance in supporting the adoption of activity through digital government strategies identified by the OECD Recommendation of the Council on Digital Government Strategies. The chapter then charts the evolution of the digital government agenda in Chile from the 2004-2006 Agenda Digital, the Estrategia Digital 2007-2012, the 2012 Agenda of State Modernisation and the Agenda Digital 2020.

Over the last 20 years, digital technologies have arguably become the single most transformational factor of economies and societies. The digital revolution has seen the rise of highly disruptive technologies, such as machine learning algorithms, artificial intelligence, cloud computing, the internet of things, mobile technologies and incredibly powerful network effects (OECD, Forthcoming^[1]). As the industrial revolution did for our ability to use physical force to enhance societies' industrial capability, the digital revolution has exponentially augmented our ability to produce, store, share and process data thus leading to an explosion of our species' analytical and co-ordination capabilities. By progressively embedding ICTs into the physical world, human societies are increasingly able to come up with smart solutions for today's most pressing challenges.

These new processing capabilities, paired with unprecedented levels of connectivity and its associated network effects, are driving innovation and productivity gains across the economy. They are also transforming citizens' everyday lives as well as their expectations regarding the public sector and public services (OECD, Forthcoming^[1]). These transformations bring about a wide range of new opportunities for more robust policy outcomes and greater social and economic well-being. Indeed, to a large degree governments' ability to design sound policies and services is enhanced through the use of massive amounts of data and the computing power to draw new insights. The ability to develop better policies is also strengthened by enhanced coordination of a great diversity of stakeholders through the interoperability of information systems. These new technologies also allow governments to deliver better services more cheaply, including to remote areas through new mobile applications.

These technological changes do not come without considerable governance and strategic challenges. Seizing the moment demands first that governments acknowledge the strategic relevance of new technologies, thus putting them at the core of public sector modernisation strategies (OECD, 2014^[2]). As a consequence, new reform efforts should always consider the trends, potential impact and role of digital technologies in achieving public sector objectives. Increasingly, the digital transformation of the public sector demands a certain degree of coherence and sustainability to deliver the expected results, thus requiring that robust ICT governance arrangements are put in place.

Figure 1.1. From analogue to digital government



Source: Based on 'Recommendation of the Council on Digital Government Strategies' (OECD, 2014^[2])

The digital transformation also raises concerns about the distribution of benefits. Ensuring an inclusive digitalisation that ensures opportunities for all is one of the great tasks governments have at hand.

Furthermore, the effective deployment of technologies, particularly in the public sector, demands new ways of working and the involvement of a wide diversity of internal and external stakeholders to ensure digital performance and ownership. This entails not only a new set of technical skills, but most importantly, a cultural shift in the public sector towards greater openness, sharing and collaboration. This represents, without a doubt, the greatest governance challenge in the transition from e-government to digital government across the OECD and the world.

The risks of not transforming government operations, enabling them to respond to the expectations of digital societies, are poorly performing services, inefficient spending, deficient policy-making, lost economic opportunities and, most importantly, diminishing trust in government.

This study aims to review Chile's preparedness, in terms of governance and strategic approaches, to effectively transition to a digital government. In particular, it will look at how national digital government strategies are embedded into government action through governance arrangements and processes that allow for ownership and co-ordination, and how these objectives are then translated into administrative procedures that support public decision-making.

The analysis advanced in this report will benefit from the OECD's analytical work on the digital transformation of the public sector and will be supported by a benchmarking study on strategy development, oversight, implementation and monitoring that will compare Chile with ten advanced OECD countries selected for the quality of their strategies and governance procedures. These are Colombia, Denmark, Estonia, Mexico, Netherlands, New Zealand, Norway, Spain, Sweden and Switzerland. These ten countries were selected because of the relevance of their experience in the robust development of their digital government strategies and their importance covering themes at the edge of the digital transformation debate. Data from these countries were collected through a series of interviews in the fourth quarter of 2016 and the first half of 2017 as well as through a benchmarking survey that was run in the course of 2017.

Digital government strategy and governance

The rise of digital natives and the rapid digitalisation of social and economic activities demand a digital government that provides the institutional framework for the development of the digital revolution. Digital government is no longer an option or an add-on. It has become a core component of good governance (see Most importantly, government transformation is about redesigning processes and services to structure them around user needs, instead of internal priorities. The digitalisation of government looks at how to embed digital teams, culture, tools and approaches to establish a continuous feedback loop and dialogue with users. All sound digital government strategy starts with users' needs (see Chapter 3).

Chile, as all other OECD countries, is faced today with a digital government imperative: to seize the opportunities brought about by new technologies requires its public sector to thoroughly re-engineer business processes, decision-making approaches and ICT investment frameworks. If Chile does not then it risks falling behind, paying a price in

terms of loss in productivity gains, social wellbeing, overall public sector performance and ultimately in the erosion of public trust.

Figure 1.2). Digital government is the next level of technological transformation of government. The OECD has identified six key dimensions that are characteristic of a digital government. They are summarised briefly in Box 1.1.

Box 1.1. The six dimensions of the OECD Digital Government Framework

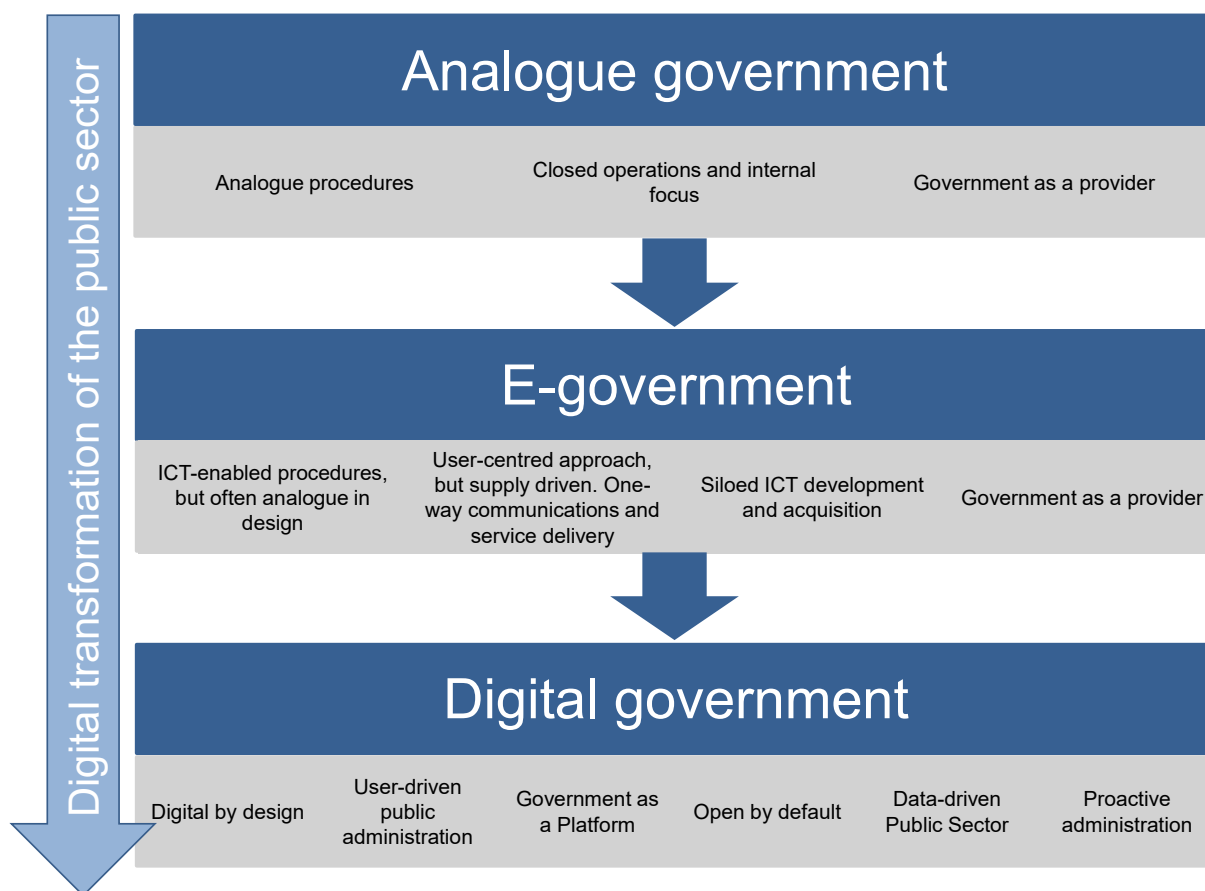
1. From the digitisation of existing processes to digital by design: Government approaches ‘digital’ with an understanding of the strategic activities involved with successful and long-lasting transformation. They take into account the full potential of digital technologies and data from the outset in order to rethink, re-engineer and simplify government to deliver an efficient, sustainable and citizen-driven public sector, regardless of the channel used by the user.
2. From an information-centred government to a data-driven public sector: Government recognises data as a strategic asset and foundational enabler for the public sector to work together and uses data to forecast needs, shape delivery, understand performance, and respond to change.
3. From closed processes and data to open by default: Government is committed to disclosing data in open formats, collaborating across organisational boundaries and involving those outside of government in line with the principles of transparency, integrity, accountability and participation that underpin digital ways of working and the Recommendation on Open Government (OECD, 2017^[3]).
4. From a government-led to a user-driven administration, that is, one that is focused on user needs and citizens’ expectations: Government adopts an approach to delivery characterised by an “open by default” culture and ambitions of “digital by design” to provide ways for citizens and businesses to communicate their needs and for government to include, and be led by, them when developing policies and public services.
5. From government as a service provider to government as a platform for public value co-creation: Governments build ecosystems of shared platforms, guidance and tooling that support and equip public servants to design effective policy and deliver quality services. That ecosystem enables collaboration with and between citizens, businesses, civil society and others to harness their creativity, knowledge and skills in addressing challenges facing a country.
6. From reactive to proactive policy making and service delivery: Governments reflecting these five dimensions can anticipate, and rapidly respond to, the needs of their citizens before a request is made. They also proactively release data as open data rather than reacting to a request for access to public sector information. Transformed, proactive, government allows problems to be addressed from end to end rather than the otherwise piecemeal and reactive digitisation of component parts.

Most importantly, government transformation is about redesigning processes and services to structure them around user needs, instead of internal priorities. The digitalisation of

government looks at how to embed digital teams, culture, tools and approaches to establish a continuous feedback loop and dialogue with users. All sound digital government strategy starts with users' needs (see Chapter 3).

Chile, as all other OECD countries, is faced today with a digital government imperative: to seize the opportunities brought about by new technologies requires its public sector to thoroughly re-engineer business processes, decision-making approaches and ICT investment frameworks. If Chile does not then it risks falling behind, paying a price in terms of loss in productivity gains, social wellbeing, overall public sector performance and ultimately in the erosion of public trust.

Figure 1.2. Progressing towards digital transformation



Technology, in and of itself, is not the driver of the digital transformation of the public sector, but its enabler. Strategy, not technology, is what can bring about transformation. Indeed, the digital modernisation of the Chilean public administration can only be achieved through a series of calculated and coordinated actions involving all relevant stakeholders. Such level of coordinated efforts relies not only on adequate political leadership, but on the emergence of a shared vision for the role of the public sector in a digital society and the place technology will take in enabling that vision. National digital government strategies are usually responsible for setting such a vision (OECD, 2016^[4]).

Nevertheless, strategic documents are of little relevance if they are not supported by broad ownership of the vision statement and objectives and by the institutional and governance frameworks needed to embed its goals into government operations. Those are the elements that can make the national strategy a true living document animating government action, and most importantly a governance tool serving the purpose of change. As such, the true question we will try to answer in this report is whether Chile counts with the strategic institutional arrangements supporting robust decision-making, ICT investments and returns helping the country to reap the full benefits of digitalisation. In the following sections, this report will assess a number of elements and help advance elements of response to this question.

Evolution of Chile's digital government strategies

Traditionally, Chile's digital government strategies have been incorporated into broader national digital agendas. Chile's efforts on digital government have progressively put in place all the necessary components for public sector transformation and consolidated its position as a regional leader.

In the 2004-2006 *Agenda Digital*, the Government of Chile vowed to make 300 public services available online and enable the State's ability to consult citizens online. This digitisation strategy focused on putting procedures online, and modernising service delivery. Noteworthy initiatives included the development of a state services platform facilitating the access to information and services, making broadband available to all public institutions, digital integration of information in the social sector, electronic medical appointments and certificates, development of a platform for basic services provided by subnational governments and measures to better account for and improve the efficiency of government ICT procurement and cybersecurity.

The 2006-2010 government of Michelle Bachelet explicitly recognised the need to digitalise the public sector as a key strategic priority of its programme. These efforts were followed by the *Estrategia Digital 2007-2012*, which aimed to build on previous efforts by enhancing interoperability, shared services and multi-sector digital platforms, and placed a strong emphasis in priority sectors such as health and local governments. The key achievements of this period were the implementation of the Transparency and Access to Information Law, the creation of the state interoperability platform, the launch of ChileClic – a new state services portal- and a focus on using accessible language for citizens and promoting digital inclusion.

The Piñera administration launched the strategic plan for digital government (2011-2014), before the period of the previous strategy had elapsed. The strategic plan was conceived around the issues of a government close to citizens (including easily accessible integrated services), open government (enhancing transparency, participation and collaboration through digital channels) and efficient government (through greater interoperability and continuous evaluation and improvement). The strategic plan was linked to the 2012 Agenda of State Modernisation, which saw digital government as a means to achieve simpler, integrated and more efficient services. The Piñera Administration had significant achievements. Among them was ChileAtiende, grounded on a multi-service, multi-channel approach that has been widely recognised. In this period, Chile also became a regional leader on Open Government and acted as a trendsetter as an early adopter of Open Government Data, launching a national open data portal – datos.gob.cl. The “Chile sin papeleo” campaign (Chile without paperwork or red tape) was a landmark initiative of the

administration. It pushed forward the digitalisation of administrative procedures and services. The number of end-to-end digital services reached nearly 45%.

Launched in November 2015 by then President Michelle Bachelet, the *Agenda Digital 2020* built on previous efforts to create a more dynamic and innovative state. The 2020 agenda tried to improve digital services and their experience to ultimately drive adoption. These efforts concentrated in strengthening the multi-channel service delivery approach of “ChileAtiende”. The digital channels ChileAtiende were enhanced and the supply of mobile services expanded. The *Agenda Digital 2020* also doubled down on the simplification and elimination of procedures and prioritised adoption of the single authentication mechanism for citizens (*ClaveÚnica*) as well as the use of the State’s digital signature. Finally, the 2020 agenda pushed for the modernisation of the Chilean with progress made in the implementation of the electronic medical records. From an institutional perspective, important achievements were made, in particular the strengthening of the governance of digital government with the creation of the DGD within MINSEGPRES and the evaluation system for ICT projects and budgets.

Efforts to simplify and digitalise government and services have produced tangible results. ChileAtiende, the government’s multi-channel service delivery approach, manages as many as 67 million interactions per year. Moreover, Chile leads Latin America and the Caribbean when it comes to the agility of government transactions. Estimations by the Inter-American Development Bank using data from the Latinobarómetro suggests that completing a government transaction in Chile takes about 2.2 hours on average, the best time among peers (IDB, 2018^[5]). According to the same study, only 16% of government transactions in the country require more than two interactions, coming in second and way below the regional average of 25%.

Nevertheless, these efforts have also had shortcomings. To date, barely over 40% of public services have been digitalised (MINSEGPRES, 2018^[6]), lagging significantly behind a country like Mexico, another OECD peer in Latin America, where 88.8% of government transactions can be started online and over 70% have been digitalised end-to-end (IDB, 2018^[5]). Furthermore, return on this investment has yet to be realised, as recent data suggests that only 11% of the population started their last government transaction online and only 7% completed their last digitally end-to-end (IDB, 2018^[5]).

The new Administration of Sebastian Piñera (2018-2022) is taking decisive steps to push for a digital first public administration and has conducted public consultation around its draft Digital Transformation Strategy.¹ This includes an ambitious project for a Digital Transformation Law², a recently adopted Presidential Instructive on the Digital Transformation of the Administration and the development of a new Digital Transformation Strategy for the State. As part of this push, 80% of government services are expected to be available online by 2021 and 100% by 2023. Furthermore, the draft law on the Digital Transformation of the State establishes that government services will default to digital, with paper-based transactions only exceptionally available in those cases where the lack of digital access and skills justifies it. Moreover, the proposed law revises the legal and regulatory framework for digital government in order to accelerate digital integration and interoperability of government. Finally, the new Administration’s efforts put a greater focus on shared services and platform approaches to government.

Notes

- 1 https://digital.gob.cl/doc/estrategia_transformacion_digital_2019_v1.pdf
- 2 <https://www.gob.cl/noticias/presidente-presenta-proyecto-de-transformacion-digital-y-crea-consejo-asesor-para-la-modernizacion-del-estado/>; <https://www.gob.cl/modernizaciondeleestado/>; http://www.senado.cl/appsenado/templates/tramitacion/index.php?boletin_ini=11882-06

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2. The governance of digital government strategies

Whilst digital government strategies are fundamentally important to the transformation of policymaking and service delivery, it is necessary to put in place the conditions which will support the development and implementation of such a strategy. This chapter identifies the governance arrangements for co-ordinating the vision, design and implementation for the strategy before discussing the different approaches taken by countries in respect of inclusive and responsive stakeholder engagement in developing the strategy itself. The chapter concludes with an exploration of how countries have put in place the necessary oversight and monitoring, funding mechanisms, and functional leadership to ensure that the implementation of their digital government strategies delivers on their promised ambitions.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Public governance can be thought of as a system of institutions, strategic processes and tools, as well as rules and interactions by which public decisions are made and executed. More concisely, public governance refers to the formal and informal arrangements that support decision-making in public policy and service delivery.

National digital government strategies are developed with the aspirational goal of turning them into tools of governance in the efforts to modernise the public sector. They put forward a vision statement for the digitalisation of government and the future of service delivery and policy making. This shared vision sets common objectives and provides a unique opportunity for aligning political, administrative and technical efforts in favour of the goals stated in the strategy. As such, strategies are indeed an instrumental piece of what makes up the virtuous circle of digital government implementation (see Figure 2.1).

Governance is perhaps the single most critical aspect in ensuring the strategic action of government. Indeed, the digital transformation of the public sector, as that of the economy and society, entails power shifts, new expectations and anxieties associated with change. The relevance of governance frameworks is that they endow governments with the ability to cope with change. Indeed, they allow governments to work out the expectations and views of all relevant stakeholders, build wide ownership of vision for the future, coordinate actions in view of attaining specific objectives and, just as importantly, governance frameworks enable the public sector to restructure and repurpose governments' workflows and resources to make the digital transformation possible.

Ultimately, governments strive to have a strategy that both effectively prepares for, and shapes, the future. For this they need a governance structure that effectively channels energies and resources to those ends, enabling governments to deliver services and policies that respond to the needs and expectations of networked societies. These elements can lead to a virtuous circle if they are linked to a robust monitoring system and to feedback loops providing data for the continuous improvement of government operations.

Figure 2.1. The virtuous cycle of the digital transformation



Governance arrangements for coordination of the vision, design and implementation

Chile has become increasingly aware of the governance challenges associated with the effective implementation of digital government strategies. The Agenda Digital 2020 set the objective of strengthening the institutional and governance frameworks for digital government. The Government of Chile worked with the OECD to identify the strengths and weaknesses of its current digital government arrangements, which led to the production of a digital government study focused on the institutional aspects that underpin the digital transformation of government, which was published in 2016 (OECD, 2016^[1]).

As the new government has progressively laid out its vision for the role of digital technologies in the modernisation of the public administration, it has shown great awareness about the need for robust governance and institutional arrangements to make that vision a reality. The new government is seeking to strengthen the institutional framework that underpins public sector modernisation and endowed the DGD of MINSEGPRES with a stronger political and legal status as well as additional resources to help materialise this vision.

In the 2016 OECD report mentioned above, Chile and the OECD identified a number of challenges hindering the strategic governance of public sector digitalisation in Chile. The factors undermining consistent progress include:

- Short political cycles which tend to translate into changing government priorities, making some efforts unsustainable.
- Lack of continuity in cross-cutting policies and projects

- Uneven level of technological adoption and maturity across institutions
- Overlaps and duplication of ICT investments and spending

The 2016 OECD report advanced recommendations aimed at strengthening the legal basis and institutional capability of the unit responsible for digital government and state modernisation at MINSEGPRES, which were taken up by the previous Administration. The current Administration is seeking to consolidate them in order to strengthen the mandate, role and capability of the national co-ordinating unit for digital government. The present study has been conceived as a follow up project aimed at looking at how to leverage the national digital government strategy as a tool of government transformation that gears public action, government business processes and decision-making.

The following sub-sections will explore key areas for the development, oversight and implementation of digital government strategies.

The making of digital government strategies: stakeholder engagement as the basis of good governance

Ultimately, the development of a shared vision for digital government requires support from governance arrangements that will coordinate and channel efforts into actions that will enable the vision to come to life. As such, the governance and strategy of digital government are as effective as their ability to coordinate stakeholders, resources and decisions.

Parting from this premise, it is unsurprising to learn that all OECD members serving as a benchmark for this study¹ engage with external stakeholders to involve them in the process of developing the digital government strategy. But this consistency hides a great degree of variability between countries. Some countries have adopted longer and more thorough participatory approaches involving a high number of stakeholders from various levels of government, parts of the administration and/or the broad society. This is particularly true in the case of **Switzerland**, a country with a long tradition of public consultation and strong decentralisation of political and administrative authority. Such a context requires the buy-in and active participation of numerous stakeholders from all administrative levels, clearly signalling the need for a consensus-based approach. **Estonia**, a more centralised country, also reaped the benefits of a thorough and methodical collaborative development, showcasing broad support for public sector digitalisation efforts and outstanding outcomes as a result.

Other cases show a more centralised, top-down approach with shorter consultation periods, often with strict timelines that follow political cycles. In such cases, the entity/authority in charge of digital government has played a greater role in the development of the strategy's content. **Spain** and **Sweden** reported that it would have been beneficial to allocate more time early on to the consultation process to ensure broad ownership of core issues and elements of the strategy. Given pressures associated with **Denmark's** budget cycle, the latest version of the Danish digital government strategy chose to elaborate a high-level strategy. The Agency for Digitalisation achieved agreements in principle with relevant stakeholders that would be later worked out and further detailed as the strategy was translated into an operational action plan.

In other cases, some of the benchmarked OECD members have found that issues or initiatives that lack sufficient consensus face greater resistance during the implementation phase, in particular when these initiatives imply significant cultural change or

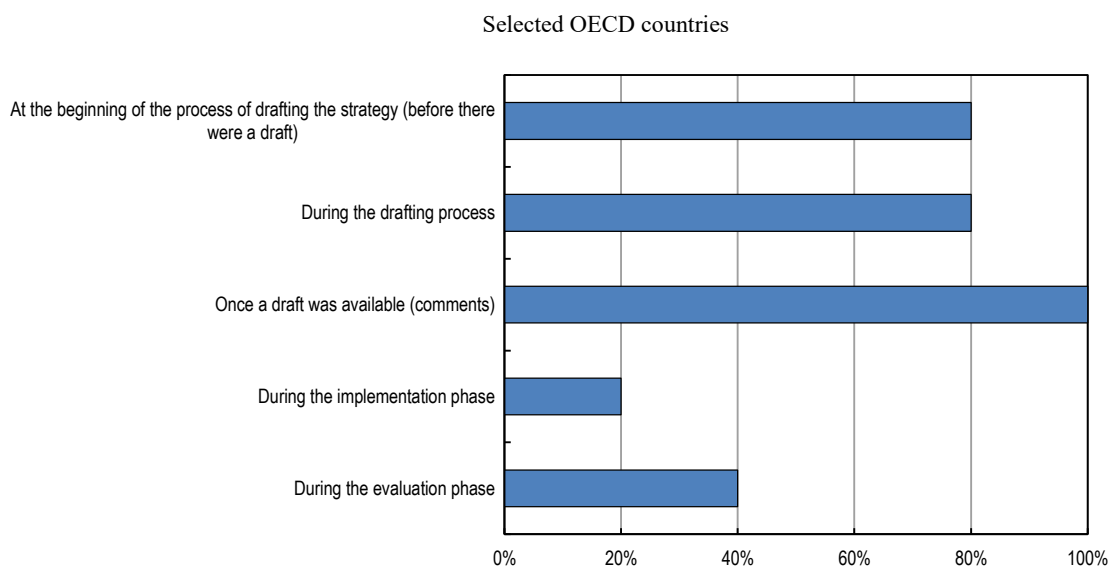
organisational adaptation. These situations tend to require greater efforts on the management side later on to address expectations, anxiety and resistance. Furthermore, insufficient engagement of relevant stakeholders increases the risk of overlooking implementation challenges, in particular when the strategy sets specific and concrete objectives for the administration.

The most thorough practices documented in this review of selected digital government strategies are characterised by structured and participatory approaches, informed through a number of in-person stakeholder engagements, surveys and online consultations on the draft. Participatory development processes tend to be longer, but also entail greater ownership of the strategy and commitment to their implementation, thus facilitating co-ordination between stakeholders down the line. Moreover, greater engagement allows for a richer and more robust analysis of opportunities, trends and risks in the use of technologies in the public sector, allowing the central co-ordinating unit to consider the priorities and technological maturity of individual public institutions and their ability to deliver strategic projects. These exercises also provide the opportunity for linking the national strategy to sectorial strategies, thus reflecting the views of a wider diversity of actors and policy communities.

However, larger consultation exercises may also lead to vague formulations that would need further specification down the road. Hence, participation needs to be balanced with the capacity and power to keep the focus on prioritisation of objectives, results and feasibility of their achievement.

Among the OECD countries assessed as part of this study, all of them opened up consultations once a draft strategy was available, and a great majority started engaging with the ecosystem before the draft was ready. Consultation during the implementation or evaluation stages seems to be rarer (see Figure 2.2).

Figure 2.2. At what point does the consultation take place?

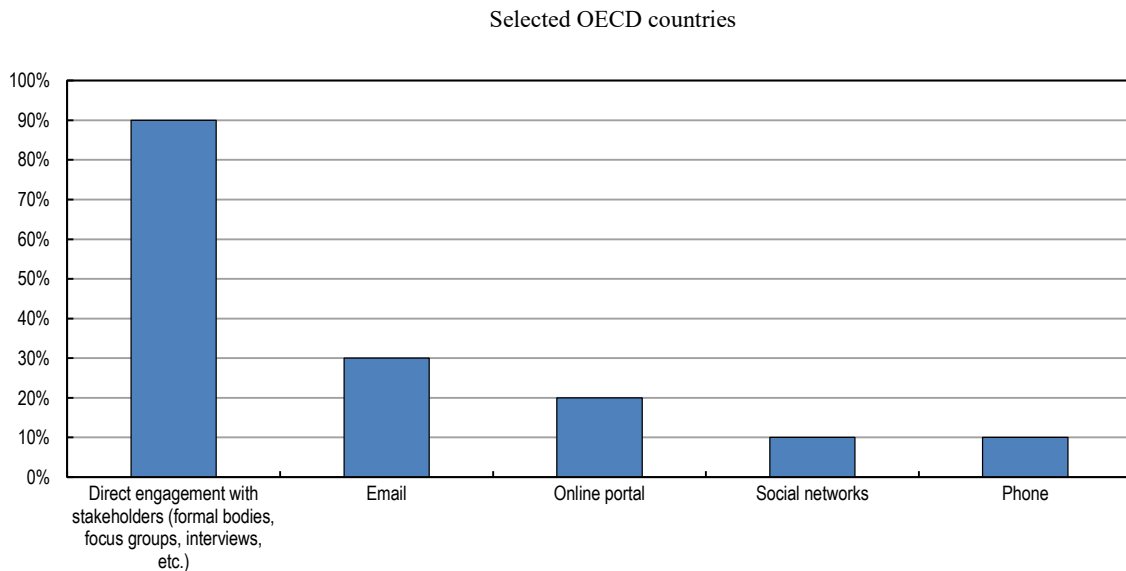


Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

Consultation mechanisms also vary greatly between countries, with a marked preference for in-person consultations, either through formal advisory or consultative groups or bodies, workshops, interviews or similar techniques (see Figure 2.3). The preference for in-person engagement could be explained by it being a more favourable framework for building consensus. Indeed, while other forms of data collections lend themselves for the structured collection of very useful information, face-to-face discussions allow for broader considerations, allowing each of the parts to better understand the views of each of the parts, the issues at stake, and make sure that all concerns are covered.

Figure 2.3. Channels used for the consultation process



Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

The data collection conducted seems to show that the criteria for selecting priorities and key objectives are very seldom pre-established and, when they are, they tend to keep a certain flexibility. The main reason for it is that the digital government strategy is simultaneously a policy and a political document, resulting from both a policy and a political process. Nevertheless, some factors are often cited as decisive, including expected impact, availability of resources and the timeline and feasibility of the initiatives.

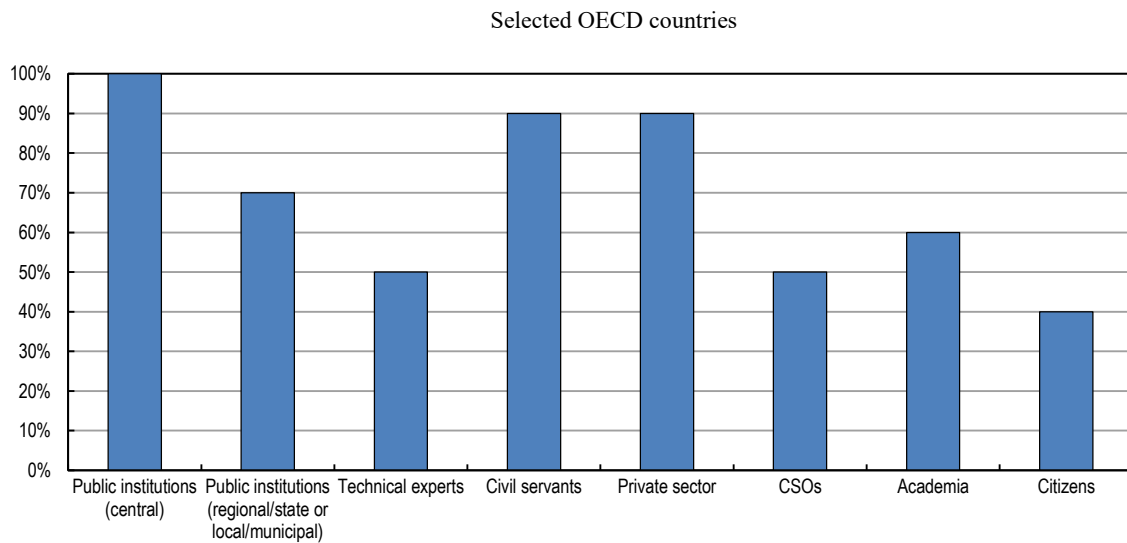
The OECD consulted each of the benchmarked countries on the lessons learned from the strategy development process. Participants highlighted the iterative development process as a working method to facilitate the emergence of ownership and consensus. The **Estonian** case is both paradigmatic and illustrative of this way of working. First, a series of structured discussions and workshops was organised with the participation of public institutions, technical experts, civil servants, private sector, CSOs and academia. These meetings were organised around focused themes, rather than horizontal, excessively broad ones. This design allowed them to get as much substance as possible out of these meetings. Participants were asked about their ideas of what the future government should look like. These scenarios were then consolidated into a single document outlining the vision for a digital Estonian government. Based on the discussions the document identified the actions required to achieve that vision. Once drafted, this consolidated document was shared with

all the stakeholders for them to review and comment. Once the reviews were taken into account, the document was then opened up for consultation.

The development of the *Agenda Digital 2020* was comparable to good practices among OECD peers assessed in this review. Leading ministries in the area of national digital development (which include MINSEGPRES, the Ministry of Economy, Development and Tourism and the Ministry of Transport and Telecommunications) established a task force that determined the themes that would be included in the strategy. The Government of Chile called on the Public-Private Council for Digital Development” (composed of public institutions, private sector, civil society organisations, specialists and academics) to organise a series of workshops. These workshops were organised around 8 thematic working groups with the participation of over 100 individuals and representatives from all 15 regions of the country. This joint work resulted in a list of 60 measures that would be incorporated into the digital agenda.

A relative weakness when compared to the benchmarked countries concerns the engagement of subnational governments (reported by 66.7% of the reference countries for the benchmarking). While Chile did work with regions for the development of the strategy, the absence of municipalities in this process should be a cause of concern. Municipalities are key service providers, usually with scarcer technical and financial resources than the central government to push forward a digitalisation agenda. For instance, municipalities are often called upon to ensure the effective enforcement of building requirements and permits as indicated in the Chilean Decree-Law on the General Law of Urbanism and Buildings and its associated regulations (MINVU, 1975^[2]). Despite sustained aspirational objectives included in successive national digital government strategies, a recent study found that, on average, only 2.8 municipal services or procedures can be completed online (Alcalá Consultores, 2015^[3]). While assessing the technological maturity and online presence of Chilean municipalities, Alcalá, a consultancy firm, found that most local government websites lacked desirable characteristics of a well-designed online platform, such as clarity of information, ease of use and user support. In addition, the report found that municipal platforms presented a scarcity of transactional services and functionalities for participation and engagement.

Despite the obvious interest in fostering digital development more evenly across the territory, and the opportunity for modernising municipal administration, the co-ordination with local governments often proves difficult. Municipalities are numerous and their levels of technological maturity vary significantly, thus increasing transaction costs in the bargaining process. In addition, political challenges often emerge. Representatives from municipalities often advance different political agendas, which can at times be at odds with the central government. This challenge calls for ingenious solutions. The assessed countries often opt for working with national associations or federations of municipal governments, which helps channel the voice, concerns and interests of local governments and administrations, usually providing very valuable inputs in the process of strategy development.

Figure 2.4. Stakeholders involved in the development of the digital government strategy

Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

A key concern for Chile seems to be how to ensure sustained digital government efforts. Engaging with all relevant stakeholders can help build agreements and consensus through a deliberative process with the digital ecosystem of the country, which can strengthen the strategy's role as a governance instrument. Chile has repeatedly confronted the question of whether the consensus that underpins their national digital government strategies is robust enough to survive a change of administration. This calls for a successful balance between a long-term engagement on setting up the enabling infrastructure, and the continuous assessment and strategic adjustment based on changing realities. These phases of strategic re-adjustment also benefit from the continuous feedback loops and engagement as a means to ensure ownership and informed decision-making, and ultimately to make the strategic vision thrive.

The above approach is relevant as the new Piñera Administration has embarked in the development of a new digital transformation strategy that seeks to help the Chilean public administration transition to paperless transactions. This strategy will be submitted for consultation with the new digital transformation coordinators of public institutions and in an open manner for the private sector, academia and civil society to make comments and contributions. The Administration has put forward an ambitious timeframe for the development of this action plan and its implementation. As it does so, it will have to carefully consider the governance mechanism it puts in place (see the next section) as they will become all the more critical to the realisation of the vision for an Administration that has greater capabilities of working transversally and horizontally.

Box 2.1. Creating a common vision for digital government in Switzerland

Switzerland's new "e-Government Strategic Plan 2016-2019" is the result of a long process of collective effort in shaping a vision for a digital public administration for the country.

As early as 2013, the Swiss Confederation started a reflection on what was it that citizens and lower levels of government expected from it. The purpose was to find a way to get the different levels of government to work closer together on behalf of citizens and businesses, despite their distributed responsibilities.

The Swiss Confederation carried out a long and intense consultation and consensus building process between 2013 and 2015. It established an inter-federal committee, with representatives from the confederation, the cantons and the municipalities.

This inter-federal committee fixed the broad strategic objectives for the new strategy:

- Easy, transparent and secure administration
- Economic efficiency
- Innovation
- Sustainability of solutions

Based on a thorough analysis jointly developed by all stakeholders using tools such as surveys workshops and other forms of consultations, the inter-federal committee then helped identified strategic projects and operational objectives linked to these broad strategic objectives before opening the strategic plan for consultation. The committee also helped determine the scope of responsibilities of the different actors, establish a governance structure for the strategic plan –both at the political and administrative level- and look for ways to overcome the legal challenges posed by the federal context.

Source: Information collected through interview with the Executive Direction of e-Government Switzerland.

Making it happen: the governance of digital government strategies in selected OECD countries

The elaboration of a digital government strategy is just the first step. Embedding the digital government strategy into government operations and its rationale, is without doubt the most difficult and transformative step. As mentioned above, the success of this second step relies on the governance frameworks that support it.

Strategy governance most often include two levels of coordination 1) some form of high level strategic governance that provides the general political orientation for the development of digital government; 2) operational co-ordination, usually through CIO co-ordination networks, which aims to work out the implementation details of strategic initiatives, making sure efforts are appropriately aligned.

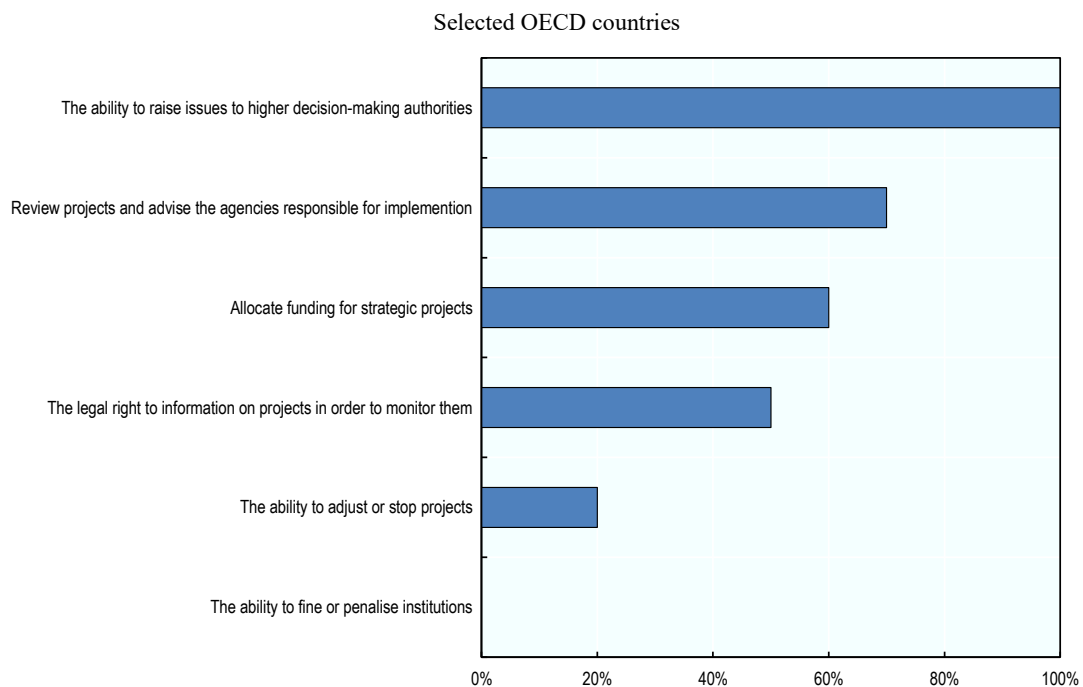
Strategic co-ordination bodies usually meet once or twice a year when integrated with high-level political leadership (i.e. Minister level) and re-examine the priorities set in the strategy. In some cases, such as **Estonia**, it approves yearly action plans to ensure its effective operationalisation and implementation. This is the body responsible for making the strategy a living document, adaptable to changing conditions and information. This strategic co-ordination body or function is often supported by a planning unit or a secretariat, which monitors the implementation of the strategy, providing useful information and forecasts, helping the steering committee plan the work ahead and make evidence-based decisions. It is not uncommon for this function to be performed by the national digital government co-ordinating unit.

Some examples of these strategic co-ordination units include the High-Level Directive Council of the Vice-Ministry of Digital Economy in **Colombia**, the ICT Strategy Committee in **Spain** and the Cabinet Meeting in **Estonia** (informed by the strategy sessions organised by the Government CIO, the Estonian Information System Authority and Government Office).

The operational co-ordination function usually brings together government CIOs and their teams, and is responsible for working out the technical challenges in the implementation of significant digital government initiatives. This operational co-ordination often falls under the responsibility of the national co-ordinating unit (i.e. national or central government CIO).

National co-ordinating units are most often able to allocate funds to strategic projects (60%) or review projects and advice agencies responsible for their implementation (70%). Furthermore, the power to require information on specific projects is also common (50%), and all are generally able to raise concerns to higher level decision-making authorities (100%). More coercive levers, such as the ability to adjust or stop projects, is generally rare in the selected subset of OECD countries (20%).

Figure 2.5. Powers of central co-ordinating unit to ensure the effective implementation of the digital government strategy



Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

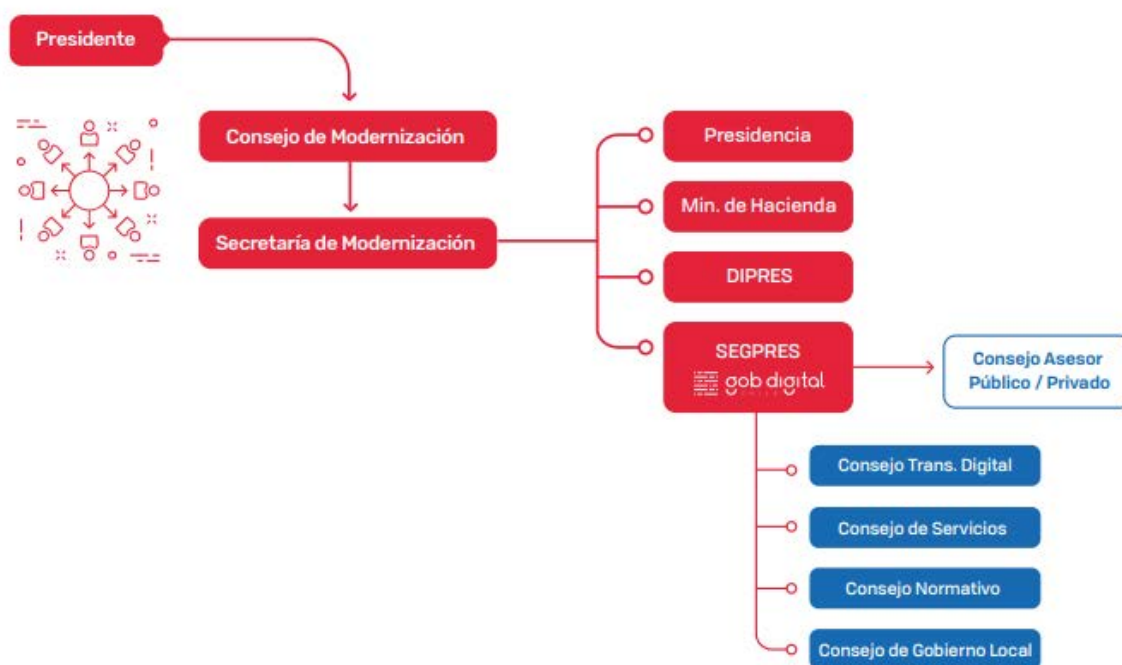
Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

The new Piñera Administration has launched a new framework for the high-level governance of public sector modernisation and digital government. President Piñera announced the creation of a Permanent Advisory Council for Modernisation composed of 12 members from the public and private sector. The Council, attached to the MINSEGPRES, has the objective of providing ongoing advice to the President on the

strategic and long-term vision for public sector modernisation. The Council has one President and an Executive Secretary.

In addition, the new Administration has created the Executive Council for the Modernisation of the State, comprising delegates from the President's Office, MINSEGPRES, the Ministry of Finance and the Direction of Budget of Chile (DIPRES). The Council will develop a roadmap for state modernisation to be presented to the President and the Advisory Council. It will also monitor the progress made in the implementation of the Modernisation Programme once adopted. This new arrangement is designed to ensure greater flexibility by helping the Modernisation Programme adjust as the context evolves. Moreover, the Administration established, through Decree No. 42 239 of 27 December 2018, the expectation that the Executive Council ensure the continuity of efforts, preparing modernisation roadmaps in the first 100 days of every new administration.

Figure 2.6. The Governance of State Modernisation in Chile



Source: Draft State Modernization Agenda of Chile.

President Piñera is also seeking to strengthen the implementation of digital government by restructuring and increasing the capabilities of DGD within the MINSEGPRES. The Division will now be organised around four core services:

- **Consulting and co-ordination:** hiring over 20 consultants for agile development to support public institutions conducting digital transformation projects and assist with user research, legal issues, early results and the strategic management of ICT procurement.
- **Leadership and digital governance:** This function of the DGD will establish the digital transformation agenda of the State in terms of standards, development models, ICT commissioning and project design.

- ***Development of tailored solutions:*** The development team will support other institutions in the development of tailored solutions as well as data integration for interoperability.
- ***Shared platforms:*** This function will facilitate the development and support shared platforms working on a “software as a service” model for public institutions in line with thinking on Government as a Platform.

To fulfil this mandate, the President has asked Congress to substantially increase the budget of the Division.

Available co-ordination mechanisms are consistent with those found in benchmarked countries. However, one area of potential improvement is co-ordination at the technical and operational levels. Similarly to other countries who have achieved co-ordination at these levels through a Council or Network that brings together the CIOs of central government agencies and departments, Chile has brought together public sector CIOs on a couple of occasions. This level of governance helps operationalise the digital government strategy and address bottle necks in the implementation of the digital agenda. These co-ordination bodies often benefit from the work of technical working groups focused on key areas such as interoperability, digital identity, service standards or others. Therefore, Chile might benefit from ensuring the continuity and formalisation of the work carried out at the technical and operational levels on digital government implementation across the administration.

Oversight and monitoring

Oversight and monitoring of the digital government strategies is most often carried out by the central co-ordinating unit (i.e. central/federal government CIO or equivalent function). In a minority of cases, such as the **Netherlands**, monitoring of projects and initiatives is decentralised, charging institutions responsible for specific initiatives with the monitoring of their progress. The common practice includes the identification of specific indicators linked to each of the objectives and projects included in the strategy. These indicators make up the strategy’s monitoring system.

The *Agenda Digital 2020* benefitted from a robust automated monitoring system based on the achievement of key predetermined milestones. These allow the government to have accurate estimations of the state of progress for implementation of the strategy. Each institution reported progress on a monthly basis through the online system. This automated system updates in real-time the status of each project on the public website www.agendadigital.gob.cl, which presents the current status of initiatives by axis and by specific objective or project. Furthermore, the monitoring function was also ensured through the regular meetings of the Ministers’ Committee for Digital Development, its Executive Secretariat and technical working groups.

The continuity of this good practice under the new Digital Transformation Strategy - currently being developed-, with the oversight and monitoring of the Executive Council for State Modernisation. In addition to tracking progress, frequent meetings of the State Modernisation Team to assess unmet needs, strategic adjustments needed and resource reallocation will provide the Digital Transformation Strategy with the operational agility that will help it meet international best practices. Indeed, research shows that the most successful digital strategies in major companies review and analyse data, reassess their digital portfolios, review business models and reallocate resources much more frequently than less successful firms (Bughin, Catlin and LaBerge, 2019^[4]).

As the institutional architecture and strategic actions of state modernisation are redefined, the monitoring system is also bound to be readjusted. The monitoring and evaluation system used in Chile to track the implementation of digital government strategies seems to be poised to put a greater focus on user satisfaction and improving measurements around state efficiency and productivity and broader social and economic development indicators.

The overall monitoring system of the strategy used until present is pretty robust. Two important areas of improvement have been identified that provide opportunities going forward. First, the ability to collect more granular project data could help strengthen strategic planning and implementation of digital government initiatives, helping co-ordinating bodies and functions to identify early on drivers of project failure and success and progressively build intelligence about ICT project performance.

Denmark and **New Zealand** provide very interesting examples in this regard. Their project governance models require approval by a central project governance function for projects above a pre-determined budget threshold. The approval demands the development of a rigorous business case for the project, clearly identifying roles and responsibilities, determining the viability, sustainability and impact of the project in advance, and pointing out clear performance indicators and project milestones. Data is then continuously collected and processed to draw insights. Responsible institutions for such projects are required to report on the advance and benefit/impact realisation up to two years after the completion of the project. **Israel** and its model of *IT Governance as a Service* can also serve as inspiration in as much as it provides a structure for ICT project management and continuous monitoring (see Box 2.2).

Box 2.2. Israel's IT Governance as a Service

As part of its efforts to strengthen ICT governance and oversight, *Israel* has developed the application IT Governance as a service (ITGaaS).

ITGaaS is a platform that supports the management and monitoring of ICT projects. It also allows agency CIOs to prepare their annual work plans, IT budget and risk management of IT departments in all ministries.

The platform serves as a service that facilitates the alignment of IT department management with government standards in a range of fields, helps create a catalogue of all government platforms and systems, thus providing Israel with a robust basis of compliance with good practices in IT project governance. It also allows for the continuous monitoring of ICT project implementation.

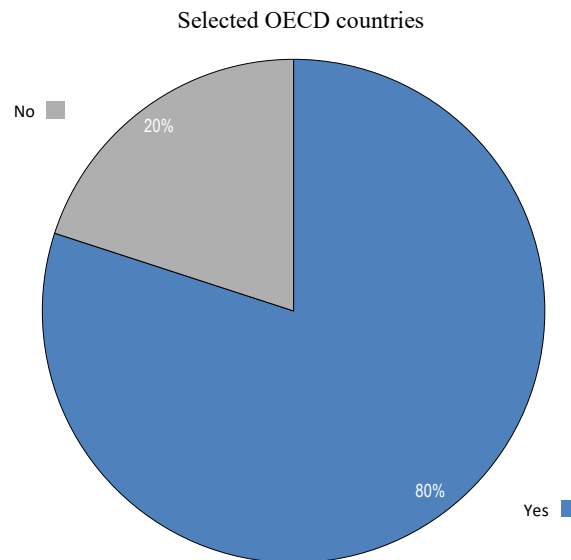
Source: OECD Survey on the use and implementation of the Recommendation of the Council on Digital Government Strategies (2017)

The second area of opportunity concerns precisely the assessment of the impact of the digital government strategy. The best example available today is without a doubt **Colombia**. Colombia put in place and progressively perfected a robust system for assessing the implementation of its digital government strategy in the form of the GeL Index (*Índice Gobierno en Línea*). This index allowed the central co-ordinating unit to assess and rank the implementation of digital government policies by all public institutions, both at the central and subnational levels of government. The publication of the index helped nudge institutions into compliance and providing incentives for strategic alignment and compliance.

Despite having this powerful tool in place, the Government of Colombia decided to work with the OECD in the development and implementation of an indicator framework and a statistical model that would help the government to better understand the impact of its digital government strategy on broader policy objectives. The results of the first implementation were published in October 2017 by the OECD (OECD, 2017^[5]). With this additional information, the Colombian Vice-Ministry of Digital Economy is much better equipped to steer digital government efforts and to identify and strategically decide on the most impactful areas of their work.

By making these methodical attempts to develop impact assessments on digital government, Colombia places itself ahead of the curve in terms of monitoring and evaluation in the area of digital government. The benchmarking reveals that most countries use KPIs linked to the individual projects included in the strategy (e.g. outputs indicators) but they rarely have in place performance indicators (e.g. outcome indicators related to the overall objectives of the strategy or of broader national policies), not to mention impact assessments. Colombia's efforts could serve as inspiration for Chile in terms of continuous assessment, evaluation and learning of the strengths and weaknesses of the national digital government ecosystem.

Figure 2.7. Benchmarked countries with a separate central government fund to help finance strategic projects associated with the digital government strategy



Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

Funding mechanisms

Funding for activities contained in the digital government strategy are traditionally funded by: a) the institution or institutions responsible for the implementation the project, b) a central earmarked government fund for financing or co-financing strategic projects or promising pilots or prototypes, c) external funding (i.e. international organisations), or d) a mix of the above.

Virtually all benchmarked countries stressed the strategic importance **centralised ICT funds** to co-finance strategic projects and create incentives that foster compliance with existing norms, guidelines and digital government objectives established by the strategy. Indeed, such financing tools and funding models are seen as key levers enabling the successful implementation of the strategy.

Out of the ten countries referenced in this benchmarking study, only **Spain** and **Sweden** currently lack a centralised fund or co-financing mechanism, while the other 80% does have one in place. Spain, however, reports on-going efforts to establish one and Sweden had launched an initiative to set up one along with the adoption of its present strategy, but the motion was not retained.

In this light, it is encouraging that the current Administration is making efforts to provide the *DGD* with additional resources that will allow it to deliver on key strategic projects that can be highly catalytic.

Functional ICT Leadership linking digital government and broader strategy and policy objectives

Leadership plays a critical role in driving change and supporting the emergence of a new administrative culture in the public sector.

“Leaders steer organisations, set goals, and play a significant role in developing the organisational culture and climate. They impart and embody the values of the organisation on a tacit level” (*OECD, 2017_[6]*).

Leaders in this context should be broadly understood. Political authorities, senior managers, project leaders and employee organisers can all play leadership roles in a given time enabling new ways of working to emerge. Public sector leaders are key pieces in the transformation of public sector operations and will become increasingly so in the digital age.

The strengthening of the political leadership of DGD was an important step in empowering digital stewardship in government. Furthermore, including the Head of DGD in the Strategic Committee of the Modernisation Programme and its successor, the Executive Council of State Modernisation, marked a clear move towards putting digital at the core of public sector reform and broader public sector strategies. This has provided for a robust strategic alignment in government reform efforts.

However, Chile – as most countries - faces the important challenge in decentralising and scaling up digital leadership. In supporting the emergence of a new kind of public sector leader that will embody the values and character of a digital culture. This will be a critical factor in achieving a whole-of-government approach and support a cohesive and sustainable overall digital transformation of the public sector. In face of a new technological revolution, and its implications for the production of goods and services, it seems like a sensible time to think about a structured approach to nurture and incentivise the kind of leadership the public sector needs to deliver on citizens’ needs.

Public sector leadership is expected to help manage change and can help break down silos in practice by fostering more collaborative forms of working. Both the OECD and the European Commission have highlighted the increasingly relevant role collaborative leadership is expected to play in the emergence of an innovative and increasingly digital public sector (OECD, 2016_[1]; OECD, 2017_[6]; European Commission, 2013_[7]). Indeed, recent reports from both organisations suggest that the future public sector will rely on

greater horizontal collaboration and initiatives, and public managers acting as distributed leaders helping build the abilities, spur the motivation and create the opportunities for greater innovation and to transform the public sector.

Moreover, emerging technologies have been growing disruptive power and capabilities. Failure to understand the strategic implications of these technological changes can translate into poor choices and failed strategies. Political leaders and chief executives have little option but to get a better grasp of how these emerging technologies shape the strategic decisions in front of them (Díaz, Rowshankish and Saleth, 2018^[8]). Senior executives in the 21st century can only be effective if they understand how new tools, like artificial intelligence, machine learning algorithms, the Internet of Things (IoT) or blockchain can impact their sectors and organisations. In effect, research findings show that organisations whose leaders dedicate time to learn about digital technologies more frequently have better digital results (Bughin, Catlin and LaBerge, 2019^[4]).

Digital is also increasingly likely to raise sensitive political and ethical questions that will demand growing political involvement in digital questions. As such, the future of the deployment of technology in the public sector will see greater participation of political leaders, which is both inevitable and desirable.

Leaders also play a crucial role in the articulation of a clear messaging, helping internal and external stakeholders understand what the administration is trying to achieve. They are also expected to help establish goals citizens can relate to, objectives that are politically sound and can support the government's broader agenda. This is not a minor challenge, since technical issues can be hard to translate into tangible outcomes for the administration or the users. All of these trends suggest that both senior leadership in public organisations and their chief digital officers would benefit from working closer together.

An additional layer of leadership that is often overlooked is the role played by the middle management in that change management process. Middle managers interact day to day with the staff that is on the front lines of the digital transformation. They have a crucial function in ensuring the effective flow of information, translating the vision and needs of the senior management to the staff, and vice versa, the challenges and needs of staff in to the senior management. Furthermore, the middle management also supports day to day motivation of their teams, helping them deliver on expectations (PricewaterhouseCoopers, 2018^[9]).

If middle managers feel threatened by the pace of change, their effectiveness can diminish quickly. This management layer could end up thwarting their organisation's innovation capacity by failing to give enthusiasts and change agents with the leeway that they need to experiment and come up with new ways of solving problems. Moreover, if middle managers do not have a solid understanding of how technology can be harnessed to solve business problems, they won't be able to convey the meaning of technology in the context of their organisation (PricewaterhouseCoopers, 2018^[9]).

Note

1 Colombia, Denmark, Estonia, Mexico, Netherlands, New Zealand, Norway, Spain, Sweden and Switzerland.

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3. Strategic areas for digital government development

This concluding chapter discusses six specific strategic areas, and certain trends and themes that can be found in the digital government strategies of the selected countries.

The chapter starts by considering the need to start with user needs before discussing the role of data as a strategic asset and building out the necessary capabilities for delivery amongst public servants. The external contribution made by private sector suppliers to the delivery capabilities of governments is then discussed in the context of transforming procurement practices to adopt an ICT commissioning approach.

The chapter identifies that the digital inclusion needs of citizens are an important strategic factor in the success of digital government strategies before finally exploring the relationship between government digital strategies and public sector innovation strategies for improving public service delivery.

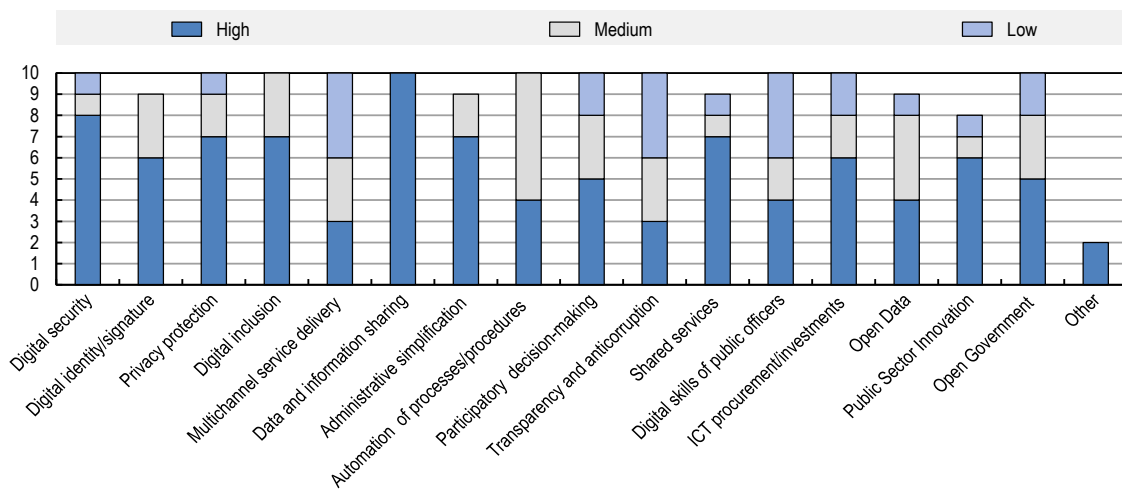
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

In addition to the process of strategy development and its functional role as a governance tool, this study will take a deeper dive into specific strategic areas, and certain trends and themes included in the digital government strategies of the selected countries.

Benchmarked countries signal data sharing across the public sector as the single most relevant theme of digital government strategies, closely followed by related topics such as data security, digital identity and privacy protection, administrative simplification, and shared services (i.e. infrastructure, platforms, software and data), see Figure 3.1. Digital inclusion, ICT procurement and investment, and public sector innovation are also an issue that remains high in the agenda of the OECD countries selected for this benchmark.

Figure 3.1. Priority of the following topics

Selected OECD countries



Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

Start with user needs

Digital government strategies have the distinctive ability to set the public administrations' goals and priorities when it comes to digitalising government. One of the critical characteristics of digital government is to put the focus on user needs. This change of focus is critical as they encourage and empower digital teams across the public sector not to simply digitalise paper-based procedures, but to focus on process re-engineering.

Countries like Australia¹, Canada², Mexico³, New Zealand⁴, the United Kingdom⁵, and the United States⁶ have developed overarching design principles, digital government standards, guides and other requirements that provide digital teams with a framework to support the service transformation. These tools have been powerful tools to boost the digital transformation. These tools provide digital teams with a principle-based approach to service design, focusing on user needs first, and empowering them to leave behind obsolete rules that make little sense in the digital age (Bracken and Greenway, 2018; Bracken *et al.*, 2018). Moreover, these tools have helped embed user-driven approaches and the need for user research in national administration, which haven't been traditionally been commercially incentivised to understand the user experience and respond to their needs.

The progressive adoption of these service design principles and standards gave rise to the internationally recognised *Principles for Digital Development*⁷ and the OECD's very own *General Digital Service Design Principles*, an unpublished document developed by the Thematic Group on Digital Service Delivery of the *OECD Working Party of Senior Digital Government Officials*.

In Chile, DGD has developed two important guides to support public servants in their digital delivery: a guide to designing web interfaces and a guide for designing digital services.⁸ Meanwhile, the Laboratorio de Gobierno (Government Lab) has developed a tool that helps public servants to innovate in the public sector.⁹ This tool lays out how to adopt user-focused approaches in service and process design. It is hard to overstate the relevance of the work of the Laboratorio de Gobierno, DGD and the Modernisation Programme in sensitising public sector organisations to the importance of the user's experience and their impact on delivering services in ways that are simpler and more effective and that as such increase adoption.

Despite those important steps, Chile has yet to adopt a service standard in the same way other peers have. The experience shows that these standards provide the public sector with a robust framework to decide whether something is good enough to go on the portal or not, thus serving as quality control, in particular when combined with governance frameworks that accelerate adoption (see Box 3.1 describing the role of Mexico's single window in ensuring compliance with digital service standards).

Box 3.1. *gob.mx*: Transforming service delivery and digital engagement in Mexico

gob.mx has been at the core of the digital government strategy in Mexico. Developed and tested in the course of 2013 and 2014, the platform has since become the government's single window and an essential shared infrastructure for government transformation. It allows users to easily access services and public information as well as take part in digital participation exercises.

The platform has also facilitated interoperability and data sharing within the public sector, ensured consistency in design and made government more accessible for citizens and businesses. By mandating that all public institutions participate in the platform, the Government of Mexico gave the Co-ordination of the National Digital Strategy and the Ministry of Public Administration greater ability to ensure that digital services comply with the technical standards and requirements. These standards and requirements, along with a series of guides, templates and re-usable components have been made available for all public institutions to re-use, helping accelerate the transformation of services.

The three main components of *gob.mx* are:

- **gob.mx/tramites**: Gives citizens and business quick, easy access to 4 000 federal public services.
- **gob.mx/gobierno**: Consolidates in one place all previous 5 000 government websites.
- **gob.mx/participa**: Interactive platform providing citizens with a channel to make proposals, report acts of corruption and participate in the development of new services and policies.

Source: gob.mx (2018) ¿Qué es gob.mx? <https://www.gob.mx/que-es-gobmx-extendido> (accessed on Oct 26, 2018); OECD (2015) Digital Government Toolkit: Good Practices – National One Stop Portal gob.mx,

<http://www.oecd.org/gov/mexico-one-stop-portal.pdf> (accessed on Oct 26, 2018); Co-ordination of the National Digital Strategy (2018) National Digital Strategy – Project files (internal, unpublished document).

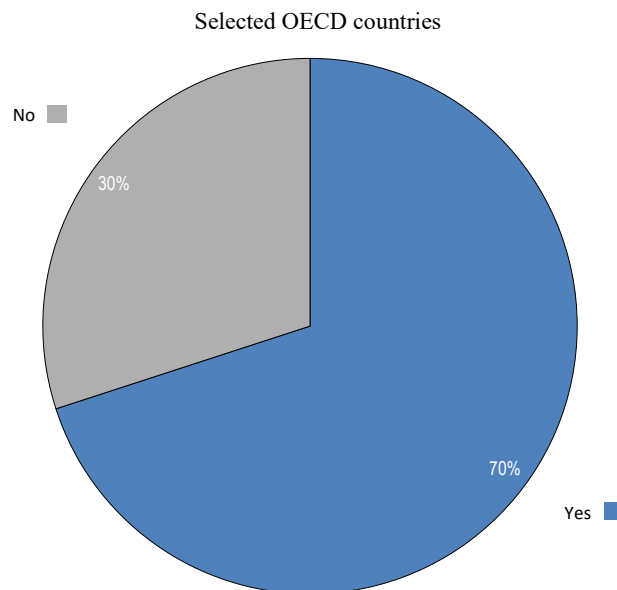
Data as a strategic asset: towards a data-driven public sector

The recording and processing of information and data to inform decision-making have always been among the core functions of government and its bureaucracy. The capability of capturing and processing data efficiently has historically been the basis for public sector intelligence and good governance. This is how governments' basic registries emerged.

Today's digital technologies have drastically increased our ability to capture, store, share and process data to support more robust decision-making. Tools like sensors and technologies of the Internet of Things, paired with big data analytics, machine learning algorithms and artificial intelligence are today able to draw insights from massive amounts of data by identifying underlying patterns in the data. It is thus unsurprising that the benchmarked digital government strategies accord such relevance to data management and sharing, as it can be appreciated in the graph above. This interest has also been the driving and motivating force in the OECD's decision to launch its data-driven public sector project and develop its forthcoming working paper on this topic (van Ooijen, Ubaldi and Welby, 2019^[1])

Indeed, as many as 70% of benchmarked countries report that data-driven decision-making is high priority for the country (see Figure 3.2). This proves that there is growing recognition of the strategic value of data, and the importance of reviewing its value chain to enhance public sector's ability to perform, deliver on citizens' expectation and prepare for the future through better forecasting.

Figure 3.2. Is data-driven decision-making a high priority for your country?



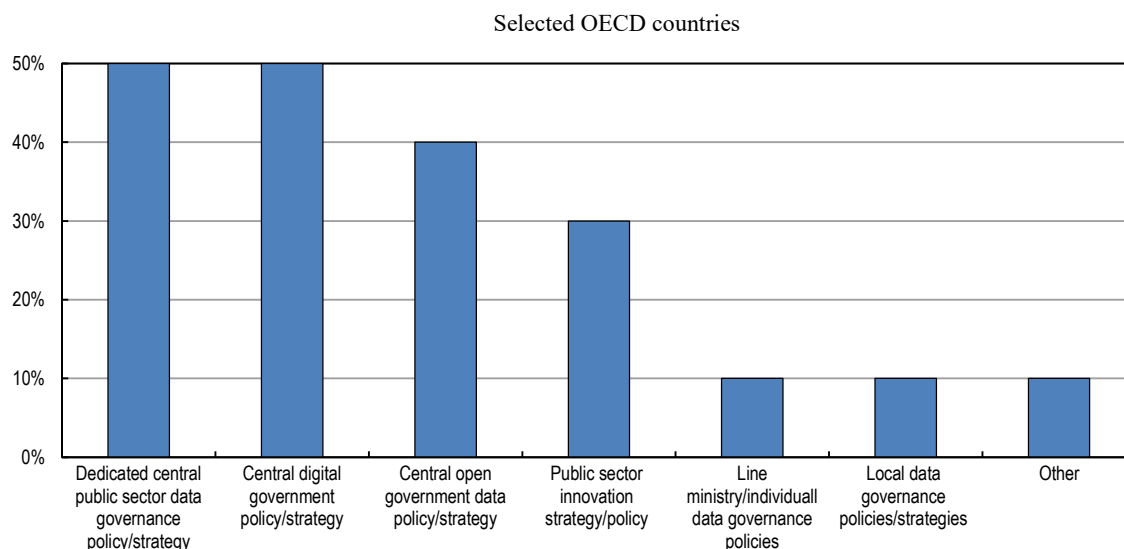
Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

Chile has not lagged behind the group, having expressed strong interest for enhancing interoperability and the digital integration of the public sector. With such efforts, the Government of Chile aims to facilitate data sharing and the delivery of more coherent and integrated services of the public administration, thus driving public sector performance. In addition, Chile has recently launched an initiative on the digitalisation of the civil registry which could have a massive impact on data sharing and data governance in the Chilean public sector and a revamped digital identity for users (OECD, Forthcoming^[2]).

This recognition is not limited to the management of public sector data internally. Governments increasingly seek to reap the benefits of alternative sources of data, such as internet-based big data (van Ooijen, Ubaldi and Welby, 2019^[1]). Furthermore, efforts to maximise the impact and value created through government data has led governments to progressively consider and adopt open data policies to support data-driven, open innovation. But the value extracted from this strategic resource cannot come at the expense of data security and privacy. The wide diversity of issues associated with the data lifecycle and data-based value creation have usually evolved progressively. They are generally not addressed and developed in a single strategy or policy, but most often different aspects of data governance and implementation are covered by more than one policy or strategy (see Figure 3.3).

Figure 3.3. Policies and strategies covering the governance and use of data in the public sector



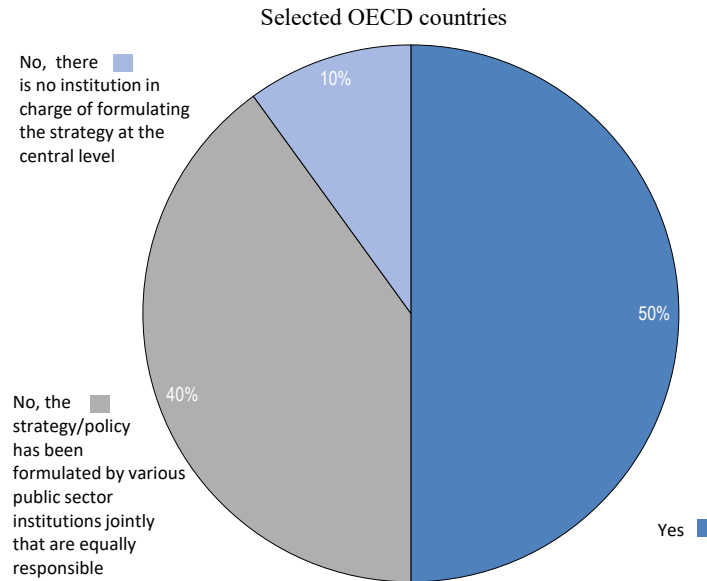
Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

Efforts to enhance the management of the data value chain across the public sector has progressively led OECD governments to identify an authority or authorities responsible for developing and implementing the government's strategic approach to data governance. These units are also usually responsible for helping the public sector identify its existing data and information gaps, develop strategies to collect the missing pieces of information, and enhance its processing and analytical capabilities to use data to draw insights, design policies, improve service delivery and build a more performing public sector.

A robust 50% of the OECD countries assessed in this study had a single authority leading the co-ordination and implementation of the national public sector data strategies and policies. Another 40% of them had more distributed responsibilities (see Figure 3.4 below). Similarly, the 2017 OECD Open Government Data Survey 3.0 reveals 11 out of 31 OECD member countries have established a Chief Data Officer for the central/federal government, up from only 7 or 24.24% in the 2014 version of this survey (see Figure 3.5 further below).

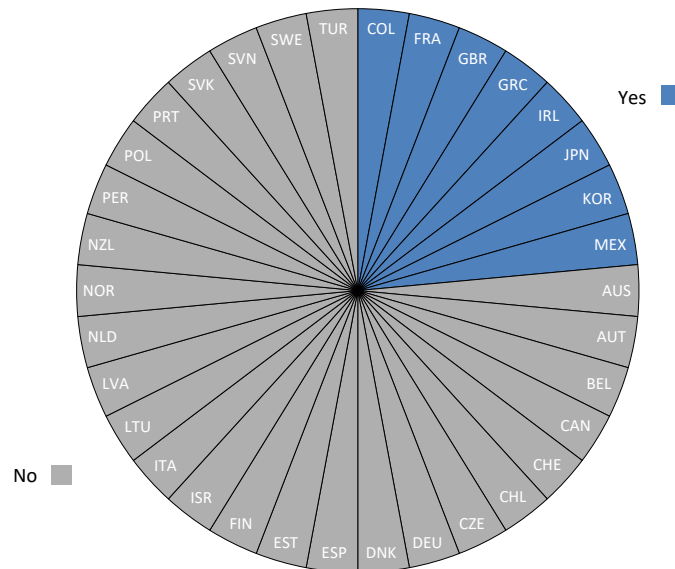
Figure 3.4. Does your government have a leading institution responsible for overseeing and co-ordinating public sector data strategies/policies?



Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

Figure 3.5. OECD countries with a central/federal Chief Data Officer



Note: Data not available for Hungary, Iceland, Luxembourg and the United States. Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Source: OECD Survey on Open Government Data 3.0. (2017): Section 2, Question 14. Countries providing a response to the question: Does the central/federal government have a Chief Data officer (CDO)? (Based on information provided by 31 OECD countries and 3 country partners: Colombia, Lithuania and Peru).

These efforts to support the strategic use of data should not be seen as excessively sophisticated aspirations for the public sector. On the contrary, they often translate into very concrete simplification of people's interaction with the public administration, even if they have limited digital skills. Indeed, the simplification of procedures thanks to greater data sharing is a critical mechanism helping governments deliver the benefits of the digital transformation of the public sector to unskilled users. This can be achieved through user research, helping public institutions better understand the different types of user that try to access a service and understand their journey and experience. This exercise usually leads to the simplification of procedures and the integration of information systems and data, making services more accessible by ensuring users will no longer have to complete excessively long and complicated forms. Chile seems to show growing awareness about this issue as it designs a new government data strategy.

Towards a new public sector data strategy in Chile

As part of its new state modernisation efforts, Chile has been working on a formal public sector data strategy with a strong focus on advancing interoperability and data-sharing in the public sector and preparing the administration for the advent of increasingly sophisticated data-processing capabilities, such as artificial intelligence.

Chile's push to move to a paperless administration that makes the *once only principle* effective relies on a number of key digital government infrastructure projects. These initiatives have benefitted from a level of continuity across administrations. As these projects come to maturity, they have the potential of becoming a mission-driven effort that can help drive a significant transformation of public sector operations. These initiatives are critical as they enable the timely access to relevant data by decision-makers and include:

- ***Electronic document management system:*** that facilitates the electronic sharing and storage of documents in the Chilean public administration.
- ***Interoperability framework and platform:*** That will foster data sharing within the administration;
- ***Digital signature for public institutions:*** that can certify the validity, source and date of official electronic documents;
- ***Digital identity:*** to facilitate the secure sharing of personal data across agencies and provide citizens with a reliable mechanism for proving their identity. It is hard to overstate the relevance of this project. According to the Inter-American Development Bank, over a third of government transactions in Chile concern identity and the civil registry (IDB, 2018_[3]).
- ***The elaboration of standards and data governance for the public sector:*** This effort seeks to foster a standardised use of data, semantics, meta-data, among other components helping structure public sector data in a way that can be easily exploited through modern data processing techniques.
- ***Digitalisation of base registries:*** as a strategic effort to enhance the flow of data in the public sector and progressively simplify and integrate service delivery.

It is important to underline, however, that along with unlocking the power of administrative data, the digital revolution allows the public sector to capitalise on new data production, collection and processing capabilities to support decision-making. The quantity of data and information produced by the ubiquity of digital devices, which increasingly interact with the physical world (i.e. sensors, the Internet of Things) is only growing. More powerful computing and increasingly sophisticated statistical models and algorithms (i.e. machine learning algorithms, artificial intelligence) can lead to better public performance and more robust decision-making.

The decision to make data a critical part of public sector modernisation shows that Chile is aware of the strategic value of data. The question now is how to nurture a data-driven culture in the public sector that is ingrained in public sector operations, strategic priorities and policy objectives.

One first challenge for public administrations is to look beyond the hype and engage with the difficult task of building a technical understanding of the opportunities and limitations of new data processing technologies. Today more than ever public sector organisations need a clear-eyed assessment that grasps that data is not about buzz, but about making better decisions, and deploys data capabilities consequently (Díaz, Rowshankish and Saleth, 2018^[4]). Indeed, data science skills are scarce and in high demand, making them expensive. To achieve maximum impact, the public sector must allocate its limited resources strategically.

Effective use of data starts by specifying the problem that needs to be solved. The business, policy or strategic questions, not the hype, should drive the data efforts made by the Chilean public sector.

The Government of Chile has started to experiment with data-driven insights supported by Google Analytics in key portals for service delivery: ChileAtiende and Gob.cl. Chile has also made progress in terms of integrating key data sources for service delivery, such as Customer Relationship Management (CRM) of ChileAtiende, institutional service delivery registries and the national services registry. However, examples of successful use of advanced analytics in policy and decision-making have yet to emerge. Data governance in the Chilean public sector would benefit from encouraging and expanding the implementation of data-driven techniques in highly strategic ways through frameworks, incentives, guidance and capacity building. It would also benefit from data-driven missions to improve public sector performance in key strategic areas as to ensure high returns on investment. For instance, predictive maintenance of infrastructure and equipment could lead to substantial savings of resources and lives (Bender, Henke and Lamarre, 2018^[5]).

While frameworks and systems are critical, culture ultimately relies on people. Technological disruption is not new, but what makes the digital age unique is its pace, scope and reach. As previously mentioned, senior decision-makers are uniquely exposed to strategic failure due to a rapidly changing technological environment. To mitigate this risk, senior leaders will require more direct and frequent lines of communications between chief data and digital officers in the organisation. This will also empower these digital and data officers by giving them the opportunity to bring technology and data to bear as valuable sources of evidence to inform strategic decisions and to support policy implementation and service delivery. As top-level decision-makers progressively see how technology and data make them more effective executives, this relationship is bound to increasingly create a digital and data-driven culture.

Ultimately, embedding a data-driven culture into the fabric of the state so that it can survive a change in administration, chief data officers and data scientists must be able to work effectively with business units and operations teams in their organisations. By making the latter improve their own delivery, thus enhancing the performance of these units, chief data officers and their teams will gain growing support and interest from the different parts of the organisation. The interest from business units in different sectors of the administration should be nurtured. Growing demand from across the administration will ultimately feed and drive the cultural transformation.

As data drives the digital revolution, Chile is doing well to maintain the focus on having the right data policy framework that covers all key aspects of data governance in order to maximise the potential of national data value chains. If it succeeds, Chile will be ready to reap the benefits and manage the risks of data-driven transformation and harness the power machine learning and AI applications in the public sector.

Australia has led by example in this regard. Acknowledging the strategic importance of data, Australia developed a comprehensive approach towards the development of a data-driven public sector (see Box 3.2). However, it is important to highlight that such initiatives are still fairly recent and have not yet been adopted by a majority OECD members and often not as comprehensively.

Box 3.2. Public Sector Data Management in Australia

In 2015, the Australian Public Service (APS) launched the Public Sector Data Management Project after a commissioned study made public the same year. The report highlighted the strategic value of data and how its sound management and use can lead to better public services and policies as well as greater public sector performance. It also underlined that the private sector's reuse of public data can support economic growth enabling companies to seize new business opportunities offered by the digital and data-driven economy.

The roadmap of the Public Sector Data Management Project comprised an initial phase of 6 months aimed building confidence and momentum and included the following activities based on the report's recommendations:

1. Secretary and Prime Minister & Cabinet (PM&C) signal data is a priority for the government
2. Commission several high value projects
3. Build external partnerships
4. Publish readily available non-sensitive datasets
5. Build data and analytics capability
6. PM&C coordinates projects and progresses in APS data policies and governance

In parallel, ongoing activities would be developed over a timeframe of 18 months to systematise the use and release of public sector data. These activities included:

1. Implement a data policy framework that includes:
 - A public policy statement
 - A simple governance model for data policy

- A requirement for evidence-based policy
2. Build and maintain public trust
 3. Establish an integrated model for sharing integrated data
 4. Create and publish a searchable, whole-of-government data catalogue
 5. Develop a Commonwealth Government high-value dataset framework
 6. Publish data management standards
 7. Establish a consistent and transparent approach to user charging
 8. Create a legislative environment that supports data use while maintaining privacy building on a possible Productivity Commission enquiry
 9. Promote innovation in the public administration

Source: Department of the Prime Minister and Cabinet (2016) Public Sector Data Management : Implementation Report, https://www.pmc.gov.au/sites/default/files/publications/Implementation-Public-Sector-Data-Management-Report_0.pdf

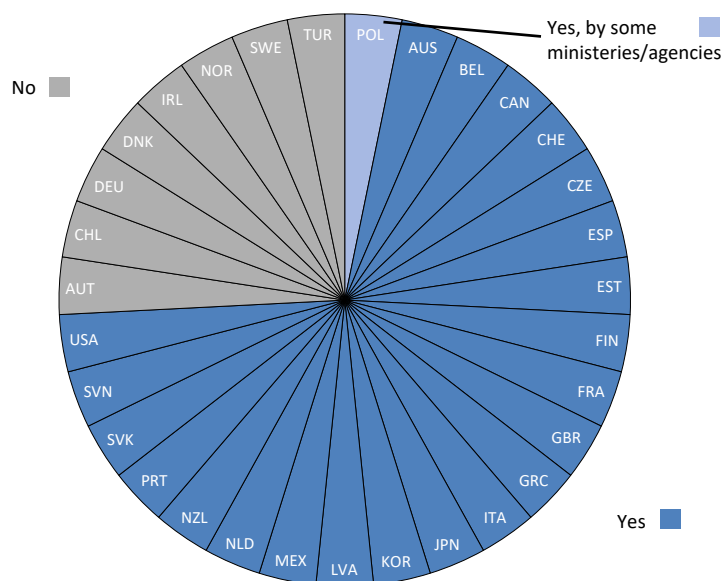
Unleashing the power of open government data

The strategic use of government data is not limited to changing internal procedures. The OECD has highlighted that open government data can be the support driving the co-creation of public value. A growing amount of evidence shows that opening up government data can lead to the collaborative creation of economic, social and public governance value (Ubaldi, 2013^[6]).

A recent OECD survey has shown that a wide majority of OECD countries have adopted an “open by default” approach to the disclosure of government data in machine-readable formats. This means that government data is systematically opened unless issues of privacy, security or other legitimate concerns apply (see Figure 3.6). Chile has yet to reflect this trend as it seeks to enable digital and data-driven innovation in the country.

Figure 3.6. Adherents with “open by default” requirements for government data

Adherents having adopted requirements whereby government data should be “open by default” unless a legitimate justification is provided

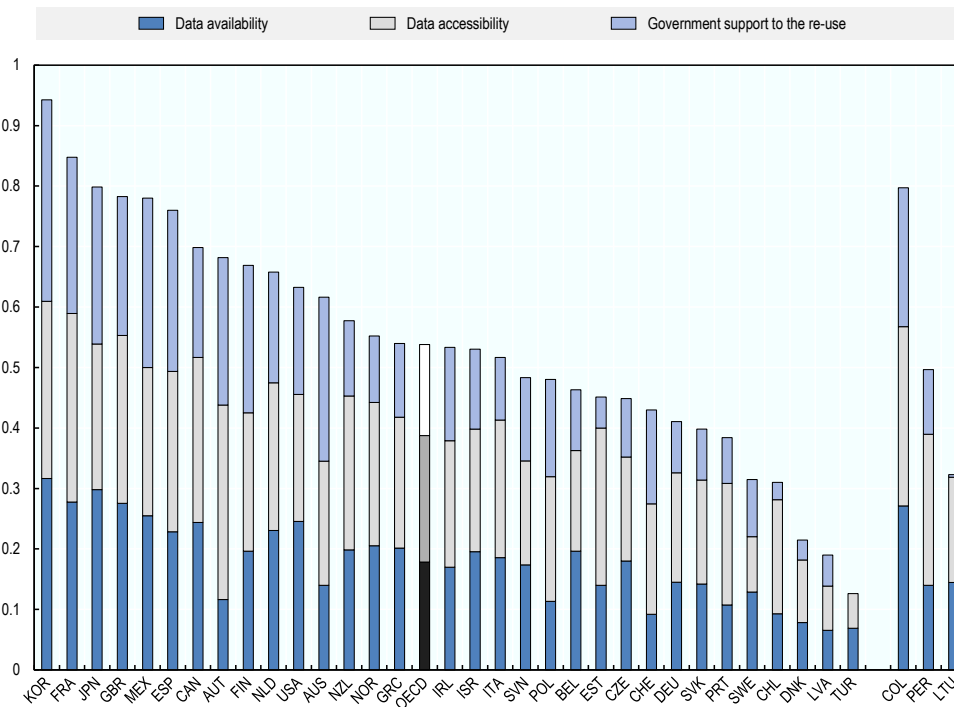


Source: OECD Survey on Open Government Data 3.0. (2017)

It is however important to point out that open government data ecosystems rely on much more than just data availability and accessibility. Open government data policies bring more value when they recognise the importance of using tools and resources to foster and nurture an ecosystem of data-driven innovation around open government data. Mexico, for instance, has two staff at each of 270 federal government institutions dedicated to implementing the national open government data policy, liaising with all relevant governance institutions as well as with external stakeholders to prioritise the disclosure of valuable datasets.

Indeed, the OECD’s Open, Useful and Re-usable Data Index, a composite index to monitor OECD members’ efforts to improve data availability, accessibility and re-use, shows that Chile lags behind other peers in open government data implementation. The government of Chile might benefit from efforts to strengthen all three dimensions, with a particular emphasis on data availability and efforts to foster data re-use.

Figure 3.7. 2017 OECD OURdata Index



Note: Data not available for Hungary, Iceland and Luxembourg. Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

Source: OECD (2017b), Government at a Glance 2017, OECD Publishing, Paris, https://doi.org/10.1787/gov_glance-2017-en with data from country responses to the OECD Survey on Open Government Data 3.0 (2017).

Ultimately, the rise of data as a strategic resource calls for governments to go beyond single valuable initiatives and develop comprehensive data policy frameworks that enable and foster the emergence of a data-driven culture in the public sector that supports public value creation. Governments would benefit from governance frameworks for the data value chain that promotes the use, sharing and reuse of government data within the public sector and the disclosure of government data in reusable formats to empower external stakeholders to create value (Ubaldi, 2013^[6]).

The launching of renewed efforts on Open Government Data by the Government of Chile provides an opportunity to ensure that robust frameworks are put in place, important between open government data and broader data governance and management are identified. It would also provide the public sector an opportunity to prioritise data efforts and investments in terms of data capacity (skills, infrastructure, standards) and identification of high-value datasets through improved collaboration with the entire open data ecosystem.

Building capabilities for delivery

As highlighted several times in the course of this report, digital transformation is mostly about making government work differently. Human capital is the fundamental lynchpin of this change. The critical task governments face today is the need to build new capabilities and a culture that supports delivery.

Digitalisation is shaping the future of work, requiring new skills in every sector and industry (Chui, Manyika and Miremadi, 2015^[7]; Manyika and al, 2017^[8]). Government does not escape this fact. In most cases, decades of outsourcing ICT project delivery and maintenance weakened the public sectors' digital capabilities. The digital revolution is only starting and is likely to accelerate. In face of this reality, Chile must put in place structured efforts to reskill, upskill and acquire new talent in order to realise its digital vision.

As this report was being drafted, the Government of Chile was preparing to launch its new Digital Academy, an e-learning platform providing civil servants with online courses on strategic areas for the digital transformation of government, such as service design, data science, cybersecurity, technological trends among other. While this is an important part of upskilling civil servants, these activities, on their own, will likely not have the scope or scale needed to respond to the challenge of the digital age.

It is important for the Government of Chile to clearly differentiate between the skills that it may need to acquire externally, and the capabilities it can build internally with existing staff. ICT project managers can be retrained to identify digital opportunities and use agile or DevOps methodologies instead of waterfall project management relatively easy. However, highly specialised areas, such as data science, machine learning, artificial intelligence or even human-centred design require very specific skillsets, backgrounds and experience that can be difficult to transfer (Bughin, 2018^[9]). Furthermore, skills in these areas are scarce and in high demand, introducing significant challenges to ensuring this foundational contributor to a successful digital transformation programme. Skills in public sector innovation could also help strengthen Chile's digital efforts by promoting positive reform. Skills from OPSI's Core Skills for Public Sector Innovation¹⁰ consist of:

- **Iteration:** incrementally and experimentally developing policies, products and services
- **Data literacy:** ensuring decisions are data-driven and that data isn't an after thought
- **User centricity:** public services should be focussed on solving and servicing user needs
- **Curiosity:** seeking out and trying new ideas or ways of working
- **Storytelling:** explaining change in a way that builds support
- **Insurgency:** challenging the status quo and working with unusual partners

The OECD recently published an assessment of innovation skills in the Chilean public sector which found that current recruitment guidelines and competency frameworks for civil service development insufficiently valued or reflected the growing relevance of collaboration and working horizontally (OECD, 2017^[10]). The review also found insufficient awareness of the importance of these skills, not only for achieving internal co-ordination and whole-of-government approaches, but also for effective service delivery. The experience in OECD countries underlines the importance of empathy and engagement skills with external stakeholders to enable a user-driven culture and public administration. These collaborative skills help senior managers and civil servants better grasp user needs, even if it means challenging common assumptions, by focusing on outcomes and the co-design of solutions and policies with end-users. Moreover, with the growing role of data, data science and machine learning capabilities are becoming critical areas of expertise for drawing insights on public policy and service design and delivery.

As political decision-makers put greater emphasis on the delivery of digital, integrated, data- and user-driven services, the skill gap described above increases the likelihood of

project failures and disappointment. In its 2017 report on Skill for a High Performing Civil Service (2017_[11]), the OECD identified working collaboratively as an issue of critical strategic importance and the public sector skills development strategy should reflect that (see Box 3.3).

Box 3.3. Attracting new talent in government

After the 2011 Healthcare.gov debacle, it became evident that the federal government had to drastically change how it procured and managed IT projects. While public sector wages weren't as competitive in the public sector, the US federal government was able to develop a strategy to attract digital talent from the vibrant tech industry building on tech entrepreneurs' and specialists' interest in having a social impact at a scale that only the federal government could offer.

Indeed, the Obama Administration succeeded in creating a series of programmes that called upon highly skilled software engineers to perform missions of six months to two years to tackle specific problems. These missions were framed as civic duties that would ultimately enhance government performance and its ability to use technology to deliver better services, even if such efforts would be hard to sustain in the long term unless they transformed the practices of career civil servants (Mergel, 2017; OECD, 2018a)

Source: Mergel, I. (2017), Digital Service Teams: Challenges and Recommendations for Government, IBM Center for the Business of Government, Washington, DC, <http://dx.doi.org/10.13140/RG.2.2.27227.57121>; OECD (2018), *Digital Government Review of Morocco: Laying the Foundations for the Digital Transformation of the Public Sector in Morocco*, OECD Digital Government Studies, OECD Publishing, Paris, <https://doi.org/10.1787/9789264298729-en>.

Chile might benefit from considering setting up a digital and data skills development strategy for the public sector to upskill, reskill and quickly attracting the critical talent that it lacks in areas of strategic importance.

To attract new talent, however, the public sector's recruitment frameworks would need to be fit-for-purpose and public sector missions could be leveraged to attract highly talented, impact-driven individuals.

Indeed, recruitment frameworks in the public administration should focus on testing relevant abilities. As Bracken et al. point out, a data scientist or software developer should not be assessed based on their ability write eloquent essays, nor on his or her CV or interview alone (Bracken and al, 2018_[12]; Bracken and Greenway, 2018_[13]). A data scientist should be asked to perform relevant tasks, such as data mining, processing massive amounts of data or setting up data collection techniques for a given service (Bracken and Greenway, 2018_[13]; Bracken and al, 2018_[12]). Evaluation panels should equally be composed by group of technical experts that can provides robust technical appraisal of the skill and knowledge of candidates.

Transforming ICT commissioning to transform the public sector

Digital government development is the result of the development and progressive deployment of new technology systems in the public sector. As such, few areas or levers are as impactful in transforming government operations as the commissioning of ICT goods and services.

Growing citizen expectations, ever expanding technological options, multiple stakeholders and sizeable project budgets are making digitalisation projects more complex with more sophisticated workflows. The World Bank has found that as many as 87% of large public sector ICT projects failed or partially failed (World Bank, 2016_[14]). As such, there is a growing sense of awareness of the need to better tackle the challenges associated with public sector ICT investments and of understanding numerous variables that impact the effective realisation of benefits in digitalisation projects.

New technological options do not only bring about new opportunities, they also open up new questions. For instance, through the aggregation of demand, economies of scale and the power of networks, *Cloud computing*¹¹ helps businesses and public institutions access infrastructure, platforms, software and other services at a fraction of the cost. However, successful adoption of cloud computing can only take place with careful consideration of data governance and ownership arrangements, exit clauses and ease of supplier change.

Furthermore, these new decision-making elements have made cost-benefit analysis much less straightforward. Shorter lifecycles in technology may often imply shorter timeframes for benefit realisation, thus affecting cost-benefit calculations. In addition to financial criteria, new cost-benefit analysis must incorporate considerations such as security, privacy and data sovereignty as well as the benefits of data sharing and collaborative work in order to accommodate a use of technology that effectively supports delivery. Most importantly, cost-benefit analysis should not only focus on financial benefits for the public sector, but appropriately weight the benefits for end-users, such as cost and time savings or improved accessibility (Government Digital Service, 2018_[15]).

Digital technologies have also enabled the public sector to explore new investment and resource sharing arrangements that were out of the realm of the possible prior to this new technological revolution. The commissioning of ICT reveals itself as a powerful policy lever for driving coherence, interoperability, resource sharing and overall co-ordination of digital government implementation. The digital transformation increasingly calls for a comprehensive and holistic approach to public sector commissioning of ICTs to foster openness, user-driven approaches, efficiency and digital integration of the public sector.

ICT investments can be a driver of the strategic transformation of public sector workflows and business operations. The following subsections will assess different dimensions of ICT commissioning can contribute to a policy mix that enables Chile to that translate the high level strategic objectives of digital government into concrete operational changes in how the procurement of technology is done in the public sector.

Strategies for ICT procurement

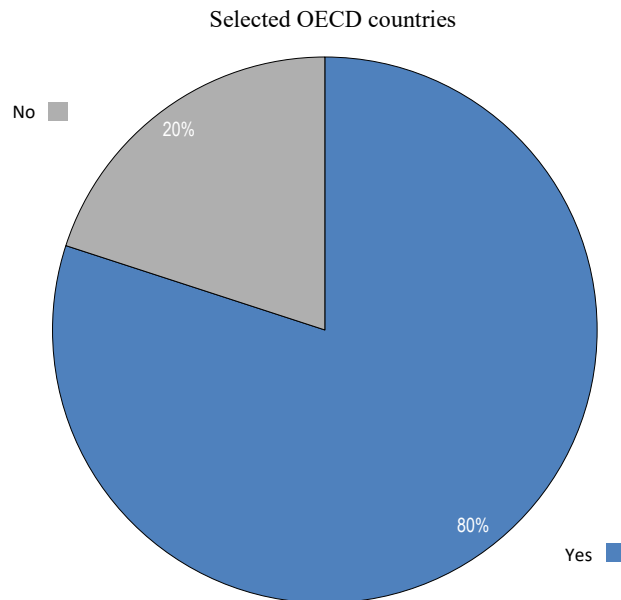
Only half (50%) of OECD member countries have in place a strategy covering ICT procurement specifically. Among the countries selected for this benchmarking, however, that share goes up to 80%. Chile has been progressively formulating its approach for the commissioning of ICT in the public sector. The country's public procurement authority, ChileCompra, in collaboration with the DGD of MINSEGPRES has issued a directive that provides guidance for public institutions to effectively manage issues such as the formulation of technical requirements, the risk of vendor lock-in, threats of information security, risks related to the continuity of public services, as well as threats against free competition (ChileCompra, 2015_[16]).

In addition, ChileCompra has developed a digital marketplace with framework agreements, which aims to simplify the process of ICT acquisition. Currently, to these agreements allow

the Chilean Administration to procure hardware and software, data centres and related services.

Moreover, the DGD will play a growing role in the transformation of ICT procurement. Through its consulting activities, the development of tailored solutions and the development and operations of shared ICT services, DGD will be increasingly able to influence public sector ICT commissioning and acquisitions.

Figure 3.8. Does your country have a strategy or policy specifically covering ICT procurement?



Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

Some of the current challenges faced by Chilean public authorities in the implementation of ICT projects in the public sector include the scarcity of the skills required to manage ICT projects for agile delivery, insufficient guidelines on the procurement of ICTs and insufficient user engagement and research in the formulation of ICT projects and structuring of provider contracts (OECD, 2017^[17]). The legal and regulatory framework for public procurement and weak inter-institutional co-ordination are also perceived to be outstanding obstacles for effective ICT project implementation (OECD, 2017^[17]). Finally, another important challenge that ICT project managers must overcome is the persistent view of the government technology sector as a support function, and not a core strategic element of organisational delivery, thus underestimating its impact and role in government transformation. Insufficient awareness about the potential of technology ultimately leads to insufficient resources and slow change in norms and practices.

Structure contracts that respond to user needs

A user-driven administration must ensure that government effort and investment starts from an understanding of user needs. If the administration does not understand users' needs, there's a good chance that it will not deliver the right things. Historically, procurement-led approaches have failed to develop a deep understanding of what users need and therefore

how digital, data and technology products or services can best be deployed and, as a consequence, do not deliver strategic, efficient or effective results. Procurement-led initiatives can also lead to a closed shop of a relatively small number of generally larger suppliers with long-term contracts meaning smaller suppliers are locked out of doing business with the public sector, possibly for several years (OECD, 2017^[18]).

To be meaningful, the transformation of ICT commissioning and technology deployment will be driven by users and based on a thorough understanding of the problems to be solved. This requires the adoption of a wide variety of user research methods, including quantitative, qualitative, online and offline methods that can subsequently inform the choice and/or development of the solution.

Chile has carried out important work in terms of modernising ICT project governance and management. It has developed a new ICT project governance mechanism that substantially improves the project and budget approval process. The *Sistema para la Evaluación Técnica de Proyectos TIC* (ICT Project Technical Evaluation System), the new ICT project governance framework, makes the ICT project development, iteration and approval more efficient. Most significantly, it enhances the government's ability to gather and structure project data, supporting the development of an ICT Project Bank. This is of great relevance, as the ICT project data will help the government identify the drivers of project failure or success, on progressively improve ICT project management.

Despite these efforts, there is still need for increasingly embed user needs into project formulation, management and delivery. User-driven approaches to procurement necessitate a fundamental shift in the public sector ICT status quo. ICT procurement has traditionally been more focused on the administrative needs of a public institution, hoping to anticipate users' preferences. New forms of technology deployment however demand of institutions that they design procurement processes and contracts to meet users' needs and preferences (OECD, 2017^[18]).

One of the main challenges in public sector ICT acquisition is that it has too often been dealt with as any other goods and services. ICT projects have often required all functions and characteristics to be determined in advance and described upfront. The project is then planned for in subsequent steps or stages. In this style of project management, known as "waterfall development", one step must be completed before moving to the next stage, not allowing for back-and-forth or experimentation that helps refine delivery to solve the client's problem and meet their expectations. This is particularly challenging in technology and software development, as no matter how thorough the description of desired functionalities, it is virtually impossible to determine in advance all of the elements that will come into play as the software is being developed (Mergel, 2017^[19]).

"Agile development", on the contrary, focuses on the final outcome and not the process, and works on prototyping, testing and iteration to deliver results. By introducing flexibility into the process, agile development gives the developer the room required to meet the user's expectation.

Agile development and iterative processes have long been used in the private sector, but adoption in the public sector has been slower, often attributed to the rigidity of public procurement legal frameworks. However, transforming government through ICT procurement is not only a legal challenge, but a cultural one (Mergel, 2017^[19]).

Box 3.4. OECD ICT Procurement Reform Playbook

Since 2016, the Thematic Group on ICT Procurement Reform of the OECD's Working Party of Senior Digital Government Officials has been developing a playbook that will help governments address the most pressing challenges of ICT commissioning today. Drawing on the experiences of Australia, Canada, Chile, New Zealand and the United Kingdom. The playbook encourages governments to adjust procurement frameworks in ways that foster competition, open opportunities for small, innovative providers and adopt solutions that meet users' needs. The plays identified include:

1. Set the context: don't constrain procurements by specifying **how** the problem should be solved, describe the **problem** to be solved.
2. Start with users' needs: Embed user-centred, design-led and data-driven approaches in procurement.
3. Design procurements and contracts that meet users' needs: Start by understanding user needs (user research), start talking to buyer and supplier communities as soon as you're able to describe users and their needs. Iterate procurement and contract design as frequently as possible.
4. Be agile, iterative and incremental: Focus on outcomes, not process; Take a minimum viable project approach using pilots and proof of concepts; ensure project governance is agile; establish dialogue with suppliers where they can provide feedback about the process.
5. Work as a multidisciplinary team: Bring together procurement and commercial capability along with user-centred design and agile delivery capability from the offset.
6. Make things open: use an open marketplace model and adopt open standard, open source and open approaches to maximise synergies and foster efficiency, competition and innovation.
7. Build trusting and collaborative relationships internally and externally.
8. Share what you have with others and reuse what others have: Use contractual provisions that enable and encourage agencies to share and re-use code on common platforms. Encourage the sharing of good practices.
9. Move away from specifying to regulating: Do not focus on specifying ICT performance but on defining outcomes and regulating of markets to unleash competition and innovation. Move to as a service consumption from ownership, to operating expense rather than capital.
10. Public procurement for public good: Increase awareness of the public value of procurement; automate certain procurement processes; consider using procurement to create demand for products or services that help advance innovation; do business with companies that reflect government values and priorities; embed requirements in deliverables or expected social outcomes.
11. Operate: While a focus on business outcomes is good, unless that focus is carried forward into the real work between the vendors/suppliers and the contracting agency/department, expected outcomes will not be achieved.

Source: OECD (2018) A Playbook for ICT Procurement Reform, *Forthcoming*.

The experience shows, however, that most countries have been able to find ways of working in agile ways within existing procurement rules or with slight adjustments to the existing framework (OECD, 2017^[18]). The **United States**, for instance, has taken important steps in modernising contracts and procurement regulations to enable new ways of working and deploying technology in support of strategic objectives. For instance, **18F**, an innovative digital transformation team at the **U.S. General Services Administration**, has developed templates for agile blanket purchase agreements (BPAs). These new contracts and service agreement templates are compatible with agile software development approaches. BPAs are a form of performance and challenge-based procurement that requires participating firms to prepare a prototype in an open GitHub¹² repository open for everybody to see. This approach allows the contractor to appreciate what competing firms are actually able to deliver. The BPAs can foresee agile development sprints and iterations, allowing both the contractor and the service provider to progressively define software requirements and functionalities as the projects advances.

As in most OECD countries, these new approaches have not yet been embedded in the Chilean public administration and present an outstanding opportunity in transforming government activities to make it more consistent with its digital government strategy.

Box 3.5. U.S. Digital Service Playbook

Government ICT projects often fail. The Federal Government of the United States, through the U.S. Digital Service, has put in place a set of 13 plays known for digital service development as the Digital Service Playbook aimed at supporting public sector digital teams. The high level criteria are listed below and more detailed information can be found using the link in the source.

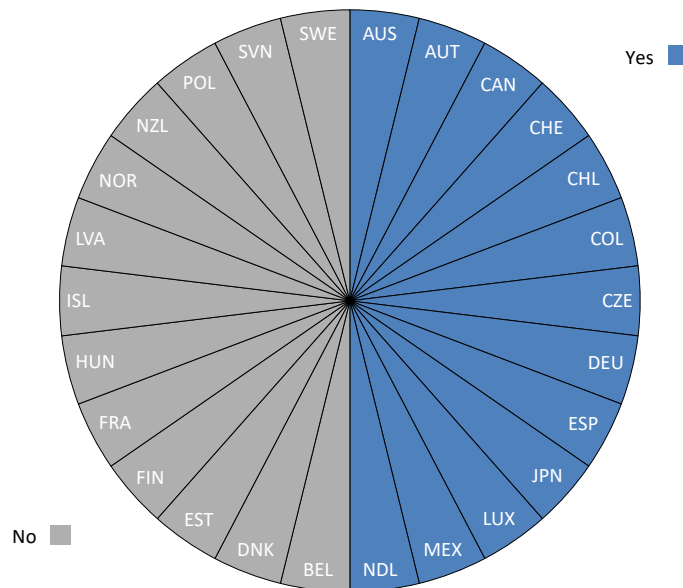
1. Understand what people need
2. Address the whole experience, from start to finish
3. Make it simple and intuitive
4. Build the service using agile and iterative practices
5. Structure budgets and contracts to support delivery
6. Assign one leader and keep that person accountable
7. Bring in experienced teams
8. Choose a modern technology stack
9. Deploy in a flexible hosting environment
10. Automate testing and deployments
11. Manage security and privacy through reusable processes
12. Use data to drive decisions
13. Default to open

Source: <https://playbook.cio.gov/>

Procuring technology based on existing assets

The OECD Recommendation of the Council on Digital Government Strategies calls on governments to procure digital technologies based on an assessment of existing assets (OECD, 2014_[20]). However, OECD member states generally lack a sufficiently comprehensive view of their digital, ICT and data assets and their respective lifecycle. According to the OECD Digital Government Performance Survey (OECD, 2014_[21]), only 50% of member and partner countries that responded to the survey have a central, searchable repository to store all ICT contracts and 18.5% has a database of previous ICT supplier performance to inform procurement decisions.

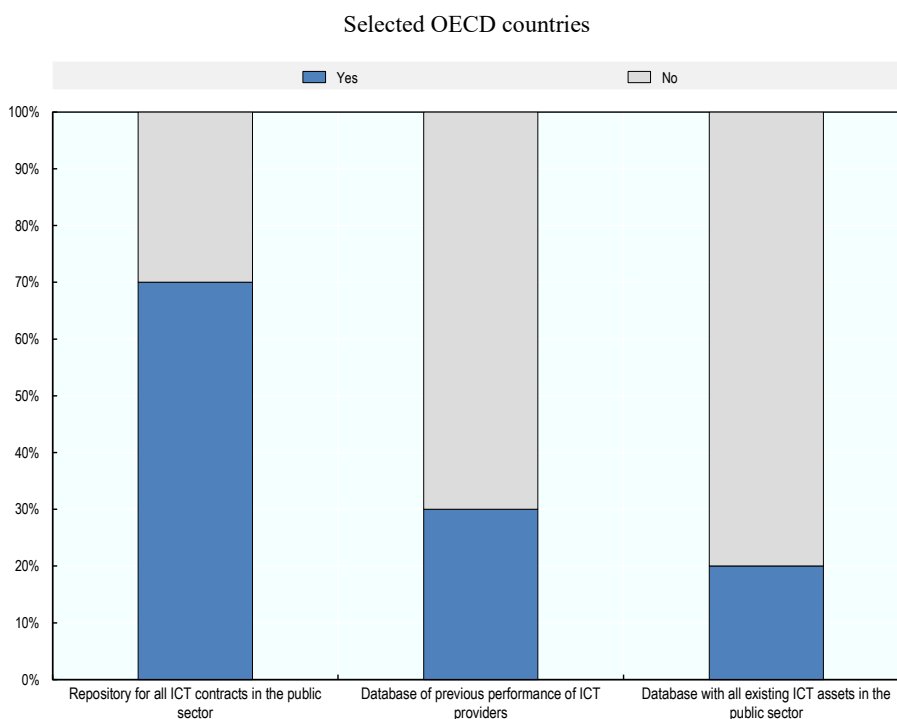
Figure 3.9. Does your country have a central, searchable repository to store ICT contract in government?



Source: OECD Survey on Digital Government Performance (OECD, 2014_[21])

The scarce visibility of government assets and procurement activities prevents OECD members from developing a more robust and detailed strategic approach to ICT procurement.

The selected countries for this benchmarking performs slightly better than the OECD average. A total 66.7% of them have a searchable repository for ICT contracts, 33.33% tracks previous ICT provider performance and 22.22% report having a database with all ICT assets in the public sector. By comparison, Chile has in place a repository of ICT contracts that is searchable by all citizens. However, Chile is also in the group of OECD members that lack a database of ICT assets in the public sector or of previous supplier performance available to public institutions, preventing it from making data-driven analysis that supports strategic decision in ICT procurement.

Figure 3.10. Tools available to support procurement based on existing assets

Note: Data from Colombia, Denmark, Estonia, Norway, Mexico, The Netherlands, New Zealand, Spain, Sweden and Switzerland

Source: Survey on Digital Government Strategies (2017); Digital Government Survey of Norway (2017)

Developing a successful approach to the adoption of shared platforms

The reorganisation of DGD into four core services includes a focus on a function to facilitate the development and support of shared platforms following the Government as a Platform model. It is important that the need for additional capacity has been recognised and such an initiative could prove incredibly powerful in supporting delivery across the Chilean government to avoid duplication of effort.

The success of these efforts will be seen in the level of adoption they achieve. One approach to ensuring this is to seek a mandate and enforce adoption. This has the advantage of removing any discussion about whether or not a shared resource could, or should, be used and helps maximise forecasted benefits. However, the simplicity of a mandate does not remove the need for shared platforms and enablers to reflect the same focus of responding to needs as any public facing activities. Therefore, alongside the technical capabilities to deliver high quality platforms, Chile would benefit from considering the role of engagement and account management for their ‘customers’ elsewhere in government. Such roles will complement product level user research by helping DGD understand any barriers to adoption.

Chile should consider approached these shared platforms with a product mind-set that starts from the premise of meeting needs well. If enablers and platforms are to be successful then they need to make things as easy as possible to start using in order that less effort is required to implement a solution or persuade a team to adopt. Critical to this success is allowing delivery teams to be able to make use of a shared resource as quickly and easily as possible.

To support this it would be beneficial for DGD to showcase what is available as a shared resource, their attendant benefits and the level of support available to aid their implementation and adoption. This ‘catalogue’ not only demonstrates what a team can begin to use but helps to standardise the way in which the product’s value proposition is described and how technical documentation is surfaced to colleagues across government as well as building confidence in this ‘Government as a Platform’ approach.

Openness as a source of transformation for ICT commissioning

The digital transformation of the public sector aims to bring a radical change in how government operates and how policies and services are designed, by shifting the centre of gravity from the government to the citizen (and/or service users). This change will enable the user to drive decisions about the content, goals, supply and ecosystem of public services as well as the policies, processes, business models and infrastructure that underpin them (OECD, Forthcoming^[22]). The transformation aims to re-engineer the government machinery around citizens’ demands and aspirations, thus making it more inclusive.

As such, digital government policy-making has turned to openness as a way to enhance government performance, deliver on citizen expectations, and secure trust. This search has led a number of OECD countries to adopt new tools to ensure services better reflect users’ needs and preferences. Among them open standards¹³ play a significant role, particularly in the transformation of ICT procurement. Open standards are developed in a fair, transparent and collaborative way, with a broad consensus from specialists and industry, enabling the public sector to move away from captures by software suppliers (i.e. vendor lock-in) while gaining market support, enabling greater competition and containing costs. In addition, open standards support software flexibility and continuous evolution based on changing user needs (Mergel, 2017^[19]).

The use of open source software and collaborative coding has also come to support greater performance of digital government. Indeed, open and collaborative coding endows public administrations with the ability to leverage the developer community in the continuous improvement of its solutions, thus proving to be a powerful tool to increase procurement’s efficiency. Most importantly it provides a space for collaboration by creating the opportunity to reuse solutions, to collectively improve by learning from each other, and to share solutions, knowledge and wisdom. For instance, 18F in the **United States**, has established the practice of developing in open source and in the open using GitHub as a way to collaborate with the external software developer community and to facilitate the reuse of its solutions by other parts of the American public administration, either at the Federal or State level.

Furthermore, the adoption of open standards and open source software has made international co-operation between governments on ICT development and deployment possible. **Chile** has been leading the way in this regard. The platform SIMPLE (*Sistema de Implementación de Procesos Ligeramente Estadarizados* – System of Implementation of Lightly Standardised Processes) developed by Chile’s MINSEGPRES proved to be quite the international success. The open source system allows institutions to map a procedure and to digitalise it. This award-winning solution has helped build the capabilities of public institutions at both the central and local level. Its simplicity and usefulness led other countries in the region, such as Paraguay and Uruguay, to adopt it as well.

This approach is in tune with international trends. For instance, **Australia** re-used the code of the **United Kingdom’s** digital marketplace, which is an open source solution. Today, both countries are benefitting from a sophisticated digital marketplace that exponentially

simplifies the procurement process for the administration and makes it more efficient. The UK's marketplace is designed to host multiple procurement frameworks that give government buyers access to better pricing and more suppliers of cloud based services, skills and delivery (see Box 3.6).

The restructuring of Chile's DGD, its new mandate and increased capability provides a great opportunity to revitalise the country's public software (*Software Público*) initiative. The public software initiative sought to develop open source applications that could be re-used and tailored by different parts of the Chilean public sector, however its adoption and the number of solutions available remain relatively limited. The use of open standards and open source solutions by the DGD, making solutions publicly available through the softwarepublico.gob.cl website can help Chile accelerate and strengthen the quality of public sector digitalisation relatively quickly. This initiative has clear synergies with the growing use of GitHub and GitLab by the DGD as means of collaborative development.

It seems that a key area of opportunity is to provide support to the digitalisation of municipalities which often lack resources and technical capabilities to invest important resources on digitalisation. Municipalities are an important component of the digital ecosystem of citizens and businesses, and because of their responsibility for similar services can benefit from sharing and reusing existing solutions made available through open source or shared ICT services.

Box 3.6. The United Kingdom's Digital Marketplace

The **United Kingdom** has been developing ways of reframing its existing approaches to contracting and supplier relationships, in particular in access to cloud-based services and the skills and capabilities required for digital transformation.

Two units within the Cabinet Office, the Government Digital Service and the Crown Commercial Service have worked together to redesign procurement frameworks (G-Cloud and Digital Outcomes and Specialists) to simplify the process by which suppliers need to apply, and improve the quality of resource available to government buyers. These interactions are handled through the government's Digital Marketplace.

The Digital Marketplace provides government buyers with access to framework agreements with suppliers from which public sector organisations can buy without running a tender or competitive procurement process.

For the G-Cloud framework the services include the following:

Infrastructure as a service (IaaS) – provisioning of fundamental computing services (processing, storage etc.) for the user to run arbitrary software

Platform as a service (PaaS) – provisioning of platform services to enable a user to deploy user-built or acquired applications

Software as a service (SaaS) – provisioning of the provider's application as a cloud service

SCS – Specialist Cloud Services – typically consultancy in the cloud domain

The Digital Marketplace frameworks are refreshed every 6 months to ensure public institutions have access to the latest innovations available whether from large, established suppliers or new, SMEs entering the market for the first time.

Furthermore, the Digital Marketplace also allows public institutions to access suppliers who can help them design, build and deliver digital products using an agile approach through the Digital Outcomes and Specialists (DOS) dynamic framework. To be part of the DOS supplier list, suppliers must provide either outcomes based services (covering user experience and design, performance analysis and data, security, service delivery, service development, support and operations, testing and auditing or user research) or provide individual capabilities in one of those areas.

The Digital Marketplace has seen sustained growth in transactions and enjoys wide participation of small and medium businesses, which make up the majority of suppliers in the marketplace.

Source: <https://www.gov.uk/government/collections/digital-marketplace-buyers-and-suppliers-information>

Finally, another crucial aspect in which openness is being used to reform public procurement and commissioning is the use of open contracting data. Chile is already moving towards such an approach by implementing the Open Contracting Data Standard which is a standard that supports the opening of data related to public procurement (its process, delivery and evaluation). In this way, the public sector is making possible the internal or external reuse of this data to identify patterns and drivers of success in project development. In the right ecosystem, open contracting data can help drive public procurement performance by helping stakeholders identify and act upon patterns and inefficiencies.

Box 3.7. Contracting 5 (C5)

Using technology to make public procurement and contracting more transparent

The Governments of Colombia, France, Mexico, the United Kingdom, and Ukraine created the ‘Contracting 5 (C5) Initiative, therefore committing to ensure country-level learning on the implementation of open contracting data as well as international knowledge-sharing to support other countries in the implementation of open contracting, open data and open source tools. The C5 countries held an inaugural meeting and issued the C5 Declaration at the Open Government Partnership Summit held in Paris in December 2016. Through the ‘C5’, these countries have committed to:

- **Implement the OCDS** to the fullest extent possible to create a timely, accessible public record for government, business and citizens on how public money is spent across the entire cycle of public contracting from planning to tender to award to implementation of contracts.
- **Foster innovation** through supporting an ecosystem of open source, re-usable and shareable tools to improve communication, analysis, data quality and automation of public contracting information.
- **Contribute to the further development and use of the OCDS** through case studies and analysis of user needs, encouraging extensions and joined up data including with corporate registries, joining and encouraging its user community and contributing to its further adoption.

- Document the **lessons learned**, and *measure* the real-world benefits for government, business, and citizens from the adoption and implementation of open contracting for sharing, learning, and improvement.
- **Focus collectively on key user needs and building capacities for opening up, manage and share public contracting information** - such as improving value for money, creating a fair and level playing field for businesses, tracking and improving service delivery and upholding public integrity and deterring fraud and corruption - to shape, share and adopt a common methodology for building capacities and measuring impacts from our interventions to refine and share such methodologies globally.
- Consider, refine and adopt best practices to **engage business and civic organisations** at appropriate points along the entire chain of procurement and to share our approaches, strategies and lessons from C5 countries' efforts to make public contracting more engaging and responsive.
- **Engage other countries** in order to adhere to C5's objectives, including through the International Open Data Charter, Open Government Partnership, the OECD, the G20, multilateral development banks, and other relevant international or sector specific initiatives such as the Construction Sector Transparency Initiative, the Extractive Industry Transparency Initiative and encourage those countries to embrace and implement open contracting principles.
- **Engage international development partners and institutions** in furthering these objectives nationally and internationally including in priority sectors such as infrastructure and healthcare.

Developing a robust business case for ICT projects

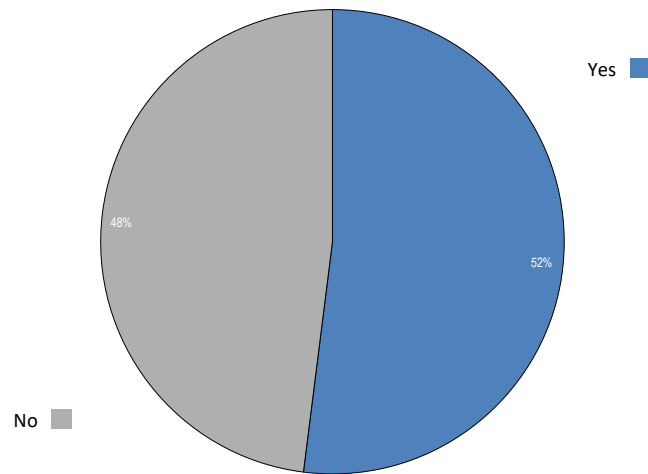
According to principle 9 of the *OECD Recommendation of the Council on Digital Government Strategies* (OECD, 2014^[20]) the development and common use of a clear business case methodology across the administration is a crucial element of tackling ICT project failures. ICT business cases solidify government decision-making when it comes to carrying out a project and lay out key variables for its effective management (OECD, 2018^[23]). Indeed, ICT business cases are the basis of ICT investments as they formulate projects and their rationale, they also ensure the strategic alignment of the initiative, and provide a detailed assessment of their risks and benefits. They clarify the linkages between the investment proposed and the governments' broader strategic objectives. As such, business cases are built upon an understanding of a problem, of organisational strategic and operational objectives, and a theory of change to which the project contributes.

By laying out the expected costs and benefits of a given project, business cases can also strengthen accountability for failed ICT projects. For instance, in **Denmark**, agencies responsible for the implementation of large ICT projects must report biannually on progress made. For large ICT projects, these reports continue to take place up to two years after the implementation was completed to follow up on the achieved benefits. These progress reports, including key performance indicators, are public and made available on line. ICT projects that incur mild delays require that the Secretary General of the public agency report directly to the National Council for IT Projects, explaining the reasons for not meeting the original objectives. In cases of important delays, ministers or heads of agencies are called upon to report to the National Council.

As the Danish example suggests, by establishing the key objectives and the expected benefits of a project, the business case becomes a governance instrument. It allows the public administration to monitor benefit realisation, to identify the key drivers of failure and success or to adopt corrective measures in the course of the implementation of the project. As mentioned above, the business case can become an invaluable source of data for the public sector as it progressively improves its ICT project performance in line with the overall objective of achieving the digital transformation.

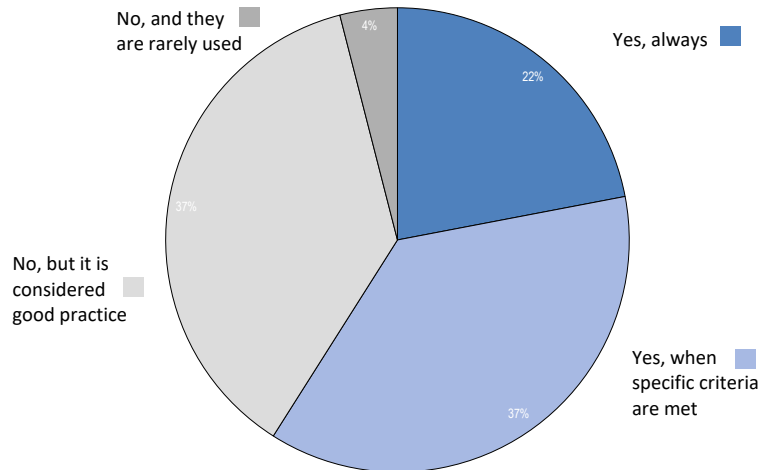
The OECD Digital Government Performance Survey (OECD, 2014_[21]) shows that adoption of business cases or similar value proposition assessments for ICT projects is not yet generalised. The survey indicates that 52% of OECD members had standardised business case models for ICT projects. In addition, 57% of respondents had mandatory business cases to support decisions on the development of ICT projects.

Figure 3.11. Is there a standardised business case model for ICT projects?



Source: OECD Survey on Digital Government Performance (OECD, 2014_[21])

Figure 3.12. Is the use of that business case model mandatory?



Source: OECD Survey on Digital Government Performance (OECD, 2014_[21])

While Chile has yet to develop a full business case methodology for ICT projects, it has made important improvements in enhancing the assessment of the value proposition of large ICT projects. The abovementioned ICT Project Technical Evaluation System established a process for ICT projects to be approved based on an assessment of total public value and a more complete consideration of its costs (total cost of ownership is considered for the latter). The methodology is applied to all ministries to ensure more robust project planning and structuring to improve investment decisions. In 2019, 554 projects were assessed for a total amount of USD 216 million. This initiative was led by the Ministry of Finance in collaboration with MINSEGPRES.

Specifically, this methodology will grant the budget authority in the Ministry of Finance with the power to approve (with or without observations), reject or request an iteration of the project. The assessment criteria will include:

- The clear identification of the project
- A clear solution to the problem or an opportunity being seized
- The consideration of alternative solutions
- Is it the best technological solution available?
- The thorough analysis and detail of the budget
- Relation between the budget and the expected benefits
- The clear identification of the expected benefits

These criteria provide a robust basis for ICT investment decision-making and can be expected to improve the project formulation process. A number of variables, however, may risk not being adequately considered if they are not explicitly included in this list:

- *Identification of stakeholders and impacts across the administration:* It might be beneficial to identify in advance all the stakeholders concerned and/or impacted by the project and try to determine how they may be impacted by the solutions.
- *Alignment of the project:* with the strategic and normative frameworks of the public sector (i.e. priorities expressed in digital government and modernisation strategies, digital government regulations and standards)
- *Commissioning strategy:* description of the method chosen, allocation of risk between the parties and its rationale and benefits compared to other approaches.
- *Product iteration:* when applicable (i.e. software development or similar project), enough room for testing and iteration of the solution should be secured. Improvements based on user feedback and testing should be required.
- *Risk assessment and management:* Governance and organisational risks, technological risks, implementation risks and risk management strategy.

However, it is important that any business case methodology is enforced and allows for use alongside agile development practices in responding to the iterative evolution of a project such that the document does not become a bureaucratic hurdle and remains a dynamic and useful management tool throughout the process (OECD, 2018 ^[19]).

Box 3.8. New Zealand's Better Business Cases (BBC)

Better Business Cases (BBC) is a systematic way to prepare business cases for programmes or projects that will provide information required to invest with confidence. In recent years, the Treasury has put significant effort into growing the capability of the New Zealand public sector to develop strong and effective business cases for investment projects and programmes. This has included developing and delivering a BBC training, certification and review programme that is now considered global best practice.

Use of the BBC guidance is required for all New Zealand State sector agencies seeking Cabinet decisions on capital proposals. The New Zealand's Government's expectations were set out in Cabinet Circular CO (15) 5. The New Zealand version of the guidance is based on the UK version, with the consent of the International BBC Steering Committee.

Cabinet Circular CO (15) 5 and the Guidance for Monitoring Major Projects set out:

- how significant projects are to be identified through the government project portfolio and risk profile assessment processes, and
- how significant projects are monitored by the Treasury and other agencies.

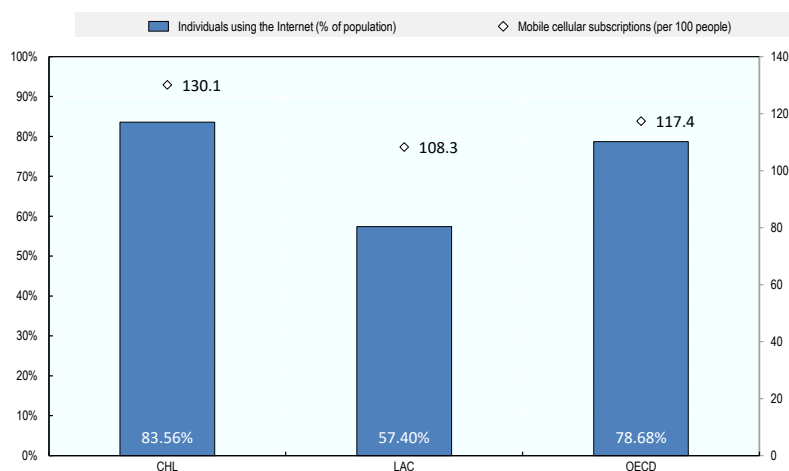
The Treasury may identify projects as significant through analysis of other data sources, such as four-year plans, long-term investment plans, the capital budget process, or via the GETS (Government Electronic Tenders) system. Projects that are identified as significant and requiring monitoring will typically meet any one or more of the following conditions:

- are assessed as high risk using the Risk Profile Assessment (RPA) tool – this is the primary means of identifying projects that require monitoring. There may also be special circumstances where it is agreed that a project with a medium risk profile will be subject to major projects monitoring
- have estimated whole-of-life-costs (WOLC) of \$25 million or more, or
- are nominated for monitoring by the responsible Minister.

Source: OECD (2015) Digital Government Toolkit, <http://www.oecd.org/gov/new-zealand-business-case.pdf>

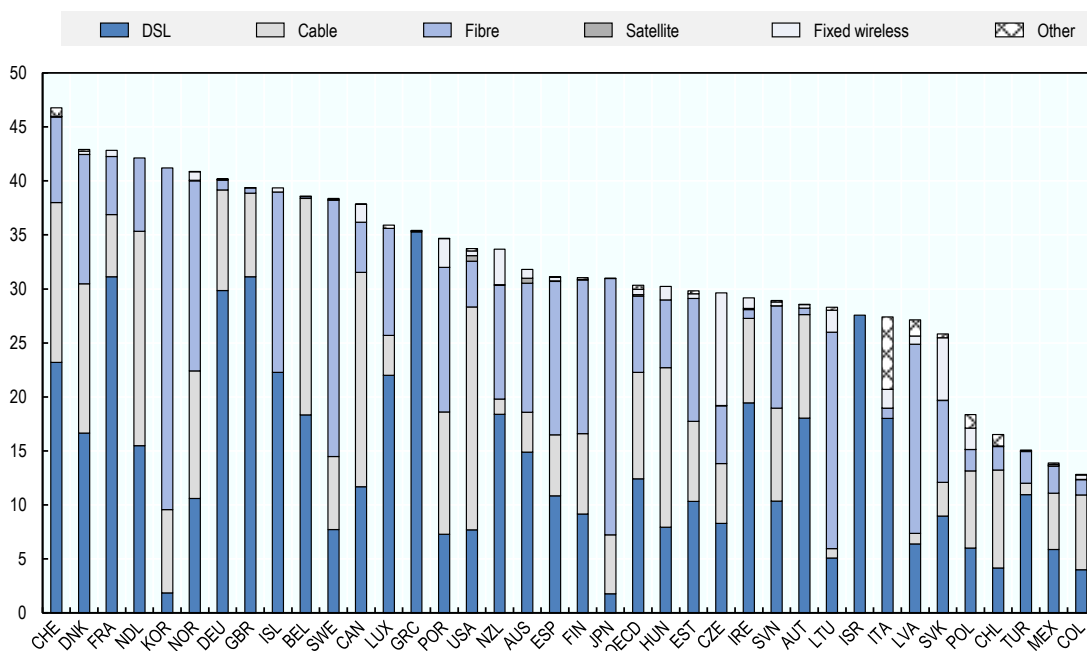
Digital inclusion

Connectivity and access to information and communications technology in Chile performs satisfactorily in comparative terms. It stands above the LAC and OECD averages in terms of share of the population using the internet and mobile subscriptions per 100 people. Given the diverse and complex geographic reality of the country this represents an outstanding feat and provides a robust basis for the development of digital government. However, what this data seems to suggest is that there is a gap in terms of the population that has access to the internet and the number of individuals who choose to transact with the public sector digitally. Chile's National Survey of Socioeconomic Characterisation (*Encuesta de Caracterización Socioeconómica Nacional – CASEN*) finds that 30.8% of the population used the internet to complete a government procedure over the last year (MIDESO, 2017_[24]). This suggests that more can be done to ensure there are returns on the digitalisation investments and efforts made by the Chilean public administration.

Figure 3.13. Proportion of internet users and mobile subscriptions, 2016

Source: World Bank (2016) World Development Indicators, <https://datacatalog.worldbank.org/dataset/world-development-indicators>

Notwithstanding the levels of connectivity achieved, the Government of Chile has made an important push to continue to expand and modernise digital infrastructure, laying the foundations for the digital transformation of the economy and society. This is sensible, especially in consideration of the fact that Chile currently lags behind peer countries in terms of broadband penetration (see Figure 3.14), which hinders the country's ability to effectively use and deploy sophisticated digital services.

Figure 3.14. OECD fixed broadband subscriptions per 100 inhabitants, by technology, December 2017

Notes: Canada: Fixed wireless includes Satellite.

France: Cable includes VDSL2 THD.

Germany: Cable includes HFC lines; Fibre includes fibre lines provided by cable operators; Fixed wireless includes BWA subscribers; Other includes leased lines.

Israel: Temporary OECD estimates.

Italy: Terrestrial fixed wireless data includes WiMax lines; Other includes vDSL services.

Switzerland and United States: Data for December 2017 are estimates.

Information on data for Israel: <http://oe.cd/israel-disclaimer>

Source: OECD, Broadband Portal, www.oecd.org/sti/broadband/oecdbroadbandportal.htm

Another crucial part of digital inclusion is the development of digital skills. As it has been mentioned before in this report, the pace of technological change can be expected to accelerate. Ensuring the Chilean population has access to the required skills is fundamental to ensure the country is prepared for the transformations ahead. The *Digital Agenda 2020* put an important focus on the upcoming generation, taking measures to improve digital capabilities of teachers and students in schools. However, changes in the economy are bound to rapidly change the skills in demand in the labour market. As such, the country might benefit from a comprehensive plan to promote continuous upskilling and reskilling of workers to help them develop the digital skills they need in a rapidly changing economy.

Another important point in Chile's digital government agenda is encouraging use and adoption of digital government services. Despite the Government's efforts to digitalise public services, usage remains relatively low in the country. The Government of Chile is looking for ways of ensuring more inclusive digital service delivery for example, through the provision of self-service kiosks at *ChileAtiende* locations where people can access 15 procedures with the support of an agent. In the 2018 pilot phase, 220 000 transactions were carried out in 39 locations with the plan being to reach 105 in 2019.

The first thing on the to-do list is to make the usage of government services easy. The digital transformation of government must consider the accessibility of the service for populations with special needs. In addition to this, digital service transformation has three essential elements that will help determine its success (Deloitte, 2017^[25]):

- **End-to-end user experience** benefits from a standardised, seamless and easy to understand experience.
- **Government-wide identity management** facilitates the user's interactions with government by bringing down complexity and, if responsibly implemented, facilitating data management. This also allows governments to have an integrated view of the user, enabling public authorities to deliver more tailored services.
- **Government-wide data management** would bring things a long way in simplifying procedures and improving public service performance.

The elements listed above would considerably improve the appeal of dealing with the public administration digitally, rather than losing time and money to complete a procedure through alternative channels.

Users can also be nudged to use digital channels. For instance, a thoughtfully designed communications campaign highlighting the time and money savings of digital services over in-person transactions can help drive use. An additional way of incentivising use is to provide promotional offers where services are marginally cheaper through digital channels. Temporary deductions in the cost of services would not only help drive the use of digital channels, but allow the user to get familiar with digital transactions and the digital government environment, making it more likely for the user to use the same channel next time around.

Digital strategy and public sector innovation for improved public service delivery: what relations between the two agendas?

Public sector innovation is to a large extent an emerging sector. Most OECD countries do not have a national public sector innovation strategy. Even within the selected countries for the benchmark, only 40% have in place a national public sector innovation strategy or policy. Public sector innovation, to this day, works mostly through *ad-hoc* structures and initiatives.

As such, situations between benchmarked countries vary greatly. **Colombia**, for instance, has a Centre for Digital Public Innovation that is attached to the Ministry of Information and Communication Technology, governing body for digital government in the country. The Centre works however with a high degree of autonomy. It serves as a catalyser, nurturing the ecosystem of digital public innovation in the country (not limited to public institutions) through the organisation of innovation related events and workshops, as well as the sharing of good practices.

Collaboration between the Colombian Direction of Digital Government and the Centre for Digital Public Innovation has taken three shapes so far:

1. Collaboration with the elaboration of the Online Government Manual (*Manual de Gobierno en Línea*)
2. Collaboration in the hosting of events and capacity-building workshops
3. Participation of the Centre for Digital Public Innovation at consultative bodies

In **Denmark**, a Ministry of Public Sector Innovation was created within the Ministry of Finance, and it is responsible for the Centre of Public Sector Innovation, the Danish Digitisation Agency (Government CIO), the Agency for Government IT Services (Shared ICT Services) and the Agency for Government Administration (government efficiency in payrolls, finance and accounting), all of the autonomous dependencies of the Ministry. The Danish Centre of Public Sector innovation was established in 2014 and plays the role of developing and sharing knowledge about the public sector innovation process, creating partnerships with external stakeholders and creating and managing networks of public innovators within and outside of the public sector. It has developed useful methods to spread and assess innovation in the public sector.

The Danish Agency for Digitisation, on the other hand, has the responsibility for developing and implementing digital government across the public sector, including some very disruptive policies such as digital by default approaches in government administration. Co-ordination between digital government and public sector innovation occurs through the umbrella of the Ministry for Public Sector Innovation and a clear, very distinctive mandates

Mexico has an innovation agency in place (PRODEINN) overseen by the Ministry of Economy. This agency focuses however on innovation in the productive or private sector as a means to achieve greater wealth generation in the country. Innovation within the public sector falls within the National Digital Strategy, under the section “Innovative and Modern Government” which has been implemented by the Digital Government Unit within the Ministry of Public Administration. Switzerland reports a similar case, where they do not have a separate public sector innovation strategy, but that a chapter on innovation can be found within their strategy and activities.

In the case of **Sweden**, a national innovation strategy exists with a chapter on public sector innovation. These efforts are led by VINNOVA, the Swedish Innovation Agency. As part

of its mandate, VINNOVA finances innovation initiatives and works to further create bridges between innovation actors from the private, public and civic sectors. VINNOVA mainly funds private actors, and they can fund public sector initiatives but not their priority.

Chile does not differ very much from the case of Sweden. The *Laboratorio de Gobierno* was created as a government innovation unit that explores and tests new solutions for outstanding policy problems and as an institution responsible for fostering innovation in the public sector. These solutions may at times entail digital initiatives or areas that fall under the competence of the DGD. However, most of the scope of digital government cross-institutional services and policy-making falls clearly under the responsibility of DGD. In addition, MINSEGPRES – home of DGD - sits at the Directive Council of the *Laboratorio de Gobierno* which helps ensure a coherent and collaborative approach.

The DGD and the *Laboratorio de Gobierno* have a history of successful collaborative work, for instance in the case of improving the user experience of ChileAtiende. What these successful collaborations have in common, is the determination to develop a common approach and strategy for diagnosing and addressing the problem. These units can build on those experience to develop common interventions together.

The OECD has published a Declaration on Public Sector Innovation (see Box 3.9). The Declaration could help guide and provide high-level vision around collaboration for digital innovation.

Box 3.9. Declaration on Public Sector Innovation

The OECD Declaration on Public Sector Innovation (OECD, 2019^[26]) is a framework and set of principles that governments can use to inform their country's own planning and strategising to foster innovation better.

If governments choose to sign on to the Declaration, they are free to use it in ways that make sense for their context. In general, a Declaration can help a government to:

- Signal the importance of innovation and encourages governments to see innovation as a possible, viable option to policy challenges.
- Create a language around ways to approach common innovation challenges.
- Provide a framework to configure different types of innovation initiatives.
- Recognise that there are different kinds of innovation, suited to different kinds of goals or outcomes, and set out how multi-faceted innovation could be managed.

The contents of the Declaration provide principles around how to:

- Embrace and enhance innovation within the public sector
- Encourage and equip all public servants to innovate
- Cultivate new partnerships and involve different voices
- Support exploration, iteration and testing
- Diffuse lessons and share practices

Source: OECD Declaration on Public Sector Innovation (OECD, 2019^[26])

Notes

- 1 <https://www.dta.gov.au/standard>
- 2 <https://www.canada.ca/en/government/publicservice/modernizing/government-canada-digital-standards.html>
- 3 Mexican digital service design principles (<https://www.gob.mx/serviciosdigitales/articulos/principios-generales-de-diseno-de-servicios-digitales>), digital service standard and re-usable tools (<https://www.gob.mx/estandar>), guides (<https://www.gob.mx/wikiguias>)
- 4 <https://www.digital.govt.nz/standards-and-guidance/digital-service-design-standard/>
- 5 <https://www.gov.uk/service-manual/service-standard/>
- 6 <https://playbook.cio.gov/>
- 7 <https://digitalprinciples.org/>
- 8 Guide for designing web interfaces: https://digital.gob.cl/doc/Guia_de_diseno_de_interfaces_web.pdf and Guide for designing digital services: https://digital.gob.cl/doc/Manual_de_servicios_digitales.pdf
- 9 https://www.lab.gob.cl/uploads/filer_public/bb/fa/bbfa1819-ade4-4dad-9692-a7f305139b7d/bitacora_herramientas_para_la_innovacion_publica.pdf
- 10 <https://oecd-opsi.org/projects/innovation-skills/>
- 11 Cloud computing refers to internet-based remote computing providing users with on-demand access to infrastructure (data centres/storage), services and applications. The economies of scale achieved through the cloud allow organisations to avoid costly infrastructure development and focus on core business operations while access storage and services at a cost tailored to their workload and needs.
- 12 A collaborative development platform.
- 13 Refers to standards relying on consensus, selected transparently using clear criteria.

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Digital Government in Chile – A Strategy to Enable Digital Transformation

This study assesses the evolution, achievements and challenges in the design and implementation of digital government strategies in Chile since 2004. It aims to support the Government of Chile in framing and implementing future strategic decisions and developing digital capacity throughout the public sector. In particular, it looks at how Chile can build a whole-of-government approach to embed digital approaches into everyday government operations.

The study argues that for Chile to ensure the sustainability of its achievements to date it should work towards shared ownership of, and responsibility for, the digital government strategy throughout the public administration.

This publication is a contribution to the OECD Going Digital project which aims to provide policymakers with the tools they need to help their economies and societies prosper in an increasingly digital and data-driven world.

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