European Union
European Regional
Development Fund

DigiBEST
Interreg Europe

ATTACHMENT 1

GUIDELINES FOR THE DIGIBEST PEER REVIEW REPORT

LATVIA

PR EXPERT 1: MARKUS ROTH AUSTRIA

PR EXPERT 2: LINDA RANDALL & MARI WØIEN MEIJER, NORWAY

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Table 1. List of abbreviations used in the text.

AF	Application form
AP	Advisory Partner
BDRM	Business Digitalization Regional Road Maps
DESI	Digital Economy and Society *Index*
CV	Curriculum Vitae
EC	European Commission
eIDAS	EU regulation on electronic identification and trust services for electronic transactions in the European Single Market
EU	European Union
GP	Good Practice
HP	Hosting partner
ICT	Information and Communication Technologies
IE	Interreg Europe
JS	Joined Secretariat
LP	Leading partner
MC	Management Committee
MoEPRD	Ministry for Environmental Protection and Regional Development
PP	Project partner
PR	Peer Review
PRM Guidelines	Peer Review Methodology Guidelines
PRR	Peer Review Report
RS	Regional Studies
SH	Stakeholder
SG	Steering Group
SP	Sending partner
SME	Small and medium enterprise

This PR methodology is using specific terms, such as:

- **PR expert** – the expert hired by the project sending partner;
- **Hosting partner** – the project partner responsible for organizing the PR event;
- **Hosting region or country** – the region or country, where the PR event takes place;
- **Sending partner** – the project partner responsible for hiring and sending the PR expert;
- **PR process** – the whole process starts from hiring PR experts by PPs until conducting the Joint PRR of the DigiBEST project by the AP.
- **PR event** - PR online or onsite visit to the HP's region during which the field research will be done.

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1. Introduction

The main objective of the PR process is to have an external analysis performed by external qualified experts of the situation on digital transformation of SMEs and microenterprises in each HP region/country, including analysis of GP. In this case, analysis of the situation for the digitalisation of SMEs in Latvia is provided by PR experts from Austria and Norway. Sub-objectives specific to this case included the ***following issues***:

- In comparison with the experience and good practice of the countries representing the experts, **conclusions on the problems and solutions** included in **Section 3 of the Latvian Regional Study** in the field of SMEs digitization are provided and proposals on possible solutions are provided;
- A comparison with the indicators of the Sending country's (NO and AT) DESI index is provided and based on the experience of the countries representing the experts (success stories), proposals are provided **for the improvement** of **Latvian** DESI category 2 "Human capital" and category 4 - "Integration of digital technology" indicators;
- **Proposals for activities have been provided for inclusion** in the **Latvian Regional Business Road Map of Business Digitization and the Action Plan** planned within the framework of the DigiBEST project, which have been developed based on the problems identified in the Regional Study. Proposals would **draw on the comparative experience** of the country / region representing the experts in implementing policies and initiatives, which initiatives are currently being implemented in the country / region, and **assess the best practices and policies identified** by the expert country / region or other Interreg Europe Policy Learning Platform initiatives **in the following areas:**
    - **Raising awareness among entrepreneurs** of the benefits of using ICT solutions in business.
    - **Improving the availability of information on the support instruments** and programs offered by the government. Avoiding information **fragmentation** (e.g., single portal, one-stop shops, digital roadmap / manual, etc.).
    - **Development of entrepreneurial competencies and corporate environment** (mentoring programs, technology audits, one-to-one consultations, training of business decision-makers / managers, etc.) to increase entrepreneurs' awareness and knowledge of the benefits of digital transformation, ICT solutions, and improve SME business processes and competitiveness.
    - **Integrating digital transformation** and **cybersecurity** issues into business support initiatives.
    - **Promoting public administration cooperation with entrepreneurs and NGOs** by planning and implementing national digital policy initiatives (matching supply to the needs of SMEs) and developing national ICT solutions for entrepreneurs.

The PR was based on the desk research, including review of literature, policy documents and legislation, as well as field research - meetings, interviews, site visits (online) or presentations and networking. All relevant documents were provided to the PR Team by the HP at the beginning of the contract. Several additional documents were provided following an introductory meeting held on May 7, 2021. The field research was conducted in connection

with the PR Event which was expertly organised by the host partner from May 31, 2021 to June 2, 2021. The event consisted of group interviews with relevant stakeholders (day 1 and 2) and a workshop with all participants (day 3). A full agenda for this meeting can be found in Annex 1.

This report is based on the activities of the desk research and the field research. It provides a clear and concise overview of the situation relating to SME digitalisation in Latvia, including:

- Characteristics of SME digitalisation
- Policy context
- Main barriers for SME digitialisation and possible solutions, and
- Relevance of good practices from the experts' respective countries.

It closes with a section highlighting the main findings and conclusions before presenting a list of recommendations for promoting the digital transformation SMEs and microenterprises.

Throughout the DigiBEST project a **definition on the digital transformation** of the European Commission is being used: "Digital transformation is characterized by a fusion of advanced technologies and the integration of physical and digital systems, the predominance of innovative business models and new processes, and the creation of smart products and services." Advanced digital technologies provided in the processes of digital transformation, such as the Internet of Things, big data, advanced manufacturing, robotics, 3D printing, blockchain technologies and artificial intelligence, as well as smart use of ICT in SMEs offer businesses new opportunities for building on their competitiveness.[1]

[1] https://ec.europa.eu/growth/industry/policy/digital-transformation_en

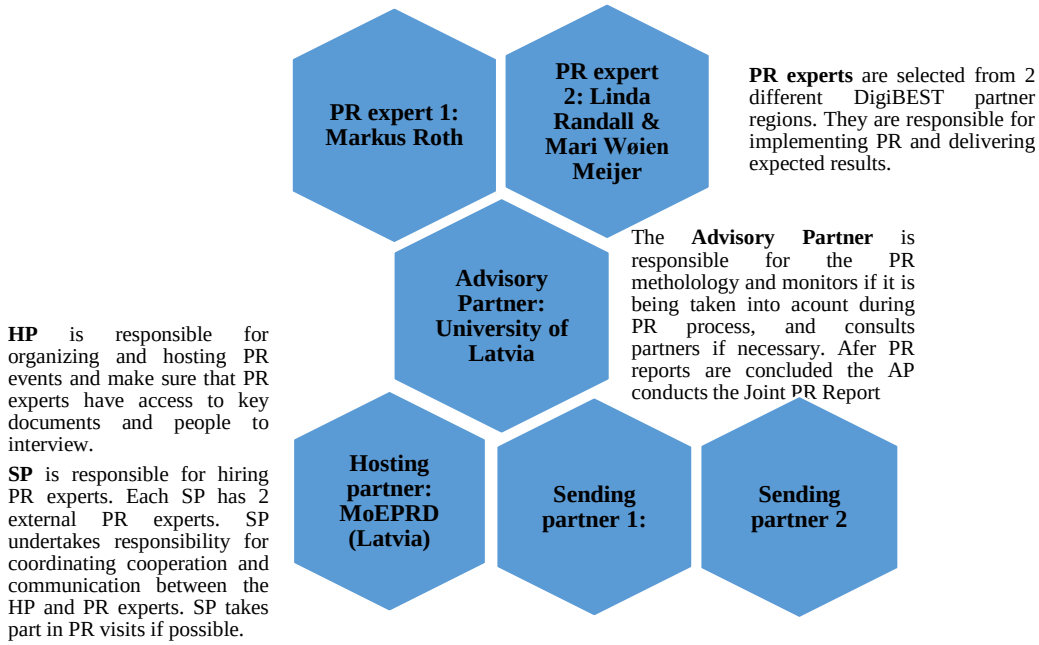
2. Presentation of the Peer Review team

The Peer Review team included the following members:

- Hosting partner – The Ministry of Environmental Protection and Regional Development (MoEPRD),
- DigiBEST project team (Julija Kovalska, Santa Sipola and Liene Strazdina);
- PR expert from Austria - Markus Roth, 'creativeBITS' business owner, IT consultant with focus on digital transformation and digital business models, as a consultant has worked with SMEs to show them the potentials of various digital solutions, also was in advisory groups to ministers of the Federal Ministry for Digital and Economic Affairs and the previous Federal Ministry of Economic Affairs (2005 -2019), giving feedback on digital policy initiatives.
- PR expert from Norway - Linda Randall, Senior Research Advisor at Nordregio, specialised in digitalisation in a regional and local development context, has experience conducting international comparative research on digitalisation and sustainable regional development in the Nordic and Baltic contexts (e.g., project 'Rural perspectives on digital innovation: Experiences from small enterprises in the Nordic countries and Latvia'). Mari Wøien Meijer is a Research Fellow at Nordregio focused on national and regional innovation systems, including smart specialisation strategies, across the Nordic countries (e.g. cross-border initiatives Denmark and Norway; Sweden-Norway; the Council of Baltic Sea States).
- Advisory partner – the University of Latvia as an author of Peer Review Methodology Guidelines for project partners, advisory support within the Peer Review Process, responsible for Peer Reviews Joint Report (Zane Zeibote, Denize Ponomarjova, Davis Vitols).

The structure and responsibilities of the PR team members are represented in the Figure 1.

FIGURE 1. STRUCTURE OF THE PEER REVIEW TEAM.



3. Peer Review implementation

This section describes our **desk research** work including the sources of information we have reviewed and analysed and our main findings and inconsistencies / changes with the information provided by RS and JS. The results are shown in Table A. The sources of information from the field study can be found in Annex 1, Agenda for peer review event.

TABLE A. PEER REVIEW DESK RESEARCH FINDINGS

No	Source of literature, document or information on the website reviewed or analysed	Date	Main findings and conclusions
1	Ministry of Trade and Fisheries (2019) Strategy for small – and medium-sized enterprises	May 2021	Ensuring continued high levels of human development is key to remaining globally competitive. This includes enhancing digital skills among SMEs, as competitiveness is increasingly decided by levels of digitalisation; data-oriented, data driven and innovation.
2	Ministry of Local Government and Modernisation (2021) Our common digital foundations.	May 2021	The COVID-19 pandemic tested the Norwegian digital infrastructure, and though it generally withstood the increased pressure it is clear that digitalisation is not an end goal but a process. Looking to the future, it is clear that the level of uptake of e.g., 5G depends on human capital. Ensuring that everyone has access to high-speed internet is also essential to ensure regional cohesion.
3	Ministry of Local Government and Modernisation (2015) Digital Agenda	May 2021	The agenda looks to ways in which ICT solutions are to simplify and improve the public sector by being increasingly user oriented. The agenda also sets out a plan to improve the digital infrastructure and what role the authorities should play in enabling digitalisation and value creation in businesses.
4	Ministry of Education and Research (2019) Learning all your life	May 2021	The commitment to lifelong learning is essential for meeting several of the global megatrends. Upskilling, reskilling, and educating the public and labour force is necessary for enabling the green transition and combating climate change through e.g., digitalisaiton and data-driven innovation.
5	OECD Reviews of Digital Transformation Going Digital in Latvia	05-06/21	General overview of status; some of the recommendations were not found in the regional study or in other documents – but could be important in the near future: e.g. Chapter 7: “develop a national internet of things plan” or “develop an IP strategy”
6	Digital Transformation Guidelines for 2021-2027 (LV)	20.-24.5.21	The guidelines highlight five areas of digitalization in Latvia, the biggest focus being on the infrastructure and public administration.
7	Digital Economy and Society Index (DESI) 2020 - LV	05/21	Status of digitalisation in Latvia in comparison to other EU countries
8	DESI Austria 2020	05/21	Status of digitalisation in AT in comparison to other EU countries
9	Digibest regional study on the state of digital transformation	05-06/21	The main barriers in regard to business digital transformation of Latvian SMEs are low adoption of

	and its impact on the regional businesses in Latvia		technology, decentralised activities and communication, lack of incentives for digitalization, lack of skills, financial support and appropriate tax policies.
10	Information Society Development Guidelines 2014–2020	05/21	Strategies, e-Government, Action Directions e-Skills & Competences Includes actions also found in OECD Review – like measures about IP rights. But while some actions are very specific in their description (like in "Development of the Latvian centralised ICT safety and prevention platform"), others are very vague (like in "Support for the development of new products and technologies" as only reference to IP rights)
11	National development plan of Latvia for 2021-2027	05/21	Visions for Latvia's future, strategic objectives, priorities – bringing digitalization initiatives into a broader context
12	Latvian cyber security strategy	06/21	Strategies applied from 2019 to 2022 regarding cyber security measures – quick overview of measures; seems to address the general issues but the building of an ecosystem with SMEs, companies, experts is missing

4. Objectives and tasks of the PR Experts

This section provides a description of objectives and tasks described in your work contracts with respect to conducting the PR Expert's work for the HP. Assigned tasks during the desk research and field research are shown in Table B.

TABLE B. DESCRIPTION OF TASKS

	Desk research	Field research
PR Expert 1: Markus Roth (AT)	Latvian Documents, Regional Study, Focus on SME digitalisation, policies and measures for digital awareness of SMEs	Infos out of Virtual Site Inspection, talks to Latvian Entrepreneurs, provided documents, documents as described in Chapter 3
PR Expert 2: Linda Randall (NO)	Latvian documents, Regional study, OECD Study	Participated in the peer review event
PR Expert 3: Mari W. Meijer (NO)	Desk research on Norway and good practices.	Participated in the PR Event, interview transcribing, and headed one interview with the Ministry of Education.

5. Characteristics of the SMEs digitalization

General level of digitalization

According to DESI 2020 report, Latvia ranks 18th with an overall score of 50,7 (EU average – 52,6) and has worsened its overall rank by three places in comparison to 2019. Latvia performs well in digital public services and connectivity. However, it ranks 23rd on the Integration of Technology by Business and 24th on the Human Capital (see Table C).

TABLE C. DESI PERFORMANCE BY DIMENSION

Dimension	Latvia score (rank)	EU score	Austria score	Norway score
Connectivity	61,8↑ (4↓)	50,1	47,2↑ (22↓)	65,8↑ (NA)
Human capital	35,0↓ (24↓)	49,3	56,7↑ (9↓)	65,9↑ (NA)
Use of internet services	54,0↑ (19↓)	58,0	54↑ (18↓)	80,6↑ (NA)
Integration of digital technology	28,3↑ (23↑)	41,4	40,6↑ (17↑)	59,0↑ (NA)
Digital public services	85,1↑ (5 -)	72,0	80,8↑ (8↑)	84,9↑ (NA)
Overall	50,7↑ (18↓)	52,6	54,3↑ (13↑)	69,5↑ (NA)

↓↑ - *changes in comparison to 2019*

All DESI 2020 indicators that build the integration of digital technology by business are below EU average (see Table D). Very few companies use big data, cloud solutions, social media and electronic information sharing. Only 11% of SMEs sell online and it constitutes 5% of SME turnover. According to the Digital Scoreboard (EUROSTAT) 53,4% of enterprises have very low level of digital intensity. Only 13,8% of enterprises have high level of digital intensity.

TABLE D. SUMMARY OF DESI INDICATORS "INTEGRATION OF DIGITAL TECHNOLOGY"

Indicator	Latvia score	EU score
Electronic information sharing (% enterprises)	32% ↑	34%
Social media (% enterprises)	19% ↑	25%
Big data (% enterprises)	8% ↑	12%
Cloud (% enterprises)	11% (-)	18%
SMEs selling online (% SMEs)	11% (-)	18%
e-Commerce turnover (% SME turnover)	5% (-)	11%
Selling online cross-border (% SMEs)	7% ↑	8%

↓↑ - *changes in comparison to 2019*

Access to human capital with digital skills is a significant component of the SME digitalization. However, several DESI 2020 indicators that build the human capital dimension are below EU average (see Table E). Basic and advanced digital skill levels remain well below the EU average. There is a low number of ICT specialists, especially the number of ICT female specialists remains low.

TABLE E. SUMMARY OF DESI INDICATORS "HUMAN CAPITAL"

Indicator	Latvia score	EU score
At least basic digital skills (% individuals)	43% ↓	58%
Above basic digital skills (% individuals)	24% ↓	33%
At least basic software skills (% individuals)	44% ↑	61%
ICT specialists (% total employment)	1,7% ↑	3,9%
Female ICT specialists (% female employment)	0,5% ↑	1,4%

ICT graduates (% graduates)	5,0% ↓	3,6%

↓↑ - *changes in comparison to 2019*

Digital Public Services can be an enabler for SME digitalization and this precondition is well-established in Latvia. The country ranks 5th in digital public services. Digital only communication between government, citizens and businesses is possible. In a Public Service Development Plan 2020-2023 the expansion of those service is planned as well as information events and trainings.

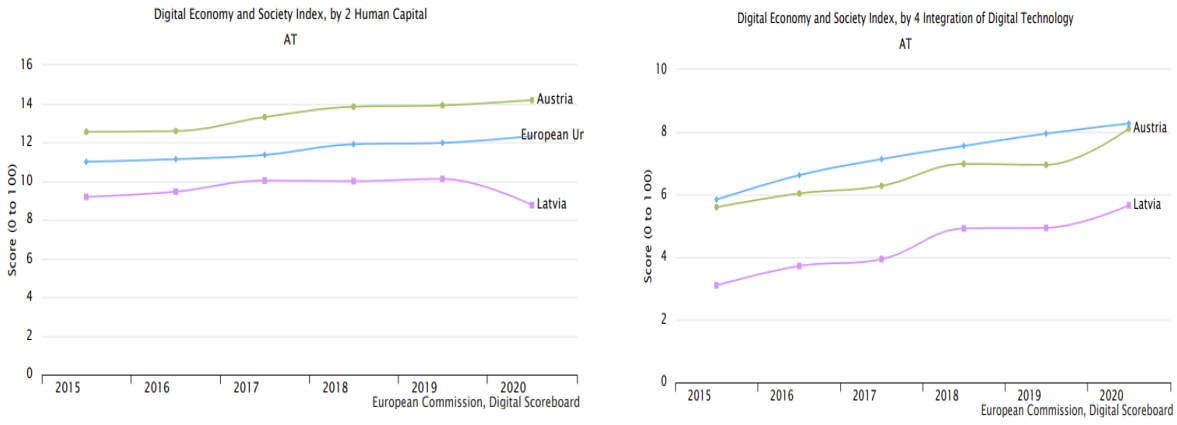
Comparison of digitalization levels across countries

Both experts' home regions score higher in DESI ranking. Norway is consistently of the most digitalised countries in the Nordic Region and Europe at large (Analysys Mason, 2020; EU Commission 2020). On the most recent DESI rankings, Norway scores 69.5. Austria scores 54.3 on the most recent DESI rankings, which places it 13th, a few places above Latvia.

It is relatively easy to operate a small business in Norway. In a global context, Norway ranks 9 in the World Bank's *Ease of doing business-rankings* (2020). Latvia ranks 19th, while Austria ranks 27th in this ranking (mostly due to the legal requirements). The Norwegian government also point to the highly educated population with high levels of digital skills as one of the main reasons for the favourable conditions for SMEs (Ministry of Trade and Fisheries, 2019).

Latvia lags behind both countries in the Integration of Digital Technology and Human Capital (see Figure 2 and 3). Regarding Human Capital, raising digital aptitudes is part of the Norwegian government's objective in their recently devised government policies on lifelong learning, skills, and competences. In this policy document, digital skills are part of the objective to ensure that the labour force are vigilant in their pursuit of personal and professional development within their jobs Ministry of Local Government and Modernisation, 2019)

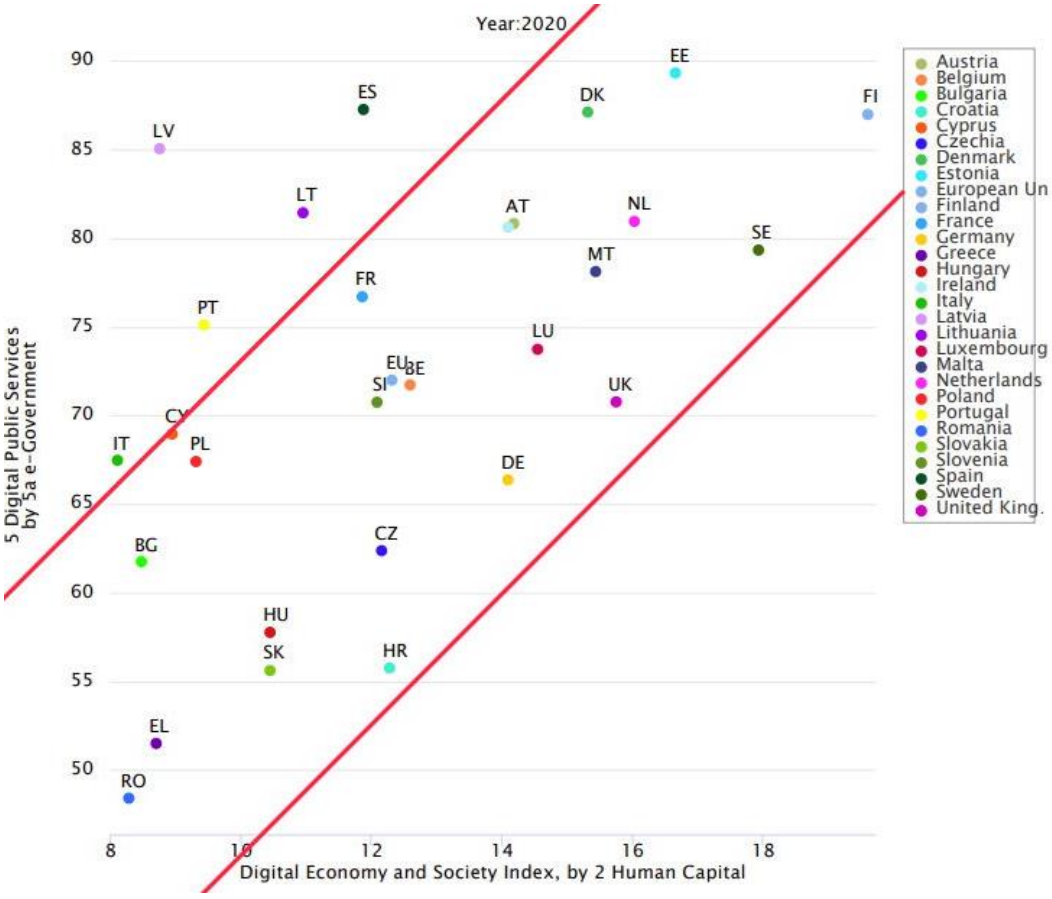
FIGURE 2. DESI INDICATORS COMPARISON BY COUNTRY (SOURCE: HTTPS://DIGITAL-AGENDA-DATA.EU/)



Latvia outperforms both countries in the Digital Public Services, even though according to the Statistics Norway's numbers from 2019, 9 out of 10 use online public services, indicating a reliance on online digital services. This is reflected in the recent most white paper on digitalisation, Report to the Storting 28 (2020-2021) Our common digital foundation. The white paper highlights the increasing expectations with regards to digitalisation, and the digitalisation of public services. Expectations to digitalisation and actions to respond to digitalisation needs go hand in hand Ministry of Local Government and Modernisation, 2021).

There is a significant inequality between the performance in E-Government and Human Capital compared to other European Countries (see Figure 3).

FIGURE 3: DESI INDICATORS "HUMAN CAPITAL" VS. "DIGITAL PUBLIC SERVICES" (SOUNRCE: HTTPS://DIGITAL-AGENDA-DATA.EU/)



Main policies & developments

The main policy guideline for SME digitalization is the digital transformation guideline, specifically its subarea "Promoting digitalization of business". Furthermore, as a part of the Latvian Smart Specialisation Strategy innovation ecosystems are built, mainly around the areas of smart cities, smart materials, and biomedicine. Additional Competence Centres, Digital Innovation Hubs and Technology Transfer programmes provide high level

knowledge. Latvia has a national AI strategy for automating public administration tasks as well as promoting AI adoption among enterprises.

Latvia does not have a specific digital skill strategy but has several sectoral programs, projects and initiatives. Coding and computational thinking have been integrated in main curricula, big coding competitions between young people and several digital skills programmes are available. The topic of digital skills is also addressed in several sectoral policies, such as 2021 - 2027 Education Development Guidelines, Science, Technological Development and Innovation for 2021 – 2027 and Latvia's 2019 – 2022 cybersecurity strategy. According to DESI 2020 the focus should be on raising the general level of digital skills and to increase the number of ICT specialists.

In Norway, the policies for increasing SMEs competitiveness and development are twofold and centre on human development and digitalisation. Enabling companies to better understand and make use of the data generated is part of the government's overall goal. Combining this with competence development and lifelong learning where no one is left behind, makes for a potent mix. The main objectives of the SME strategy is to a) facilitate easier daily operations through lessened administrative burdens, and a simplified overview of available support measures; b) Better access to customers, including real opportunities to participate to secure public procurement contracts, as well as stimulating internationalisation and export; c) stimulate increased levels of innovation through green, smart and creative production, and d) Access to competence and capital to ensure adaptability and development (Ministry of Trade and Fisheries, 2019). Digitalisation is seen as a horizontal policy objective and digitalisations strategies, including policies with regards to e-communication, e-networks, public services and artificial intelligence, are considered as integrated and mutually reinforcing parts.

In Austria, all digitization-related measures are coordinated by the Ministry of Digitization. The measures are divided between Austria-wide and region-specific measures. On all measures affecting SMEs, the Ministry of Digitization cooperates with the Chamber of Commerce, which implements the regional measures. The goals of the SME strategy are a) to increase awareness among companies, b) to bring more digitalization into all jobs and trainings, c) to promote investments in digitalization, d) to optimize digital collaboration with governmental institutions, and e) to create an SME environment that favours innovation and digitalization. In doing so, the strategy supports the individual development of citizens, sustainable and secure digitalization, infrastructural equality of opportunity and trust in the state through transparency. The measures are passed on to companies and employees at the local level, primarily on an industry-specific basis. Good cooperation between the individual institutions ensure that agreed measures reach companies and that friction losses are low. Digital focus topics are open data, artificial intelligence, the Austrian cloud and the digital school.

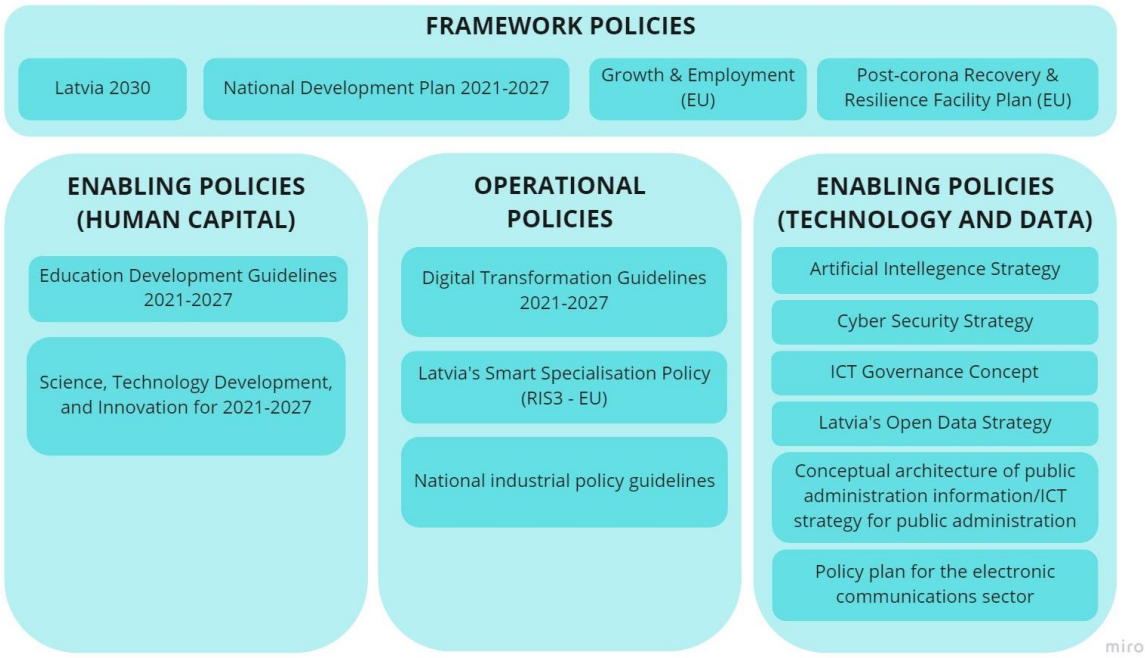
The barriers are described in chapter 7.

6. Policy context

In the PR report template, we were instructed to consider one specific policy instrument, the Growth and Employment fund. Given the detailed insight into the overall policy context that was provided through the RS and the FS, we have chosen instead to take a broader view. As such, this section considers the overall policy framework for SME digitalisation in Latvia. This includes the policies themselves, the relevant stakeholders and specific initiatives designed to support SME digitalisation.

There is no single strategy addressing the digitalisation of SMEs in Latvia. Instead, digitalisation efforts are guided and funded through a range of policy instruments spanning various government departments. These policies are depicted in Figure 4 and summarised in detail in Appendix 1.

FIGURE 4. POLICY FRAMEWORK FOR DIGITALISATION OF SMES IN LATVIA



Several **framework policies** provide the overall development context for the country and set a broad framework for digitalisation work. These include the national policy *Latvia 2030* and its accompanying implementation plan the *National Development Plan 2021-2027*, as well as the EU funded *Post-corona Recovery and Resilience Facility Plan*.

Sitting beneath these are four **operational policies** central to the digitalisation of SMEs in Latvia. The most important of these is the Digital Transformation Guidelines 2021-2027. This policy includes five key areas for development: 1) Digital skills and education; 2) Digital security and reliability; 3) Availability of telecommunications and computing; 4) Digital transformation of the national economy (incl. Public administration); and 5) Innovation, ICT industry and ICT science. A second important core policy is the EU funded Growth and Employment. This policy and it's associated funds support key national development priorities along with the "Europe 2020" objectives. It provides significant support to economic growth and employment, with a particular focus on the competitiveness of Latvia's economy. Approximately 23% of the fund covers aspects that relate directly or indirectly to SME digitalisation. Latvia's Smart Specialisation Strategy provides a framework for regional

innovation and includes ICT and digitalisation as cross-cutting themes across all other priority areas. Finally, the National Industrial Policy Guidelines is a medium-term policy covering all sectors of the economy and including a range of initiatives to foster the digital transformation of Latvian businesses.

On either side of the core policies are a series of what we have termed **enabling policies**. These policies do not include specific actions to support the digitalisation of SMEs. They are however vitally important in providing the necessary preconditions for digital transformation. On one side are policies related to **human capital**. These include the Education Development Guidelines 2021-2027 and the Science Technology Development and Innovation for 2021-2027. On the other side are policies related to **technology and data**. These include Latvia's Open Data Strategy, Artificial Intelligence Strategy, ICT Governance concept, Conceptual, architecture of public administration information/ICT strategy for public administration, Policy plan for the electronic communications sector, and Cyber Security Strategy.

These policy changes (improvements) are based on substantial consultation and thus should be anticipated by the institutions who are in decision making power. For example, the Digital Transformation Guidelines 2021-2027 included consultations with over 200 experts including Ministries, NGO representatives and academics. Interestingly however, the consultation with representatives of SMEs appears to be fairly limited. Although some data has been obtained via survey, this data is primarily quantitative in nature. While this is useful in providing broad information about the challenges SMEs face, more qualitative data would be highly valuable in gaining a deeper underdstanding of the nature of these challenges and the types of solutions through which they may be addressed. As such, this review recommends that **the Ministries consider a stronger role for the voice of SME representatives themselves in the policy making process.**

One of the key factors that appears to be crutial to achieving policy change is the introduction of two European Digital Innovation Hubs. These hubs aim to be a one-stop-shop for the digital transformation of SMEs, as an information and support infrastructure. Rather than taking a regional approach, a decision was made to have two centralised hubs, each with a different thematic focus. The first focuses on highly innovative, digital-native complanies, while the second is designed to support the digitalisation of more traditional businesses. The centralised nature of the hubs does not necessarily preclude a regionally or locally anchored approach to the DIHs and stakeholders within the Ministries described the importance of local outreach and anchoring. Our discussions with regional stakeholders however, suggested a lack of clarity about the status of the DIHs and their role in them. As digital transformation is a context-based endeavour for the individual companies, ensuring that the the DIHs are regionally anchored is important. As such, **this review recommends a clearer role for the Planning Regions in the roll out of the DIHs.**

The specific actions to be taken to achieve the policy changes, in other words, the support measures available to support the digitalization of SMEs were more difficult to identify in the RS. A summary of those we discovered is given in Table H. We are not however confident that this covers the full range of supports available. As such, **this review recommends that the RS is amended to include a table detailing all support measures available to SMEs seeking to digitalise.** This table should include a description of the measure, as well as eligibility requirements and the responsible Ministry or organisation. Based on what we

learned during the FS, such a summary could be of great value to regional stakeholders and others responsible for supporting the digitalisation of SMEs.

TABLE F. SUMMARY OF SPECIFIC INITIATIVES TO SUPPORT DIGITAL TRANSITION OF SMES

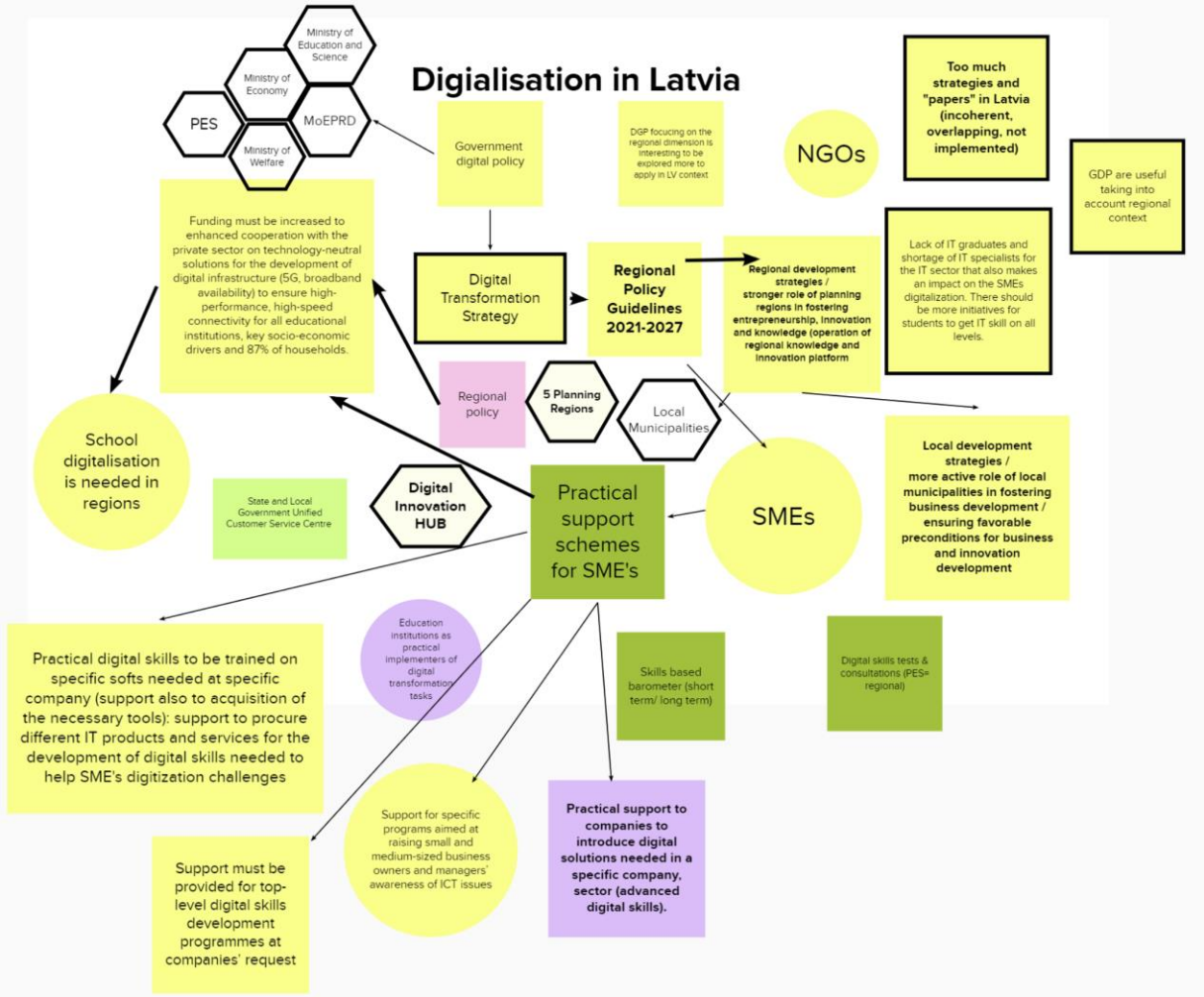
Initiative	Description	Actors
Competence centre programme (8)	Eight competence centres corresponding to the areas of Latvia's Smart Specialisation Strategy	Ministry of Economics (EU Funded)
Digital Innovation Hubs (2)	Three centres of excellence which are expected to act as "one stop shops" for digital transformation.	Ministry of Environmental Protection and Regional Development; Ministry of Economics, LIKTA, Latvian IT Cluster
Labs of Latvia	Information and technology portal	LIAA
Enterprise Europe Network	Provides support for SMEs by helping to innovate and grow on an international scale (e.g., innovation and technology audits to help carry out technology transfer) and extensive advisory services on what EU offers.	LIAA
Technology Transfer Programme	Promote innovation activities in SMEs by providing: 1. Innovation vouchers (e.g., for feasibility studies, industrial research, experimental development and attracting highly qualified personnel); 2. Research and innovation support (e.g., developing commercialisation offers or participating in exhibitions and conferences); and 3. Start-up support (e.g., meetings with potential investors).	LIAA
SMEs trainings for digital technologies and innovation development	Training programmes aimed at entrepreneurs, managers and employees that aim to boost the uptake of digital tools. Involved 1 200 companies and 3 900 training activities.	LIKTA
Cross-industry collaboration, networking and knowledge sharing services	Builds a cooperation community of those Latvian companies who are most willing to contribute and benefit from joint efforts in digitalization	Latvian IT Cluster
Digital Training Programme	To let companies challenge themselves, innovate and look at their business processes from a new perspective (Chapter 7).	Latvian IT Cluster
hackathons, yearly conference and call for award.		LATA

The FS gave an excellent perspective on the main stakeholders and their influence on digitalisation of SMEs. An overview is provided in Table I. Further, the workshop on the final day of the Peer Review Event provided an opportunity to work with the stakeholders themselves to visulise the digitalisation landscape. This is shown in Figure 5. The figure provides great insight into the range of actors and their relationship to digitalisation policy. The peer review team recommends **that the figure is simplified in order to become a useful tool for communicating the Latvian policy landscape for SME digitalisation to a broad audience.**

TABLE G. MAIN STAKEHOLDERS AND THIER INFLUENCE ON DIGITALISATION

Stakeholder	Responsibility
Ministry of Environmental Protection and Regional Development of the Republic of Latvia	Overall digital transformation strategy in the context of information and communication technologies
Ministry of Economics	Business policy
Ministry of Education and Science	Policy in education and science
Ministry of Welfare	Labour and employment related policy
Ministry of Transport	Policy plan for the electronic communications sector
Ministry of Defence	Cyber Security Strategy
Investment and Development Agency of Latvia (LIAA)	Increasing export and competitiveness of Latvian companies, facilitating foreign investment and implementing tourism development and innovation policies. (sits under Ministy of Economics)
Latvian IT Cluster	Contact point for interested parties who intend to expand their own technical and economic potential in international markets.
Latvian Open Technology Association (LATA)	Promotes cooperation between technology suppliers and consumers, including public, municipal authorities, educational and scientific institutions on the basis of openness of technologies, interoperability, reusability and open standards in industry; quality, efficiency and safety of technologies; free and fair competition in technology development and supply.
Latvian Information and Technology Association (LIKTA)	Unites leading industry companies and organizations, as well as ICT professionals – more than 160 members in total. The goal of LIKTA is to foster growth of ICT sector in Latvia by promoting the development of information society and ICT education thus increasing the competitiveness of Latvia on a global scale. The association provides professional opinion to government institutions on legislation and other issues related to the industry, while also maintaining close relationships with other Latvian NGOs and international ICT associations. Member of the consortium that will develop the European Skills and Jobs Platform.

FIGURE 5: MAIN ACTORS AND POLICIES FOR SME DIGITALISATION



Overall, the anticipated policy changes are absolutely still considered relevant. We believe however that there remains work to be done in clearly articulating how the proposed policy outcomes will be achieved, which specific initiatives will be implemented, where and by whom. Previous research by the PR Team has found that one cannot underestimate the importance of trusted local actors in getting SMEs on board with the need to digitalise their processes and business models (Randall et al., 2020). Thus, this review recommends that **local and regional actors should be equipped with a strong awareness of the national agenda and be provided with adequate tools to enact it.**

7. Main barriers for SMEs digitalization and possible solutions

The RS and PR Event provided a comprehensive overview of the main barriers for SME digitalization, as well as great insight into the solutions that have been identified to overcome them. The main barriers identified included:

- Low e-commerce performance
- Low adoption of technology
- Decentralised activities and communication

- Lack of in-work training
- Lack of skills needed to implement business digital transformation
- Lack of incentives for digitalisation
- Low level of innovation
- A tax policy that does not promote business expansion / lack of employees with adequate skills to make full use of ICT and those with change management skills / lack of time
- SME's have difficulties in accessing funding to invest in ICT
- Latvia does not currently have a comprehensive business digitalisation strategy
- Cybersecurity risks

Table K deals with each of these barriers in turn. It highlights the solutions identified in the RS as well as providing analysis of the proposed solution based on the data collected at the PR Event.

TABLE H. PR TEAM ANALYSIS OF BARRIERS AND SOLUTIONS IDENTIFIED BY THE HP

Awareness rising & collaboration			
Barriers	**Description**	**Solutions**	**PR Team analysis**
Low adoption of technology	The use of digital technologies in enterprises is limited to basic tools. Technologies like ERP or CRM are used rarely. Smaller firms are reluctant even to adopt technologies like social media. The DigiBEST online (second-round) survey shows that even despite COVID-19 pandemic 67% have not introduced any new digital solutions or increased the use of existing digital solutions.	Training programs and individual consultations (digital champions / train the trainer / digital advisors or mentors)	Many activities already underway to support the adoption of basic digital skills and increase e-commerce activity. There does not appear to be a need to introduce new activities but there is perhaps scope to **coordinate existing activities to reduce duplication.** In Austria the best working system is to provide centralized content like webinars, hackathon formats, special event formats, brochures and to break those down for special interest groups (e.g. carpenters association suggests best practices for their work out of an existing "toolbox"). Being too general might otherwise result in not accepting the importance of topics while creating every content new for every region/interest group might result in a waste of resources. The EDIHs could be a good tool to support increased coordination. At the national level, we note that it already appears to have increased cross-departmental cooperation. **Clearer communication with and clearly defined roles for regional actors in the roll out of the EDIHs** will be vital in ensuring the implementation meets the expectations. It is important that regional actors, who are closer to the SMEs, have a clear mandate to act according to their specific regional context and needs. It is important to ensure that the level of workshops varies, from low digital maturity to high digital maturity, and that they are tailored to the SMEs needs.
Low e-commerce performance	Share of enterprises turnover generated from web-sales is amongst lowest in EU, the number of enterprises who have websites is lower than the EU average. The DigiBEST online survey (first-round) shows that the main reasons for non-use of e-commerce are high costs of delivering / returning products, lack of comprehensive e-commerce strategy, lack of knowledge of foreign languages and other reasons not specified in the survey.	Workshops, educational tutorials, webinars and 1to1 coaching that teach small businesses simple ways to engage in e-commerce & adapt hybrid selling structures (combination of big shops, local platforms and offline selling in own shop) Local e-commerce platform for small companies	
Decentralised activities and communication	There are various actors stimulating digital transformation process for business with little coordination among themselves. There are redundancies in the offers and no common communication platform. According to the DigiBEST online (second-round) survey 95% of entrepreneurs have not used any of the support programs offered by the state for the implementation of digital solutions or for training employees in the use of IT technologies. 54% of the surveyed entrepreneurs do not deem them useful,	Establishment of a single platform EDIH network (EDIH as one-stop shop for those who wish to know more about digital transformation) Sending official local representatives to tell companies about the advantages of digital transformation.	

	43% say that there is no information about these programs.		
Enabling corporate environment & capacity building			
Barriers		**Solutions**	**PR Team analysis**
Lack of in-work training	Little work-based learning is provided, partially due to the requirement not to have a tax debt.	Legal framework for support of in-work training / strengthening links between educational institutions and businesses. Promoting a dual VET (vocational education & training) system with addition of dual academy that makes job/education rotations easier and helps the life-long-learning concepts.	Supporting SMEs to take the next steps in their digital journey's (beyond the acquisition of basis digital skills) appears to the most important challenge to be addressed going forward. At this stage, companies will require a tailored approach that considers their specific needs and is lead by a trusted individual who can support them through the process (e.g., coach, mentor, IT company, regional expert). At the same time, it is recommended that this **tailored support is provided through a consistent and transparent framework that operates similarly for all companies.** This will avoid further fragmentation of support measures.
Lack of skills needed to implement business digital transformation	Latvia has low level of digital skills and shortage of ICT specialists. Furthermore, there is shortage of complementary skills, such as administration and management. However, the DigiBEST online (second-round) survey shows that 9% entrepreneurs assess the knowledge and skills of their employees in the use of digital technologies as week, 33% - as average.	A broad set of skill development programs	
Lack of incentives for digitalisation	Companies lack the right mindset and culture for digital transformation. Furthermore, companies do not feel supported by the government.	Promoting cross-sectoral cooperation / advantages for companies that interact online / mentorship and consultations	
Administrative & technical & legal			
Barriers		**Solutions**	**PR Team analysis**
Low level of innovation	Only few Latvian companies adopt new production technologies, launch new products or introduce new organizational methods. R&D expenditures are among lowest in the EU, particularly in the ICT industries.	R&D support measures as part of the National Development Plan 2021-2027 (e.g., tax incentives, checks / grants for companies that cooperate with research institute, support when applying for a patent)	Firms face obstacles accessing finance which can act as a barrier to innovation (OECD report, p.174). For start-ups and scale-ups new funds and initiatives are in place. Not every investment is high tech or can be financed by investors. That's why **measures for supporting normal digitalization efforts should be started**.

A tax policy that does not promote business expansion / lack of employees with adequate skills to make full use of ICT and those with change management skills / lack of time	No real tax deduction for research-oriented companies	SME support instruments (National Industrial Policy 2021-2027) / RRF plan (e.g., a combination of grants, research bonus and tax deduction for innovative companies)	A system where investments in digitalization leads to a **lower tax rate** should be established. Alternatively, a **bonus** could be provided at the end of the year – an investment bonus on digitalization investments that have been applied for at the beginning of the year. Furthermore, a flourishing venture capital infrastructure will attract more high potential companies – also international ones. An **Investment Allowance system** for private investors, business angels is missing and would help attracting future businesses. To address the lack of time for taking care of digitalization measures the importance of these measures to the SMEs seems to be missing. For that it is necessary to work either with obstacles that are easier to overcome digitalization (e.g. electronic communication with governmental organisations leads to benefits for SMEs) or with best practise models that are directly introduced to SMEs. When it comes to raising digital skills, we were impressed by the collaboration between industry and education to integrate digital skill provision into the curriculum and believe this will have a positive impact on indicators related to human capital in the long-term. Community-based initiatives to support re-skilling of unemployed workers and general digital skills also have great potential in the short-medium term. The **RS should highlight to a greater degree the role of the Ministry of Education and Science and the State Employment Agency in human capital development, and how they will work to overcome skills mismatch on the labour market.**
Financial & economic			
Barriers		**Solutions**	**PR Team analysis**
SME's have difficulties in accessing funding to invest in ICT	In the survey among entrepreneurs (mentioned in the Digital Transformation Guidelines) 40% of the companies admit	Public funding for SMEs to promote the deployment of new technologies	There appears to be a degree of confusion about exactly what support is available to companies and from where. We recommend **providing a clear outline of all support measures along with eligibility requirements and details about the source of support.**

	that IT solutions and services are too expensive.		
Policy & security			
Barriers		**Solutions**	**PR Team analysis**
Latvia does not currently have a comprehensive business digitalisation strategy	Latvia does not have a single overarching strategy in place for the digitalization of business. Digital Transformation Guidelines 2021 – 2027 incorporate several policy domains, including digitalization of SMEs, yet the main tasks are split between MoEPRD and Ministry of Economics, and othe ministries.	Digital Transformation Guidelines 2021-2027 includes a number of policy ares including digitalisation of SMEs.	The digital transformation guidelines include a wide range of measures to help with the digitalization of SMEs. Especially start-ups and scale-ups are well covered – also through measures of the new started DIH. From the document the interaction between digitalization stakeholders is not clearly stated, so it was not possible to read how the interaction will take place. The issue was addressed in the peer review event and even though the main stakeholders are exchanging information regularly, others might miss important information. So it is strongly recommended to establish a **fixed communication structure between all relevant stakeholders** with a clear chain of command.
Cybersecurity risks	Main victims of digital security incidents in Latvia are SMEs and municipalities. Thus, digital transformation efforts should be supported by cybersecurity measures. Currently, the DigiBEST online survey (first-round) shows that none of the companies has a cybersecurity strategy and only 61% use available digital security solutions.	Communication / training on cybersecurity issues	Cyber Security is already addressed at highest level but the measures for SMEs were missing until the development of the cyber strategy in 2019. This strategy covers the most important issues in building a secure infrastructure. The cooperation between national cyber security experts and cyber security companies or companies that help securing SMEs (like IT infrastructure and network support companies) should be added to the overall structure. In an ideal case the support companies provide information about occurring problems and are informed by official organisations like Latvian CERT. To lower the barrier for companies if they have security issues a quick response solution should be established (e.g. Cyber Security Hotline).

8. Relevance of Good Practices

Several opportunities for cross-country learning became evident throughout the desk study and the PR Event. In this section, we focus on two examples not already described elsewhere: SME Digital (Austria) and Industry 4.0 Trøndelag – Digital transformation in small and micro-sized enterprises (Norway). Several other good practice examples from both countries can be found on the DigiBEST website: https://www.interregeurope.eu/digibest/good-practices/.

Table 7 Description of the Good Practice

Good practice general information	
Title of the good practice	***SME Digital Austria***
Category of the good practice	*Please choose one of the categories:* ☐ *Awareness rising and collaboration;* x *Empowering tools;* ☐ *Sustainability instruments;* ☐ *Enabling environment;* ☐ *Other*
Organisation in charge of the good practice	*Ministry of Economics*
Description	
Short summary of the practice	*Showing a predefined set of relevant digital trends and their application through specifically certified IT consultants / IT companies. Costs for IT consultants are 80% funded. Consultants have to derive a profile of the maturity level of the company and an analysis of the digitalization potential of the company. Consultants will advertise for it and will in return not only earn money, but eventually get a new customer for future business. Companies will get knowledge and will have the chance of apply for digitization funding – extra consulting or developing a digital solution - as a second step. Applying for step one is easy, but every company can just apply once. The ministry gets an overview of what is needed in which region and of how the overall maturity level looks like. No extra advertising effort is needed by the organizers.*
Resources needed	*Initial costs: The digital trends and a way of how to certify consultants have to be derived by the organizers, as well as a web tool to apply for the funding and to assess the maturity level.*

	Ongoing costs: Funding starts with 400 EUR for the analysis of the potential of a company through the consultant. As second step companies can apply for up to 6000 EUR for their digitization projects. *Overall costs in AT: 3-5M€ per period (1/2 – 1 year).*
Timescale (start/end date)	*In AT: Jan 2018 – ongoing*
Evidence of success (results achieved)	*No costs for advertising and awareness building, every EUR will be used directly by companies. Companies get IT partners to do their projects with and so they are not lost after being aware that they have to change something.*
Potential for learning or transfer	*Since a mentoring system is planned at the moment, this could be an alternative to it – similar costs, but instead of having a gap after the mentors' work, this version provides advanced knowledge in how to implement the digital solution in the company and leaves the company with a reliable partner for the upcoming years.*

Out of Austrians good practices from the interregeurope Website the DIH are similar to the plans seen in Latvia. Since the ones in Austria are still under construction its hard to compare.

Table 8. Description of the Good Practice

Good practice general information	
Title of the good practice	***Industry 4.0 Trøndelag – Digital transformation in small and micro-sized enterprises***
Category of the good practice	*X Awareness rising and collaboration;* *X Empowering tools;* *X Enabling environment;*
Organisation in charge of the good practice	*Trøndelag County Council*
Description	
Short summary of the practice	*A large part of the businesses in the region of Trøndelag are classified as small or micro-sized enterprises. Trøndelag County Council estimates that 92% of the enterprises have less than 10 employees, and they make out approximately 23% of the total number of employees. The digital maturity in these small and micro-sized enterprises is relatively low, partly due to a lack of competences, time and resources to prioritise digital skills enhancement. Industry 4.0 is an effort to improve the digital skills in these enterprises through low threshold workshops, that focus on a step-by-step introduction to digitalisation in businesses.* *The programme is a collaboration between the regional authorities, the 'Næringshage'-programme (business*

	gardens) and Incubators financed by the Industrial Development Corporation SIVA. The business gardens and incubators enable a greater sectoral focus, and as such, a tailored approach to the businesses engaged in digital transitions. *The programme is staged across three phases:* *- Phase 0: Mobilisation (dialogue with business gardens and incubators)* *- Phase 1: Introduction courses (digital opportunities and challenges, acknowledging stage of digital maturity, make a simple digitalisation strategies)* *- Phase 2: Specialisation (Sector specific, organisational development; case studies; digital business models, hackathon, pilot projects)*
Resources needed	*Key actors:* *Business gardens, incubators, Proneo, enterprises, and Trøndelag County Council.* *Total number of enterprises mobilised: 400 in Trøndelag county.* *Financial model (3 years):* - *Self-funding part (including local enterprises and business gardens and incubators, and Innovation Norway): 4.5. million NOK* - *Regional funding: 4.5 million NOK* - *Businesses own contributions: 1.95 MNOK* *Total cost over 3 years: 10 950 000 MNOK*
Timescale (start/end date)	*Autumn 2020 – ongoing (3 years)*
Evidence of success (results achieved)	*The programme is relatively new, with a kick-off in January 2021. The aim is ambitious, but attainable. Mobilising 400 enterprises in the region is an important first step. A sense of urgency pertaining to competitiveness is discernible in Trøndelag County Council's promotion materials and should be an incentive to participate. The step-by-step approach adopted in the programme, is a good approach to make it relevant for more traditional and less digitally mature enterprises in the region.*
Potential for learning or transfer	*This is an excellent example of how low threshold workshops can mobilise enterprises that otherwise would be left out of the conversation on digitalisation. Making digitalisation fit the context of the businesses, rather than the other way around is key in this programme.*

	The coordination efforts are also worth noting. Taking already existing structures rather than constructing new partnerships is a good way of further connecting across governance and actor levels in the region. This help decrease levels of fragmentation.

The level of transferability of the SME Digital (AT) and Industry 4.0 (NO) is high, however it is important to keep in mind that good practices cannot be replicated one to one. Sensitivity to the contextualities surrounding the good practices and what contextual specificities that have allwed these good practices to develop, are important to recognise. It is therefore recommended that good practices are to serve as sources of inspiration, and that these are modified to fit the specific context in which the good practices are to be applied.

In the case of SME Digital Austria the main learning is, that mentorship and public employed consultants who brought digitalization knowledge to SMEs did not work to the extend as it was planned. The main issue was, that the knowledge was partly not perceived as being important or SMEs missed someone who helps them from the first step through the implementation until enrolment of the measures. The term of applied knowledge is now used very often. A lot of effort of new initiatives runs now into building up a network of digitalization experts, IT solution providers, SMEs and governmental representatives. While it is not clear how to enroll a similar initiative in the HP territory since the funding topic has been discussed and structural funds seem to be not suitable for the program. Since the program is also applied on cyber security issues (same structure: also potential analysis at the beginning, afterwards grants are offered for implementing solutions, firewalls,…) maybe this part could be used as a field test for the initiative (less money and less SMEs need higher security measures while the structured knowledge provided by the consultant in the first step can be easily created at the beginning as a IT security questionnaire). The initiative is not very expensive but has direct output so starting it as a field test is in general relatively easy.

Industry 4.0 Trøndelag shows an example of how to use existing structures to promote digitalisation in less digitally mature enterprises, by working with the companies to identify their needs and understanding of digitalisation. It is a bottom-up process that allows for significant tailoring to the specific context of the enterprises, rather than a top-down processes of what digitalisation might look like from a governance perspective. The aspects of the programme that could be transferred to the HP territory is e.g. the focus on the tailor-made programmes meeting sector specific needs. Building on existing structures in Latvia, regional actors should be more involved in the process of encouraging digitalisation. By drawing on the planning region's knowledge of their industrial and economic structures, the DIHs may be used to strategically target sectors. Much like Industry 4.0, introducing low threshold workshops that build on increasing the understanding of why, what and how of digitalisation and how it related to the particular businesses involved, may be a good place to start. The way Industry 4.0 Trøndelag is organised may also be a source of inspiration. By connecting actors

working with skills development and innovation to also work with digitalisation in a targeted way alongside the regional authorities, is a way to reduce fragmentation.

In addition to the two new identified good practices from Austria and Norway, it would be worth considering the transferability of the following cases from the Interreg DigiBEST website, to the Latvian context:

- (NO) **Public-private cooperation/funding model for Business Gardens-creating ecosystems**: May inspire ways of using public-private partnerships for the purpose of digitalisation (https://www.interregeurope.eu/policylearning/good-practices/item/3834/public-private-cooperation-funding-model-for-business-gardens-creating-ecosystems/)
- (PT) **Loja do Cidadão/ Citizen's Shop**: Having worked to establish a one-stop-shop since 1999 and more broadly since 2007, there might be knowledge to be shared on the opporutnties and challenges connected to establishing one-stop-shops as channels connecting SMEs and the government. (https://www.interregeurope.eu/policylearning/good-practices/item/3926/loja-do-cidadao-citizen-s-shop/)
- (ES) **Growing in Digital: how to grow digital to be competitive on national and international markets.** This programme seeks to increase the employability of young people not in education, employment or training by increasing their digital skills, and use their newfound skills to develop online enterprises. (https://www.interregeurope.eu/policylearning/good-practices/item/4834/growing-in-digital-how-to-grow-digital-to-be-competitive-on-national-and-international-markets/)

9. Findings and conclusions

Latvia scores below EU average on the overall DESI score, which places it in the bottom half of the ranking. It especially has low scores in integration of digital technology and human capital. More than half of the enterprises have very low level of digital intensity: they do not use electronic information sharing, social media, e-commerce or any other digital technologies. Access to human capital plays a significant role in the low level of integration of digital technology by business. There is still a scarcity of ICT specialists and room for improvement of the digital skills of the general population. From the analysis of the DESI indicators, it seems that there is disproportionate investments in E-Government in comparison to Human Capital, which is a risky long-term path if the goal is to digitalize SMEs.

Awareness raising has been high on the agenda, demonstrated by the mapping of digital intensity and the focus on demystifying the role digitalisation may have for companies. Besides the lack of digital skills, the main barriers for SME digitalization are the low adoption of technology, low e-commerce performance, lack of tangible and intangible incentives for digitalization, lack of financial support. Moreover, there are many players involved in the implementation of the policy and support measures. Hence, companies are often confused about the offers and whom to approach. Translating awareness raising into actions to improve

digital skills is underway, but it relies on the ability of governing bodies and private actors to work together to develop targeted support schemes for SMEs. This requires a partnership approach which should include different departments, sectors, and levels of government.

When it comes to policy, there is no single strategy addressing the digitalisation of SMEs in Latvia. Instead, digitalisation efforts are guided and funded through a range of policy instruments spanning various government departments. Several **guiding policies** provide the overall development context for the country and set a broad framework for digitalisation work. Sitting beneath these are four **core policies** that act as the central engine driving the digitalisation of SMEs. The environment for SME digitalisation is further supported by a series of enabling policies related to human capital and technology and data.

Several of the most relevant policies are undergoing a process of renewal. These policy changes (improvements) are based on substantial consultation and thus should be anticipated by the institutions who are in decision making power. There was however less evidence for the direct inclusion of SMEs themselves in the policy-making process. Two EDIHs will be implemented, each supporting a different subset of the SME community (digital native and traditional). This centralised approach appeard to have merit in a small country such as Latvia. Care should be taken however to carve out a clear and consistent role for the Planning Regions in the implementation of the hubs.

Despite the range of support measures available, it was somewhat difficult to sketch out a clear picture of all measures based on the DS and the PR Event. A similar lack of clarity was evident among the regional stakeholders interviewed, suggesting that this is an important area to be addressed, rather than an oversight on our part. The PR Event gave an excellent perspective on the main stakeholders and their influence on digitalisation of SMEs. It also suggested a high level of cohesion between stakeholders. There is room to improve alignment between the national and regional agendas as well as providing greater clarity to regional actors about their role and mandates in the implementation of the national plans.

The RS identifies a range of barriers, along with strategies through which these may be addressed. While many of the strategies demonstrate potential for success, our analysis suggests room for improvement in some areas. In particular, the PR Team see that there are already many activities underway related to awareness raising. Rather than adding to these (and potentially creating greater fragmentation), we suggest increased coordination between existing activities and stakeholders. The greatest need for investment as we see it, is in more tailored activities that will support individual companies to take the next step in their digital journey. These activities are obviously quite labour intensive and, as such could benefit from involvement of actors from the private sector and from academia.

In addition, we identified the need for greater balance between short-term, easy to implement changes, and longer-term structural changes. For example, one barrier raised in the OECD Study was that firms face obstacles accessing finance. This barrier was also evident in our review and is thus a notable absence from the RS. To address this, the PR Team recommends that **a clear roadmap and an overall action plan, including short, medium- and long-term goals should be established as soon as possible.** As part of this work, it would be worth considering the long-term goals in a context where EU funding plays a less substantial role. This will be important for long-term sustainability, as well as providing more flexibility for home-grown policy responses.

The good practices identified from Norway and Austria may fit well with the Latvian context due to their targeted focus on manufacturing industries in rural areas and strong focus on mentorship for SMEs. The additional good practices identified on the DigiBEST-platform address some of the challenges found in the Latvian context, including alternative funding mechanisms, one-stop-shop frameworks, and a structure for improving unemployment rates among young people by equipping them with digital skills. It is important to emphasise that good practices cannot be replicated one-to-one and should serve as sources of inspiration that can be modified to fit the specific context in which the good practices are to be applied. This may not only be the Latvian context, but also the specific context of the planning regions.

10. Recommendations for the Hosting Partner

The PR Team provides a series of recommendations for better public policies/policy instruments based on the knowledge gathered during the PR (desk research and field research).

Regarding the RS, the PR Team reccommends:

- The inclusion of a table which clearly details all support measures available to SMEs seeking to digitalise, including eligibility requirements and details about the source of support.
- That the RS includes a simplified version of the figure developed by the stakeholders at the PR event.

Regarding the role of different actors, the PR Team recommends:

- That the Ministries consider a stronger role for the voice of SME representatives themselves in the policy making process.
- Clearer communication between various levels of governing bodies, and a more clearly defined role for the Planning Regions in the roll out of the DIHs.
- Local and regional actors should be equipped with a strong awareness of the national agenda and be provided with adequate tools to enact the digital agenda.
- RS should highlight to a greater degree the role of the Ministry of Education and Science and the State Employment Agency in human capital development, and how they will work to overcome skills mismatch on the labour market.
- Stakeholders like the ones from the PR event should be in a systematic, regular strategic process where the strategy is revised, and next steps are planned. Working on coordinating pictures like the “Digitalisation in Latvia”-map help removing obstacles before they occur.
- There are a lot of good strategy and action documents now but its hard to find the road map in between – so building up the “one Latvian step-by-step-Roadmap” could be the big goal (maybe in a moderated process that identifies short, medium and long-term goals).

Regarding specific initiatives to support SME digitalisation, the PR Team recommends:

- Coordination of existing activities to reduce duplication. For example, webinars held in one region could be promoted to participants in all regions.
- That the support provided can be easily tailored to individual company needs. Ensure that workshops, support structures, or webinars are targeted to the audience in terms of the relative digital maturity of the SME. Avoid generalisations.
- Provided support through a consistent and transparent framework that operates similarly for all companies, so that the same support structures and opportunities are provided to all.
- Work with experts on both digitalisation and in the relevant to develop activities and webinars that suit the specific SME.
- Awareness raising activities that encourage companies to take things to the next level – transforming awareness into action.
- Utilise the competencies of IT expert companies in the field of digitalization. Instead of trying to transport all the knowledge and awareness to SMEs by governmental organisations, expert companies can do a lot of work instead. And since its their money, they will do everything to ensure that SMEs are taken care of well.
- Being up-to-date with all digitalization issues can be hard and requires a lot of effort. Since IT expert companies need the same inputs as people from governmental teams it makes sense to derive an infrastructure where knowledge will be passed on to those who need it in a centralized way
- Build up a network of external digitalization specialists available to work with SMEs to support the realisation of the policy goals.
- Try to avoid having too many initiatives but rather chose a small number of priorities and focus on maintaining and promoting these in a clear and consistent way to SMEs and other stakeholders.

Regarding funding and longer-term structural change, the PR Team recommends:

- That the recommendations of the OECD study are revisited and incorporated into the Road Map.
- Exploring alternate avenues for funding with a view to securing the sustainability of programs beyond EU funding (e.g., Public-private partnerships).
- Create sustainable structures that are independent from EU funding mechanisms.

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Appendix I. Policies related to SME digitalisation

Policy	Aims	Relevance to SME digitalisation
Latvia 2030	Main high-level long-term planning document in Latvia. Seven priorities: 1. Investments in Human Capital, 2. Change of Paradigm in Education, 3. Innovative and Ecoefficient Economy, 4. Nature as Future Capital, 5. Perspective of Spatial Development, 6. Innovative Government and Participation of the Society, 7. Development of Culture Space.	Includes such topics as use of information technologies and lifelong education, globalisation of economy, user-driven innovation and innovative entrepreneurship.
National Development Plan 2021-2027	National-level comprehensive medium-term planning document. Three strategic goals: 1. Equal opportunities, 2. Productivity and income, 3. Social trust. Key policy changes (selected): 1. Competitiveness of business and material well-being, 2. Promoting the increased use of digital technologies in business, 3. Smart specialisation, 4. Supporting innovation and investments.	The aspects related to digital entrepreneurship include the increase in R&D efforts in the defined priority scientific areas, reduction of obstacles for entrepreneurs, ensuring high-speed connectivity throughout Latvia, as well as the development of digital content, product and e-services to expand the use of digital technologies in the economy and in the population.
The Information Society Development Guidelines for 2014 - 2020	These guidelines reflect directions of transformation course for the national economy, growth priorities and also specialization areas, as defined within the RIS3 framework. Goals: 1. Provide the opportunity for anyone to use ICT, 2. Create a knowledge-based economy, 3. Improve the overall quality of life by contributing to the national competitiveness and increasing economic growth and job creation. Aspects covered: • ICT education and e-skills, • Widely available access to the internet,	Special attention in the Guidelines is devoted to implementation of open data principle in the public administration and reduction of administrative burden, simplifying delivery of public services by means of efficient and effective eServices and interoperable information systems. The policy also covers the enhancement of e-skills and improvement of Internet access and speed, which is an essential prerequisite for e-commerce and business in general.

	• Advanced and effective public administration, • E-services and digital content for public, • Cross-border cooperation for Digital Single Market, • ICT research and innovation, • Trust and security.	
The Digital Transformation Guidelines for 2021-2027	**currently out for public consultation and review by public authorities. A unified digital development policy for public administration, economy and society. Areas covered by the policy: • Promoting digital skill development for all citizens at every stage of life, • Providing entrepreneurs with a digital environment that enhances competitiveness, • Shift from intstitutionally siloed digitization solutions to the creation of open ecosystems. • Developing public-private partnerships to create innovative digital services and solutions, • Fostering a society ready to use new and existing digital tools, • Creating a connected ecosystem of public and commercial services, • Digital skills and education, • Digital security and reliability, • Availability of telecommunications and computing, • Digital transformation of the national economy (incl. Public administration), • Innovation, • ICT industry and ICT science.	Most, if not all, aspects of this policy are relevant.
Latvia's smart specialization strategy (RIS3)	Considers economic transformation priorities, focusing on fostering technological progress through innovation ecosystems and using public Research and Development investment to increase domestic capability and interregional comparative advantage. Investment priorities: • High added value products, • Productive innovation system, • Energy efficiency,	ICT and digitalization are a horizontal priority influencing every priority area of RIS3.

	• Modern ICT, • Modern education, • The knowledge base, • Polycentric development. Smart specialization areas: • Knowledge-intensive bio-economics; • Biomedicine, • Medical technologies; • Bio-pharmacy and biotechnologies; • Smart materials, • Technologies and engineering systems; • Smart energetics; • Information and communication technologies (ICT). Linked to: • National industrial policy guidelines, • Guidelines for Science, • Technology Development, • Innovation and Education Development Guidelines.	
National industrial policy guidelines	Medium-term policy planning document covering all sectors of the economy and setting out the objectives and directions for promoting economic growth for the next seven years, both domestically and internationally. Aims: • Promoting economic structural changes, • Increasing the production of goods and services with high added value, including strengthening the role of industry, allowing modernization of industry and services, as well as expanding exports. Key directions: • Availability of financing in order to increase innovation capacity, • Promotion of exports. Policy objectives: • Strengthening human capital, • Arrangement of business environment, • Promotion of export activities growth, • Increasing innovation capacity,	Key initiatives to foster the digital transformation of businesses include: • Zero paper economy concept, • 'Consult first' principle, • 'Zero bureaucracy' approach, • Proactive and public interest driven digital processes, • Facilitated conditions for new product creation and testing, • Support for small and medium-sized enterprises, • Strengthening the capacity of the internal market, • Introduction of a smart contract platform with links to public registers. On 26th of February, 2019 upon meeting agenda of the Cabinet of Ministers the informative report "Examples of the use of blockchain technology, prospects and further actions to promote the development of the field" presented by the Ministry of Economics has been reviewed and taken into consideration aiming at in-depth assessment of the prospects for the use of blockchain technology in the public sector and identifying further actions to promote its development in Latvia, as well as legal and technological aspects evaluation related to

	• Strengthening the infrastructure and technological base of enterprises, as well as the availability of investments or financial resources.	blockchain technology integration into market.
Guidelines for Science, Technology Development, and Innovation 2014-2020	A new horizontal approach to science and innovation policy, linking research and industry sectors in a single system. The main components for a successful development of Latvian innovation system are the following: 1. Development of the potential of scientific activity; 2. Development of the platform for long-term cooperation between researchers and enterprises; 3. Support for the development of innovative enterprises. Overall aim: Raise the global competitiveness of Latvian science, technology and innovation, satisfying the development needs of Latvian society and economy. The new strategy in Science, Technology Development, and Innovation for 2021-2027 is under elaboration by responsible ministry.	Not currently addressed in the Regional Study. Suggested recommendation: The new strategy in Science, Technology Development and Innovation 2021-2027 should include clear links to the Digital Transformation Guidelines for 2021-2027 (and vice-versa)
Education Development Guidelines 2014-2020	No broad overview provided for existing study. The new strategy, Education Development Guidelines 2021-2027, sets Latvian National Skills Strategy goals including: • Improving study outcomes for learners, • Promoting a culture of lifelong learning, • Reducing skills mismatches in the labour market, • Strengthening skills system management. • Technology and future skills (new).	Covers investment in lifelong learning and human resources as an essential precondition for economic development and increased competitiveness, as well as supporting workers to adapt to changing labour-market conditions through formal and non-formal education. Supports workers to keep up with changes to the sectoral qualification structure through the provision of modular vocational education programs. Each program includes the modules: "initiative and entrepreneurship", "public and human security" and "information and communication technologies". The new iteratation of the policy includes a goal related to technology and future skills, which covers: • Digitisation of learning content and mixed forms of learning (including online studies), • Digital transformation and innovation development and governance,

		• Support for digital innovation for research and entrepreneurship.
Growth and Employment	Aims at achieving key national development priorities along with the "Europe 2020" objectives, providing significant support to economic growth and employment, with a particular focus on the competitiveness of Latvia's economy. Based on support from the European Regional Development Fund (ERDF), the Cohesion Fund (CF), the European Social Fund (ESF) and the specific allocation for the Youth Employment Initiative (YEI). Priority areas: • Support RTD and innovation, • Promoting information society, • Supporting the competitiveness and innovation of SMEs, • Supporting the shift towards a low-carbon economy in all sectors, • Environment, sustainable use of natural resources and adaptation to climate change, • Development of sustainable and efficient transport infrastructure, • Promoting employment and work force mobility, • Education, skills and lifelong learning, • Social inclusion and fight against poverty.	Approximately 23% of the Growth and Employment fund (OP) covers aspects that relate directly or indirectly to SME digitalisation: 3.91% of the total OP allocation is aimed at promoting information society by ensuring the accessibility of high-speed broadband connection to at least 80% of Latvian households, developing e-services, e-solutions, e-commerce (priority axis 2). In particular it will support the broadband network development in rural areas with at least 30 Mbps to address the existing digital divide. 7.11% of the OP resources are allocated to supporting the competitiveness and innovation of SMEs (priority axis 3) by creating the necessary preconditions for private investments, and by creating new enterprises and jobs in the national and regional development centres. Under this priority axis, the ESF will support strengthening the institutional capacity of public administration and judiciary to create a better environment for business and less corruption. 11.68 % of the OP resources will be allocated to investments in education, skills and lifelong learning (priority axis 8). ESIF investment will be instrumental for reforms in the higher education through supporting establishment of an internationally recognised accreditation agency, elaborating new joint doctoral study programmes and programmes in EU languages and implementation of result-based governance. ESIF will promote vocational education and training, with focus on work-based learning, support comprehensive career guidance system and a new lifelong learning implementation model (through regions).
Spatial Development Planning Law	LV	
Service Environment Development Plan	LV	
Latvia's Open Data Strategy	LV	
Artificial Intelligence Strategy	LV	

ICT Governance concept	LV	
Conceptual architecture of public administration information/ICT strategy for public administration	LV	
Policy plan for the electronic communications sector	LV	
Cyber Security Strategy	LV	
Report: Examples of the use of blockchain technology, prospects and further actions to promote the development of the field	LV	
Post-corona Recovery and Resilience Facility Plan (EU)	This is only mentioned briefly but could be quite important. Set to include up to 1.65 billion euros with 20% earmarked for digitalisation efforts including: promoting the coordination and efficiency of ICT governance, centralization of public infrastructure solutions, establishment of a digital transformation support centre to support businesses, integrating digital skills into the education system and digital (5G) 3B country interconnection. Strategic goals in regard to digital transformation are digital transformation of public administration, business digitization and innovation, digital skills and infrastructure (5G). In the context of entrepreneurship, it is aimed at full cycle support initiatives for businesses to be able to easily access knowledge, digital transformation support tools and mentoring anywhere in Latvia regardless of company's area of activity and size.	