Chapter 7

POLICIES FOR DIGITAL TRANSFORMATION: RECOMMENDATIONS FOR A WHOLE-OF-GOVERNMENT APPROACH

Going Digital in Latvia: An Integrated Policy Framework

The previous chapters of this Review have analysed recent developments in several policy fields in relation to digitalisation in Latvia. The analysis led to an assessment of performance and a set of policy recommendations for each field. This section discusses these recommendations and maps them against the Going Digital Integrated Policy Framework presented in Chapter 1 and summarised in Figure 7.1.

The main components of the framework under analysis are **access**, **use**, **trust** and **innovation**. These were identified as priorities by the Latvian authorities. On their request, the Review also uses strategic foresight to examine key uncertainties surrounding the future of the digital transformation and the potential implications for Latvia.

Figure 7.1. Going Digital Integrated Policy Framework

Source: OECD (2019), *Going Digital: Shaping Policies, Improving Lives*, *https://doi.org/10.1787/9789264312012-en*.

Strategic foresight

The digital transformation is driving rapid change on an unprecedented global scale. At a time of rapid change and high uncertainty, strategic foresight intends to help Latvian decision makers better anticipate disruptive changes, identify critical uncertainties, develop innovative new strategies and policies, and stress-test existing plans and practices.

Strategic foresight begins by exploring a set of three scenarios. The first scenario considers a world where active citizens have taken digitalisation into their own hands and formed a comprehensive "third pillar" of online empowered communities that provide a counterweight to states and markets. The second scenario describes a world in which governments have set up digital platforms that become the backbone of their economies, and which promote exchange between countries using the same system but create barriers with those who do not. The third scenario presents a future in which multinational digital conglomerate corporations are able to serve their users so well that many of the roles traditionally held by the state, such as education and welfare, can be better offered by non-state entities.

These scenarios help to identify some key strategies for action for Latvia, which fall into four main categories:

- Evaluate and strengthen Latvia's strategic partnerships for digital transformation.
- Identify smart approaches to education and skills to produce more adaptive and critical Latvians.

- Identify pathways towards an inclusive digital Latvia by and for the people.
- Build capacity to benefit from access to and use of personal data, while safeguarding digital security and privacy.

Enhancing access and connectivity

Latvia is performing well in terms of deployment of both fixed and mobile broadband high-speed networks. In June 2019, mobile broadband subscriptions reached 127 subscriptions per 100 inhabitants, one of the highest rates among OECD countries. Fibre connections accounted for 70% of all fixed broadband connections, the fourth highest penetration in the OECD area after Korea, Japan and Lithuania. Prices for both fixed and mobile broadband connectivity are substantially lower than the OECD average.

Despite this performance, differences in connectivity persist between urban areas and rural areas, particularly when comparing Riga with other regions. There are also concerns about competition in the fixed broadband market, where the incumbent's share is 56%.

The recommended changes to policy design and regulatory frameworks listed below can help prepare Latvia to face coming developments in communication technologies and markets:

- Evaluate the benefits of creating a convergent regulator for both telecommunication and broadcasting services, particularly in relation to increasing the convergence of services over IP networks.
- Establish a clear ministerial focal point for communication services. Competencies are currently dispersed between the Ministry of Transport (MoT) and the Ministry of Environmental Protection and Regional Development (VARAM).
- Improve territorial planning in municipalities by promoting dig-once policies, granting permission for new towers, and planning new routes for fibre and cables, as well as harmonising and simplifying administrative procedures for network deployment.
- Increase co-ordination among municipalities and the MoT to overcome bottlenecks in fixed and mobile network deployment and prepare for network densification in line with the deployment of 5G.
- Reduce information asymmetries about available infrastructure and closely monitor for potentially discriminatory practices in access to passive infrastructure.
- Monitor the state of competition in the fixed broadband market and implement infrastructure-sharing obligations as appropriate.
- Engage with local stakeholders on last-mile solutions as part of rural broadband programmes and foster demand through targeted initiatives.
- Update the regulatory framework to allow for the development of a secondary spectrum market to promote more efficient usage.
- Develop and implement a national Internet of Things (IoT) plan to identify challenges and foster demand from businesses and consumers.
- Develop and implement a comprehensive IPv6 strategy in co-ordination with civil society, the private sector and technical stakeholders.
- Undertake an analysis of the state of traffic exchange and promote the deployment of neutral IXPs, based on good international practices.

Fostering effective use of digital technologies

Latvia has made significant progress in Internet usage in recent years, with the government becoming a leading user of digital technologies in Europe. Latvian people, however, remain moderate users of the Internet while businesses lag behind those in OECD countries. A large share of small firms and a lack of skills hold digital adoption back. Latvia also has the lowest employment share of ICT specialists – particularly women – in the European Union. The country should therefore implement a coherent set of measures to foster effective use of digital technologies by individuals, firms and government.

Upgrading digital skills

- Update training resources provided under the Third Father's Son programme, and provide libraries with sufficient resources to maintain ICT equipment.
- Create a community-based ICT training programme for groups with low digital uptake, similar to those in Australia and Norway.
- Support the development of modular programmes in higher education that include ICTs.
- Increase employer participation in defining university curricula, and introduce a legal framework for work-based learning in tertiary education.
- Strengthen links between vocational schools and firms employing ICT specialists, and simplify procedures to grant firms support for on-the-job training.
- Introduce training vouchers for employees funded out of an employers' contribution on gross wages, as used in France and Poland.
- Exempt foreign ICT specialists with proven experience, or who completed their studies in Latvia, from labour market tests, as is the case in Germany and the United Kingdom.

Increasing digital uptake by firms

- Create a digital champions programme, like the one in Australia, whereby the government provides support to a small number of SMEs in sectors with low ICT uptake.
- Provide consultancy and management advice to help firms catch up with highly digitised firms, as already done in Australia and Austria.
- Introduce a system that enables business payroll software to automatically report data to tax authorities, similar to Australia's Single Touch Payroll system.

Fostering digital government

- Consolidate funding for digital government into a single ministry, which can then set priorities in accordance with a national strategy.
- Create a civil service-wide training programme on the use of ICTs and the design of e-government services, and develop a manual of good practices, like that in the United Kingdom.
- Introduce incentives for businesses to interact with government online (e.g. to issue permits or payments more quickly than offline operations). Set a schedule for phasing out selected e-government services offline.
- Develop new rules, procedures and standards on the use of telemedicine, like the Act on eHealth and Secure Data Sharing in the Czech Republic.
- Establish a one-stop shop for those who wish to access health and social care data for research, such as in Finland.
- Promote an open data ecosystem by granting prizes to tertiary-level students and researchers making use of open data to address societal challenges.

Enhancing trust in a digital environment

Fostering digital security

Latvia has built solid foundations from which to address the challenges and opportunities of digital security. The Latvian Computer Emergency Response Team (CERT.LV) is recognised internationally for its technical expertise and vulnerability disclosure policies. The Latvian Ministry of Defence (MoD) is also strongly committed to promoting digital security as a strategic issue, as showed in the recently adopted *Cyber Security Strategy (2019-2022)*. The creation in 2011 of the Latvian National Information Technology Security Council (NITSC) represents a further step in developing a whole-of-government approach to digital security.

However, digital security policy in Latvia is still narrowly focused on national security, with insufficient attention paid to the economic and social dimensions of digital security.

To tackle these issues, Latvia should:

- Promote the digital security strategy at the highest level of government.
- Step up the involvement of ministries with a cross-cutting mandate (e.g. those in charge of economic and regional development) in digital security initiatives.
- Better integrate the digital security strategy with the Information Society Development Guidelines.
- Promote upskilling and workforce-sharing programmes between public institutions.
- Increase multi-stakeholder co-operation on digital security policy making through trust-based partnerships.
- Enhance international co-operation in the area of digital security for economic and social prosperity, in particular with other Baltic countries.

Enhancing privacy

Latvia has made significant progress in enforcing the privacy and data protection rights of individuals since the enactment of the EU General Data Protection Regulation (GDPR) and the Personal Data Processing Law (PDPL) in 2018. The Data State Inspectorate (DSI) has begun enforcing both legal frameworks in a proactive fashion and has levied administrative fines against companies for non-compliance with the general obligations in both laws.

Latvia should take the following further steps to enhance privacy:

- Provide the DSI with the human and financial resources necessary to perform its tasks effectively, including by advising and investigating privacy and data protection in the digital space.
- Develop DSI guidance on privacy and privacy management programmes (PMPs), based on existing good international practice.
- Encourage co-operation between the DSI and other countries, including outside the European Union, for example, by joining the Global Privacy Enforcement Network (GPEN).
- Establish appropriate data governance of artificial intelligence (AI) and the IoT, including through further participation and collaboration with international fora such as the OECD.

Enhancing consumer protection online

Latvia's consumer policy framework incorporates general principles for protecting digital consumers consistent with the OECD *Recommendation of the Council on Consumer Protection in E-commerce* (OECD, 2016). However, the government could act to improve its evidence base for consumer policy decision making, and enhance consumer protection within and outside the European Union, as follows:

- Collect and analyse consumer complaints data specific to e-commerce in order to better understand the nature and scale of consumer issues associated with e-commerce transactions.
- Enhance consumer awareness of issues associated with e-commerce, targeting the special needs of different groups based on their age, income and literacy.
- Assess the effectiveness of the dispute resolution and redress system, by exploring consumer usage and satisfaction, and analysing unresolved dispute cases.
- Improve the evidence base on cross-border disputes outside the European Union and enhance cross-border enforcement co-operation within and outside the European Union.

Unleashing digital innovation

Latvia has made significant economic progress since the beginning of the millennium. The economy has grown faster than in any other EU and OECD countries. Latvia's National Research and Innovation Strategy for Smart Specialisation (RIS3) aims to promote structural transformation of the economy towards knowledge-based activities. Productivity, however, remains significantly lower than in other OECD countries, while a declining working age population limits the prospect for further growth. Innovation is therefore key to increasing productivity and raising living standards in Latvia.

In order to increase research and development (R&D) and foster innovation in businesses, Latvia should:

- Focus on digitalisation as a key transversal enabler of innovation and growth.
- Promote digital service innovation.
- Promote digital innovation to address Latvia's societal and economic challenges.
- Increase the level of public support to business R&D and diversify its composition towards greater use of tax allowance for R&D expenditures.
- Allocate a greater proportion of research funding to ICT-related projects, which are currently underfunded.
- Increase the share of RIS3 funding devoted to ICTs and target applications of high relevance for other Smart Specialisation areas.
- Raise the quality of research by increasing the proportion of funding allocated through a competitive process.
- Introduce a system of *ex post* evaluation of research projects, similar to Science Foundation Ireland.
- Raise the proportion of private co-financing of competence centres to ensure they are geared towards commercial innovations.
- Assess the activities of the IT Cluster, LIKTA, LIDA and the IT Competence Centre and clearly define their respective roles based on this assessment.
- Develop an intellectual property rights (IPRs) strategy, based on the successful example of Finland, and establish a specialised court for all IPR issues.
- Raise business incentives to invest in R&D by making existing tax incentives for R&D staff in start-ups less generous but available to all firms.

Building a whole-of-government approach for digital transformation policy

The digital transformation affects different parts of the economy and society in complex and interrelated ways, making trade-offs between public policy objectives difficult to navigate. Leveraging the benefits and addressing the challenges of digital transformation requires co-ordination across all policy domains identified in the Going Digital Integrated Policy Framework (Figure 7.1). It also requires the consideration of transversal policy issues (e.g. skills, digital government and data governance) that cut across several of the framework's policy dimensions (OECD, 2019). The above policy recommendations, therefore, need to be co-ordinated through a whole-of-government approach.

Co-ordination implies the involvement of a wide range of actors across multiple parts and levels of government, as well the participation of non-governmental stakeholders and international partners. A whole-of-government approach, however, may prove challenging. For example, high transaction costs, power and information asymmetries, and different governance approaches across different levels of government can make co-ordination and negotiations cumbersome.

While well-designed governance is fundamental to effective co-ordination. However, there is no one-size-fits-all approach. Different approaches can reflect, for example, variations in state institutions, the organisation of government, or administrative culture and capacity. In addition, governance arrangements are likely to evolve over time, for example with changes in government, technological progress and shifts in the constellation of actors driving digital transformation.

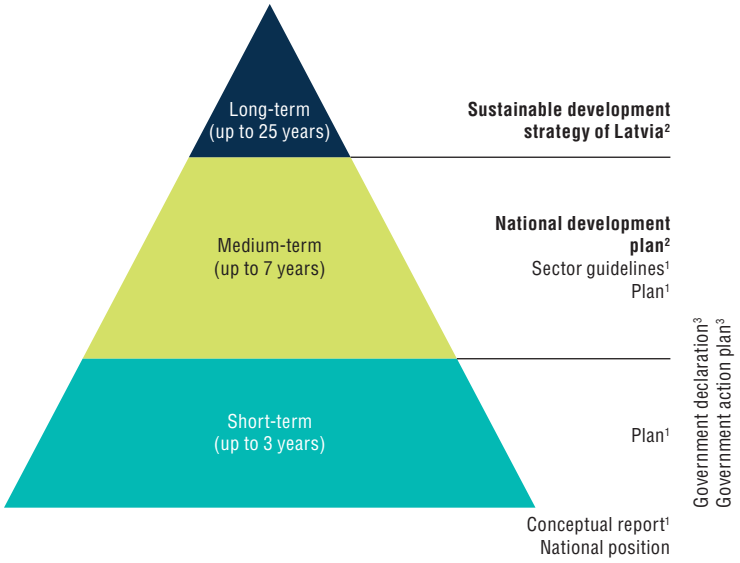
This section examines the current co-ordination mechanism of policies for digital transformation in Latvia and makes recommendations to help ensure a coherent and cohesive whole-of-government approach to policies for digital transformation.

Latvia's Sustainable Strategy 2030

Latvia has a hierarchical policy planning system with long-term (up to 25 years), medium-term (up to seven years) and short-term (up to three years) horizons (Figure 7.2). The Sustainable Development Strategy is the highest national-level, long-term planning document. It sets the main priorities for the government and society in order to achieve balanced and sustainable development.

Latvia 2030, the current Sustainable Development Strategy, includes 7 development priorities, 7 strategic indicators, 11 objectives, 11 development directions, 42 areas of action and 27 performance indicators (SAEIMA, 2010).

Figure 7.2. Latvia's national development planning



1. Policy planning document.
2. Spatial planning document.
3. Political guidance document.

Source: CSCC (2012), *National Development Plan of Latvia 2014–2020*, *www.pkc.gov.lv/index.php/en/national-development-planning/national-development-planning*.

Latvia 2030 considers digitalisation in relation to national development priorities. Development of the cultural space (priority 1) regards digital technologies as an opportunity to improve access to culture, preserve Latvia's language and cultural heritage. and strengthen national identity. The Sustainable Development Strategy allots libraries the role of local competence centres geared towards providing life-long education and information to foster long-term investments in human capital (priority 2).

Digitalisation is also expected to contribute to changing the education paradigm (priority 3), through improved access to networks of social services, the digitisation of schools, libraries and educational material, and e-learning.

Open knowledge and science, through virtual business incubators, digital networks and platforms, have the potential to promote an innovative and eco-efficient economy (priority 4). Digital licensing is expected to ease access to intellectual property and reduce licensing costs. A shift away from using transport towards teleworking and distant learning would also reduce energy consumption and gas emissions.

Digital technologies and platforms can help establish natural assets as future capital (priority 5) and stir and diffuse new practices to reduce the ecological footprint of human activities. The deployment of high-speed broadband networks would make advanced digital services available in rural areas and remote regions, thus enhancing regional development (priority 6).

Finally, digitalisation is regarded as a means to enhance government innovation and public participation (priority 7). E-government has the potential to deliver better services in a more efficient way, while social networks and Internet platforms can act as public fora where citizens can share opinions and collaborate to address societal challenges.

Latvia 2030 also identifies 27 indicators to measure progress across the 7 development priorities. However, only one indicator (i.e. use of e-government by individuals, has a direct link to digital transformation).

As a high-level policy document, Latvia 2030 does not detail specific actions; these are developed and detailed in national plans and sectoral guidelines.

The National Development Plan 2014-2020

The main tool for the implementation of the Sustainable Development Strategy is the National Development Plan (NDP), Latvia's main medium-term development planning document. The NDP set outs the main medium-term objectives, priorities and performance indicators, areas of action, outcomes and responsible institutions for a period of seven years. The plan is implemented via the development policies of sectors and territories (regions, local governments), including through the planning investment programmes of central and local governments, EU policy instruments and other financial sources.

The NDP 2014-2020 sets out 12 strategic objectives under three priorities: 1) growth of the national economy; 2) human security; and 3) growth for regions (CSCC, 2012). Several actions foreseen in the NDP leverage digital transformation to achieve strategic objectives, as discussed above.

To achieve the strategic objective "Highly productive manufacturing and internationally competitive services with export potential", the NDP foresees training for entrepreneurs in productivity-enhancing production processes, and management methods and business models, including those enabled by digital technologies.

Actions to attain the strategic objective "Services for more equal work opportunities and living conditions" include enhanced access to high-speed and ultra-high-speed data transmission networks throughout Latvia, general improvement of e-skills among the population and enhanced access to e-government services, and the development of digital content, products and services.

To achieve the strategic objective "Development of competencies", the NDP foresees the introduction of innovative forms of content and activities in elementary and secondary education to promote creative and entrepreneurial skills in a digital learning environment.

Reduction of the administrative burden on businesses, including through digital technologies, and the establishment of a one-stop online platform for e-government services to businesses, form part of the actions to achieve the strategic objective to create "(a)n outstanding business environment".

Finally, achievement of the strategic objective "Advanced research and innovation and higher education" is reliant on the establishment and development of a co-operation platform for higher education, science and the private sector among Baltic countries, in selected areas, including smart technologies and engineering. The NDP encompasses other actions to support research and technological transfer, but does not refer specifically to digital technologies.

The NDP does make specific reference a set of indicators to assess progress. While several indicators are likely to include a digital component (e.g. R&D, high-tech exports and skills), only two incorporate a direct link to digital transformation: 1) the proportion of households with access to the Internet; and 2) the proportion of the population who use the Internet to interact with state and local government institutions. The 2020 targets for both indicators – 80% and 60%, respectively – have been achieved (Chapter 4).

The NDP for the period 2021-27 was approved by the Cabinet of Ministers on 25 February 2020. The NDP 2021-2027 establishes three strategic goals – equal opportunity, productivity and income, and social trust – for six priority areas: 1) strong families, healthy and active people; 2) knowledge and skills for personal and national growth; 3) competitiveness of business and material well-being; 4) quality living conditions and territorial development; 5) culture and sports for active and fulfilling life; and 6) a united, secure and open society.

The NDP 2021-2027 includes several measures leveraging digital opportunities:

- strengthening digital and new technology skills in co-operation with businesses
- promoting the use of digital technologies in business

- furthering the diffusion of digital solutions for the exchange of information among economic operators, national and local authorities
- mainstreaming the "go digital first" principle for user-oriented, open public services
- enhancing ICT infrastructure for public administration, municipalities and education institutions
- increasing physical and digital accessibility to national and municipal infrastructure
- promoting Smart Specialisation Strategies in five areas, including ICTs
- preserving and transmitting cultural heritage, sport traditions and values to future generations, including through ICTs.

The Information Society Development Guidelines 2014-2020

The Information Society Development Guidelines (INFSO) 2014-2020 – next in Latvia's hierarchical policy planning system – lay down the digital strategy (Cabinet of Ministers, 2013a). The Guidelines function as a medium-term development plan and were developed by a working group co-ordinated by the Ministry of Environmental Protection and Regional Development (VARAM) and composed of representatives from 12 ministries (Agriculture, Culture, Defence, Economy, Education, Finance, Foreign Affairs, Health, Interior, Justice, Transport and Welfare), the State Chancellery, ICT industry associations, the Latvian National Commission for UNESCO and the Latvian Chamber of Commerce.

The aim of INFSO 2014-2020 is "to provide an opportunity for everyone to use the possibilities offered by ICTs, to develop a knowledge-based economy and to improve the overall quality of life by contributing to national competitiveness, and increasing and economic growth and job creation" (Cabinet of Ministers, 2013a).

Economic growth and job creation are at the core of the strategy and inform the formulation of each of the seven Action Directions put forward in the Guidelines: 1) ICT education and skills; 2) widely available access to the Internet; 3) advanced and effective public administration; 4) e-services and digital content for the public; 5) cross-border co-operation for digital single market; 6) ICT research and innovation; and 7) trust and security.

The Guidelines devote particular attention to the use of open data principles in public administration as a tool to improve efficiency in public service delivery. Upgrading e-skills and improving Internet access and speed also have a prominent role, as enablers for e-commerce and e-business more. Using digital tools to reduce the administrative burden and improve the efficiency of the public administration is also key to the INFSO 2014-2020, with a view to reducing administrative costs for businesses, especially SMEs.

Each Action direction is articulated along several measures, as shown in Table 7.1.

An interim assessment of implementation of the guidelines was completed in October 2019 (VARAM, 2019). The final assessment will be submitted by VARAM to the Cabinet of Ministers in July 2021.

The INFSO interim assessment concludes that human capital and innovation, together with interoperability of digital solutions, are key for the digital transformation. In order to gain synergies between the public administration and the private sector should be further developed, by improving the existing institutional framework and developing a new framework that responds to the challenges posed by digitalisation.

Several other development documents are currently in force, often with a focus on improving e-government services. These include the *Concept of the Organisational Model of Public ICT Management* (Cabinet of Ministers, 2013b), the *Conceptual Architecture of Public Administration Information Systems* (Cabinet of Ministers, 2015), the information reports *Using Cloud Computing Services in Public Administration* (Cabinet of Ministers, 2018) and *Latvia's Open Data Strategy* (Cabinet of Ministers, 2019) (Chapter 4) as well as the informative report on *Artificial Intelligence Solutions* (Cabinet of Ministers, 2020a) and the *Public Services Transformation Action Plan* (Cabinet of Ministers, 2020b).

Table 7.1. Information Society Development Guidelines 2014-2020

Action direction	ICT in education and e-skills		
Key measures	**Responsible institution**	**Institutions involved**	**Planned expenditure (LVL)**
1.1 E-skills upgrade of employees and entrepreneurs	VARAM	Local governments, all ministries	4 035 294
1.2 Training of employees in partnership with businesses	MoE	LIDA	15 000 000[1]
1.3 E-skills training for the unemployed and job seekers	MoW	MoE, MoES, local governments, SEA, social partners	10 000 000
1.4 E-skills training for adults	MoW	MoE, MoES, social partners	1 900 000
1.5 Digital textbooks library	MoES	MoC, VARAM, municipalities, NCE, social partners	694 118
1.6 Development of an integrated education curriculum, including algorithmic thinking and information literacy	MoES	SECC, MoC, VARAM, municipalities, social partners	1 058 824[1]
1.7 Digital learning materials for general education	MoES	MoC, VARAM, municipalities, social partners	2 966 667
1.8 Natural sciences cabinet equipment in schools, including software	MoES	Municipalities	18 000 000[1]
1.9 Methodological support in ICTs	MoES	Municipal and state grammar school	10 000 000
1.10 Ergonomic arrangements and innovative ICT solutions in regional secondary schools	MoES	Municipalities	57 400 000
1.11 Qualification upgrade of teachers, including in ICTs	MoES	SECC, municipalities	6 000 000[1]
1.12 Skills upgrade of teachers, including ICT skills	MoES	Municipalities, MoA, MoC, MoE, MoW, social partners	3 507 100
1.13 Management improvement in small rural schools, including through ICT acquisition	MoES	Municipalities	11 764 706
1.14 Development of a next-generation network in rural areas	MoT	State Radio and Television Centre	65 000 000
1.15 Broadband for the last mile of connection	MoT	Telecom companies	36 000 000
1.16 Evaluation of existing electronic communications grids	MoT	..	MoT regular budget
1.17 Mapping of the current electronic communications network infrastructure	MoT	..	2 400 000
3.1 Development of ICT centralised platforms for the public administration	VARAM	All ministries	25 035 294
3.2 Digitalisation of public administration services	VARAM	All ministries, local governments	76 258 824
3.3 Introduction of the state administration human resource management system based on e-government principles	SAO	Public Administration School, all ministries	6 670 600[1]
3.4 Introduction of e-auctions	MoJ	CA, IAC	1 000 000
3.5 Development of a single IT platform for patent, trademark and design registration	MoJ	Patent office	800 000
3.6 Introduction of the labour market forecasting system	MoW	MoE, MoES, MoW, social partners	764 706
3.7 Higher efficiency of inpatient health care institutions	MoH	Local governments, social partners	3 000 000
3.8 Quality improvement of disability expertise services	MoW	MoH municipalities, social partners	505 882
3.9 Online psychological consultations for children in distress	MoW	SIPCR	120 000
3.10 Engagement with civil society on web 2.0 solutions	SAO	All ministries, social partners	300 000
3.11 Development of a research and publication database	CSCC	..	11 800
3.12 Development of an integrated database on climate change and air quality	VARAM	IPE, LEGMC, LUA, Silava	In budget
3.13 Assessment of climate change reduction policy	VARAM	IPE, LEGMC, LUA, Silava	In budget
3.14 Development of climate change portal	VARAM	..	In budget
3.15 Development of an information system on flood risk areas	VARAM	..	In budget
3.16 E-services and systems related to law	MoJ	CA (LR), DSI, IAC, RE, SFSB, SLS,	7 000 000
3.17 Digitisation of cultural heritage	MoC	CISC, LNB, MoC	11 764 706
3.18 Update of library, archive and museum information system in accordance with EU Directive 2013/37/EU	MoC	CISC, LNB, MoC	1 750 000
3.19 Development and maintenance of the digital cultural heritage competence network	MoC	CISC, LNB, MoC	3 000 000

Table 7.1. Information Society Development Guidelines 2014-2020 *(cont.)*

Action direction	ICT in education and e-skills		
Key measures	**Responsible institution**	**Institutions involved**	**Planned expenditure (LVL)**
3.20 Improvement of the machine translation system	MoC	CISC	4 000 000
3.21 Development of ICT management system for central government	VARAM	SRDA	1 487 022
6.1 Support to applied R&D for commercial use	MoES	MoA, MoC, MoE, VARAM, MoH, Registered Scientific Institutions	32 500 00[1]
6.2 Support for new products and technologies	MoE	LIDA	124 000 000[1]
7.1 Development of the Latvian centralised ICT security and prevention platform	CERT.LV/MoD	National regulatory authorities	515 530
7.2 Electronic reporting of illegal and harmful content on the Internet	CERT.LV/MoD	LIA	184 200
7.3 Public awareness raising on ICT security	VARAM	CERT.LV, MoD	4 035 294
7.4 Public awareness raising on risks and threats on the Internet	VARAM	CERT. LV/MoD, LIA, MoW, SIPCR	208 200
7.5 Helpline for children and youth affected by harmful content on the Internet	MoW	SIPCR	220 200
7.6 Public awareness raising about personal data security	MoJ	CERT.LV, DSI, VARAM	53 400
7.7 Informing State administrative institutions about the necessity to ensure personal data processing safety in the Internet environment	MoJ	CERT.LV, DSI, VARAM	12 000
7.8 Securing a high level of protection of activities dealing with personal data	DSI	..	629 778
7.9 Modernisation of the 112 call platform	MoI	VARAM	8 800 000

1. Only some of the expenditure relates to the INFSO 2014-2020 measures.

Notes: .. = not available. The Latvian latz (LVL) was replaced by the euro on 1 January 2014, 1 LVL = EUR 1.42288. CA = Court Administration; CERT.LV = Computer Emergency Response Team of Latvia; CISC = Cultural Information System Centre: CSCC = Cross-Sectoral Coordination Centre; DSI = Data State Inspectorate; IAC = Internal Audit Council; IPE = Institute of Physical Energetics; LEGMC = Latvian Environment, Geology and Meteorology Centre; LIA = Latvian Internet Association; LIDA = Latvian Investment and Development Agency; LNB = Latvian National Library; LR = Land Registry; LUA = Latvian University of Agriculture; MoA = Ministry of Agriculture; MoC = Ministry of Culture; MoD = Ministry of Defence; MoE = Ministry of Economy; MoES = Ministry of Education and Science; MoH = Ministry of Health; MoI = Ministry of Interior; MoJ = Ministry of Justice; MoT = Ministry of Transport; MoW = Ministry of Welfare; NEC = National Centre for Education; RE = Register of Enterprises of the Republic of Latvia; SAO = State Audit Office; SFSB = State Forensic Science Bureau; Silava = State Forest Research Institute; SIPCR = State Inspectorate for Protection of Children's Rights; SLS = State Land Service; SRDA = State Regional Development Agency; VARAM = Ministry of Environmental Protection and Regional Development.

Source: Cabinet of Ministers (2013a), *Information Society Development Guidelines 2014-2020 – Informative Part, Order No. 486, 14 October*, *www.varam.gov.lv/in_site/tools/download.php?file=files/text/Darb_jomas/elietas//Information_Society_Development_Guidelines_2014_2020.docx*.

Other documents, such as the Concept for the Development of Next Generation Broadband Electronic Communications Networks 2013-2020 and the Electronic Communications Policy Plan 2018-2020, focus more on ICT access and infrastructure (Chapter 3).

Additional documents include the Guidelines for the Protection and Enforcement of Intellectual Property Rights 2015-2020 and the Cyber Security Strategy of Latvia (2014-2020). The Guidelines for the Cyber Security Strategy of Latvia (2019-2022) were approved in September 2019 (Chapter 5).

Latvia does not currently have an overarching strategy in place for the digitalisation of business. There is, however, a Smart Specialisation Strategy, which is flanked by the *Science, Technological Development and Innovation Guidelines for 2014-2020* (STDI) and the *National Industrial Policy* (NPI) guidelines for 2014-2020. The latter aim explicitly at promoting the modernisation of industry. The NPI guidelines were published in 2012 and aim, among other objectives, to align labour supply and education to the needs of economic development, and to promote open, creative and innovative environments (Chapter 6).

Clear budgetary appropriations for the digital strategy

The INFSO 2014-2020 includes information on the expenditure required for implementation (Table 7.1), but does not provide for any budgetary appropriation. The Guidelines, therefore, must be implemented from the regular budget of each ministry. This leaves significant discretionary power in the hands of

the ministries regarding the resources devoted to measures foreseen under the Guidelines and their actual implementation.

Furthermore, the lack of a specific budget for the INFSO 2014-2020 makes it difficult to assess the actual allocation of resources *ex post*. This difficulty is illustrated by the INFSO progress assessment carried out in 2019, which does not report any information on actual expenditures by responsible ministries for measures foreseen under the Guidelines.

Similarly, it is difficult to identify resources allocated for implementation of the Guidelines in the central government budget. For instance, under the INFSO 2014-2020, the Ministry of Economy (MoE) should allocate a proportion of its 2014-20 budget for the training of employees (EUR 10.5 million) and provide support for new products and technologies (EUR 87.1 million) related to digital uptake and skills. In the MoE budget, these measures are listed mainly under the European Regional Development Fund (ERDF), which has an overall budget of less than EUR 50 million for 2018-20. In addition, the actual level of resources allocated to policies for digital uptake and skills is not reported.

Similarly, EUR 40.3 million should be devoted to the measure "Ergonomic arrangements and innovative ICT solutions in regional secondary schools", one of the largest planned expenditures in the Guidelines. While local governments were designated to implement 44 projects as part of this measure, expenditures for ICT solutions (EUR 23 million) seem significantly below the level planned in the INFSO 2014-2020.

The large number of sectoral guidelines developed in Latvia appear to constitute an obstacle to clear alignment between policy initiatives and budget appropriations. Although these guidelines favour co-operation among ministries and agencies in specific policy fields, their volume leads to some overlap of measures across several guidelines.

Furthermore, while the ministries responsible for each set of guidelines are accountable for their implementation, line ministries seem to enjoy weaker accountability, reducing their incentives to implement the guidelines (OECD, 2018). This helps to explain why Latvia has made more progress on measures related to e-government, as VARAM is responsible for both the INFSO 2014-2020 Guidelines and e-government policies.

These issues are acknowledged in Latvia 2030: "A large number – several hundred – of development planning documents … have been created. The development planning system is poorly connected with the budgetary process and lacks medium-term and long-term assessment ... The strong sectoral perspective in the design and implementation of policies … is a further source of difficulties". The Sustainable Development Strategy was meant to be a single instrument, which together with a change in governance model would address these issues. However, formal respect for the objectives set in the Sustainable Development Strategy and the NDPs aside, persistent tension among sectoral guidelines remains a strong obstacle to policy making in Latvia.

Stronger co-ordination mechanisms within government

Three steps seem necessary to increase government commitment to the digital agenda. The first is to push digital transformation policies higher up the policy agenda. This means that digital transformation objectives should have a more prominent role in the Sustainable Development Strategy and National Development Plans. As discussed above, these documents foresee policies for the digital transformation but do not provide sufficient detail about their nature and scope. While a new NDP is being developed for the period 2021-27 with the option to strengthen the role of digital transformation policies, the Sustainable Development Strategy will be in place until 2030. Therefore, the government should explore the opportunity to revise the strategy with a view to providing a stronger and clearer commitment to digital transformation policies.

The second step is to define clear budget appropriations for the Information Society Development Guidelines for the next planning period. While it seems appropriate to leave the implementation of these guidelines to each ministry, which will have better information regarding its sector of competency, it is necessary to set clearer budgetary appropriations and clearer spending commitments at the ministerial level. This would increase transparency regarding the objectives of the Guidelines, send a strong signal confirming the government's commitment and strengthen the political credibility of the measures. More transparency would also facilitate implementation of the Guidelines.

Finally, it is important to establish some institutionalised mechanisms for co-ordinating digital transformation policies across the government. Leadership, design and management of the Information Society Development Guidelines are spread among several ministries, including VARAM, the MoE, the MoT and the MoES. The lack of a formal, whole-of-government approach hampers the overall effectiveness of Latvia's digital transformation agenda.

The INFSO 2014-2020 progress assessment reaches a similar conclusion, calling for balanced integration of digitalisation policy into sectoral policies, with sufficient resources for policy co-ordination, adequate funding to achieve the objectives pursued and ambitious but achievable indicators.

OECD countries employ different governance models for their national digital strategies (Table 7.2). Some rely on a dedicated ministry or body; others incorporate co-ordination of the national digital strategy into the portfolio of a minister or body. In a few, co-ordination is the responsibility of several ministries or is taken up at the highest level of government (i.e. Prime Minister's Office, Presidency or Chancellery).

Table 7.2. Governance of national digital strategies in OECD countries

Number of countries

Responsible body	Co-ordination	Implementation	Monitoring	Evaluation
Prime Minister's Office, Presidency or Chancellery	5	0	3	4
Dedicated ministry or body	12	8	12	10
Non-dedicated ministry or body	14	4	12	11
Several ministries or bodies	6	24	8	8

Note: The data are based on survey responses from 33 countries. The sum of each responsibility may exceed the number of countries (33) when responsibilities have been assigned to more than one body.

Source: OECD (2019), *Going Digital: Shaping Policies, Improving Lives*, *https://doi.org/10.1787/9789264312012-en*.

While the above models all have strengths and weaknesses, it is essential that the body responsible for the co-ordination of the digital strategy have both sufficient political leverage and adequate resources to fulfil its mandate.

The Deputy Prime Minister appears to be a natural candidate for the co-ordination of digital transformation policies in Latvia. Appointed by the Cabinet, the Deputy Prime Minister is responsible for the government's National Development Plan and its coherence with the Sustainable Development Strategy as well as with the budgetary process. In this function, she or he can help ensure that digital transformation policies are placed at the highest level of the policy agenda.

The role of co-ordinating the digital economy strategy could be supported by the Cross-Sectoral Coordination Centre (CSCC). The CSCC is the leading institution on national development planning and co-ordination in Latvia. Placed under the direct authority of the Prime Minister, the CSCC is responsible for developing and monitoring the Sustainable Development Strategy and the National Development Plan. It also performs analytical tasks assigned by the Prime Minister and the Prime Minister's Office, including assisting with the Government Declaration and Action Plan.

As the co-ordinator of Latvia's digital economy strategy, the Deputy Prime Minister should also have a discretionary budget that can be used to co-finance policies, according to objectives set by the government, implemented in co-ordination with two or more institutions: ministries, agencies or local governments. While line ministers would retain the responsibility and appropriations to implement digital transformation policies in their field, this budget would provide an incentive for institutional co-operation. For instance, the Deputy Prime Minister could allocate an additional allocation (i.e. a kind of co-ordination premium) for policies implemented through co-ordination among several ministries.

These budgetary allocations would typically take the form of a matching grant, (i.e. a grant that must be used for a specific purpose and is conditional on additional resources from the receiving institutions).

The budget would not require additional resources but a reallocation of the appropriations currently allocated to digitalisation policies under different lines of the central government budget. A clearer budgetary allocation, as discussed above, is a prerequisite for the establishment of this co-ordination mechanism.

Box 7.1. Policy recommendations for a whole-of-government approach

To help ensure a coherent and cohesive whole-of-government approach to digital transformation policies in Latvia, the government should:

- Push digital transformation policies higher up the policy agenda
- Define clear budget appropriations for the Information Society Development Guidelines
- Institutionalise a co-ordination mechanism for digital transformation policies (e.g. by investing the Deputy Prime Minister with the role of co-ordinator).

References

Cabinet of Ministers (2020a), *Informatīvais ziņojums "Par mākslīgā intelekta risinājumu attīstību"* [Developing Artificial Intelligence Solutions], Riga, *http://tap.mk.gov.lv/doc/2020_02/IZ_MI%5b1%5d.2.docx*.

Cabinet of Ministers (2020b), *Public Services Transformation Action Plan*, Riga.

Cabinet of Ministers (2019), *Latvijas atvērto datu stratēģija* [Latvia's Open Data Strategy], 20 August, Riga, *http://polsis.mk.gov.lv/documents/6533*.

Cabinet of Ministers (2018), *Informatīvais ziņojums "Mākoņdatošanas pakalpojumu izmantošana valsts pārvaldē"* [Using Cloud Computing Services in Public Administration], 20 February, Riga, *http://polsis.mk.gov.lv/documents/6140*.

Cabinet of Ministers (2015), *Conceptual Architecture of Public Administration Information Systems*, 10 March, Riga.

Cabinet of Ministers (2013a), *Information Society Development Guidelines 2014-2020 – Informative Part*, Order No. 486, 14 October, Riga, *www.varam.gov.lv/in_site/tools/download.php?file=files/text/Darb_jomas/elietas//Information_Society_Development_Guidelines_2014_2020.docx*.

Cabinet of Ministers (2013b), *Concept of the Organisational Model of Public ICT Management*, Order No. 57, 15 January, Riga, *www.varam.gov.lv/in_site/tools/download.php?file=files/text/Darb_jomas/elietas//E2269_Organisational_Model_for_the_Management_of_Public_Infor_and_Com_Techn.doc*.

CSCC (2012), *National Development Plan of Latvia 2014–2020*, Cross-Sectoral Coordination Centre, Riga, *www.pkc.gov.lv/images/NAP2020%20dokumenti/NDP2020_English_Final.pdf*.

OECD (2019), *Going Digital: Shaping Policies, Improving Lives*, OECD Publishing, Paris, *https://doi.org/10.1787/9789264312012-en*.

OECD (2018), *Access to Justice for Business and Inclusive Growth in Latvia*, OECD Publishing, Paris, *https://doi.org/10.1787/9789264303416-en*.

OECD (2016), *Consumer Protection in E-commerce: OECD Recommendation*, OECD, Paris, *www.oecd.org/sti/consumer/ECommerce-Recommendation-2016.pdf*.

SAEIMA (2010), *Sustainable Development Strategy of Latvia until 2030*, Riga, *www.varam.gov.lv/in_site/tools/download.php?file=files/text/dokumenti/pol_doc//LIAS_2030_parluks_en.pdf*.

VARAM (2019), *2nd Interim Evaluation of the Information Society Development Guidelines 2014-2020*, Ministry of Environmental Protection and Regional Development, Riga, *http://polsis.mk.gov.lv/api/file/file7299860066764117769.pdf*.