# INTERSESSIONAL PANEL OF THE UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

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Contribution by Latvia

to the CSTD 2021-2022 priority theme on "Industry 4.0 for inclusive development"

# CSTD 2021-2022 Priority theme 1: Industry 4.0 for inclusive development

1. **What are the national strategies, policies, laws, programmes and initiatives concerning Industry 4.0 in your country?**

The following policy documents have been approved for the planning period 2021-2027 (most of them are currently available only in Latvian).

- **National Development Plan of Latvia for 2021-2027**

  https://www.pkc.gov.lv/sites/default/files/inline-files/NAP2027__ENG.pdf

- **National Industrial Policy Guidelines 2021-2027 (available only in Latvian)**

  https://www.em.gov.lv/lv/media/4157/download

- **Guidelines for Science, Technology Development and Innovation 2021-2027 (available only in Latvian)**

  http://polsis.mk.gov.lv/documents/7053

- **Research and Innovation strategy for smart specialisation of Latvia**

  https://www.izm.gov.lv/en/smart-specialisation-strategy

Latvia is planning to restructure its economy with an aim of facilitating productivity growth and export of knowledge-intensive goods and services (smart re-industrialisation). It will be focused on the following key areas:

- Knowledge-intensive bio-economy;
- Biomedicine, medical technologies and bio-pharmacy;
- Smart materials, technologies and engineering systems;
- Smart energy;
- Information and communication technologies.

- **Freedom of Information Law**

  https://likumi.lv/ta/en/en/id/50601-freedom-of-information-law

- **Digital Transformation Guidelines for 2021-2027** (available only in Latvian; summary article in English)

  https://likumi.lv/ta/id/324715-par-digitalas-transformacijas-pamatnostadnem-20212027-gadam

The guidelines provide for action in five directions and cover all key aspects of the digital societal breakthrough:

- Digital skills and education,
- Digital security and credibility,
- Access to telecommunications services,
- Digital transformation of the economy (including "public administration"),
- Information communication technology (ICT) innovation development, and commercialization, industry and science.

- **The Space Strategy of Latvia 2021-2027**

https://www.izm.gov.lv/en/space-policy

- **Latvia Open Data Portal** (available only in Latvian)

  https://data.gov.lv/lv

- **Support programmes and initiatives** (available only in Latvian)
  - In general about digitalisation support

    https://www.em.gov.lv/lv/digitalizacija
  - Innovation Motivation Programme

    https://www.liaa.gov.lv/lv/programmas/inovaciju-motivacijas-programma
  - Business Incubators

    https://www.liaa.gov.lv/lv/programmas/biznesa-inkubatori
  - Start-up support programmes

    https://www.liaa.gov.lv/lv/programmas/jaunuznemumu-atbalsta-programmas
  - Innovation vouchers and support for attraction of highly-qualified specialists

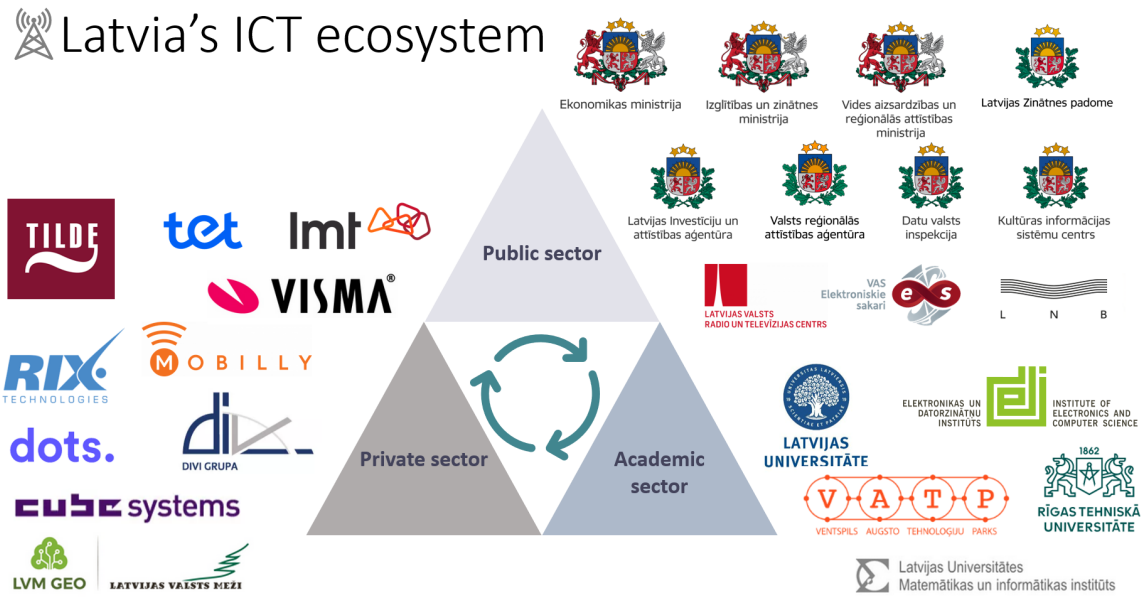
    https://startuplatvia.eu/innovation-voucher **(in English)**
  - Support for science result commercialisation

    https://www.liaa.gov.lv/lv/programmas/atbalsts-petniecibas-rezultatu-komercializacijai
  - International competitiveness development

    https://www.liaa.gov.lv/lv/programmas/skv
  - Green Channel (to relieve administrative burdens for high value-added investments)

    https://www.liaa.gov.lv/en/article/minister-economics-latvia-new-fast-track-green-channel-will-significantly-contribute-latvias-economic-breakthrough **(in English)**

2. **What are the key industries that are pioneer Industry 4.0 innovation in the country? List the key actors in the national ecosystem of innovation related to Industry 4.0 in your country (firms, universities, financial institutions, regulators)? What are the key networks of the ecosystem in your country (including online networks, innovation hubs, forums, etc.)?**




**Main industries**:

- telecommunications
- electronics
- logistics
- smart mobility
- biotechnology.

**Key networks:**

- ***IT Cluster*** https://www.itbaltic.com/;
- ***Latvian Information and Communication Technology Association (LIKTA)***: https://likta.lv/en/home-en/ and their "*Platinum Mouse*" award: https://likta.lv/platina-pele/;
- ***European Digital Innovation Hubs*** (EDIH), Latvia will have two EDIHs https://digital-strategy.ec.europa.eu/en/activities/edihs;
- ***annual 5G Techritory*** – **Europe's Leading 5G Ecosystem Forum**: https://www.5gtechritory.com/.

**Companies:**

- ***"Latvian State Forests"*** – innovative logistics system, implementation of geospatial information technology products and services, drones and robots.

- ***LMT*** *(Latvian Mobile Telephone*) – introducing 5G technology & autonomy of unmanned aircraft; connecting 5G industry players to enable developing new solutions for connected and automated mobility; virtual call management platform developed for use in mobile networks, it eplaces traditional, VoIP, and cloud PBXes with a single solution; SPARTA is one of the four EU projects aimed at strengthening the region's resilience and capabilities in cybersecurity; using AI to transform urban data into valuable information that ensures increased road safety and traffic optimization; powering drones with AI and sensors enhances the success of rescue missions such as search operations, forest fires, and more; the cross-border e-CMR solution will significantly ease the exchange of cargo information between countries and benefit the transit speed. More: https://innovations.lmt.lv/solutions/.
- ***SAF Tehnika*** – Accumulated experience, world-class intellectual capacity and a team of like-minded suppliers are the essential assets behind Customized Microwave SolutionsTM - our commitment to an industry-rare capability to design, develop and produce hundreds of supported, customer-tailored product variations, as well as numerous specific, user-adapted application techniques and features for our products all linked together by a feature-rich SAF Network Management System. More: https://www.saftehnika.com/en/about#;
- ***Conelum*** – a biotechnological startup using AI in microbiological testing, measuring cell clusterization. Solutions helps companies in reducing risks of product recalls, saving products and reputation, becoming able to react on time, minimizing negative consequences of unlikely events of outbreaks. More: https://www.conelum.com/about_us.html;
- ***MikroTik*** –provides hardware and software for Internet connectivity in most of the countries around the world. More: https://mikrotik.com/aboutus;
- ***Mobilly*** – super convenient and user-friendly billing system for mobile phones around. With the Mobilly application, you can pay for car parks, entry fees in Jurmala, taxi services, postage, purchase train and bus tickets, supplement Bite cards, purchase Helio interactive TV codes, make donations and pay for other goods and services. More: https://mobilly.lv/en/about-mobilly/;
- ***Dots*** – strives to take a different approach by using the latest advancements in Cloud and Machine Learning to solve challenges related to efficiency, mobility and security. More: https://www.wearedots.com/en/about-us;
- ***Tilde*** – drives innovation in European language technologies, provides world wide award-winning language technology, translation and localisation services. *Tilde* provides localization services, develops custom machine translation systems, and offers online terminology tools for a wide range of languages. More: https://www.tilde.com/;

3. **What are the challenges that your government have faced or may face for promoting Industry 4.0 in your country to contribute to national development priorities and accelerate the progress towards the SDGs?**

Development of Industry 4.0 is very much related to availability of well-trained engineers, machine setters and operators who have knowledge of digital programming tools and who are able to prepare machine tool control programmes. Lack of qualified staff and insufficient level of skills of employees.is one of the main challenges faced by the government in promoting Industry 4.0. In addition, implementation of Industry 4.0. is affected by insufficient private

investments in digital infrastructure and implementation of digital solutions in the company's business processes.

4. **What should governments, the private sector, labour unions and other stakeholders do so that developing countries can benefit from these technologies?**

- Support for good-practice sharing, training in digitalisation and new opportunities in solving business problems more effectively,
- Awareness of the modernisation and skills needed in production – it is not an expensive extra, but necessity for competitiveness;
- Unified vision and deep understanding of measures needed to effectively and smoothly become digitised company/industry/country;
- In order to clearly define the direction of economic development it is necessary to develop a strategy, define priorities, clearly identify action for future development and the results to be achieved;
- Develop close cooperation with industry, involve stakeholders in the development of legal frameworks and support framework;
- To offer cooperation platforms that help to promote the implementation of digital solutions in companies' business processes, providing consultations and offering support tools.

5. **What actions can the international community, including the CSTD, take to help your country take advantage of Industry 4.0 for inclusive and sustainable development?**

International experience, involvement of foreign experts, experience from other countries, exchange of sectoral views is essential to find the best solutions to sustainable strategy.

6. **Could you suggest some contact persons of the nodal agency responsible for projects/policies and international collaboration in this context as well as any experts (from academia, private sector, civil society or government) dealing with projects in this area? We might contact them directly for further inputs or invite some of them as speakers for the CSTD inter-sessional panel and annual session.**

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7. **Do you have any documentation, references, technological assessments, future studies or reports on the priority theme in your country or region?**

- **Smart specialisation strategy (RIS3) and analytical reports**: https://www.izm.gov.lv/en/smart-specialisation-strategy-ris3, including ICT:

https://www.izm.gov.lv/en/media/6435/download (most important document to understand Latvia's ICT ecosystem);

- **Several studies related to implementation of RIS3** are ongoing, including the following OECD projects: "The Anticipatory Innovation Governance", contact person: Natalija.Pavluha@liaa.gov.lv, and "Innovation Diffusion", contact person: Janis.Paiders@izm.gov.lv.