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

Geneva, Switzerland
18-22 January 2020

Contribution by Latvia

to the CSTD 2020-2021 priority theme on "Harnessing blockchain for sustainable development: prospects and challenges"

DISCLAIMER: The views presented here are the contributors' and do not necessarily reflect the views and position of the United Nations or the United Nations Conference on Trade and Development

CSTD 2020-2021 Priority theme 1: Harnessing blockchain for sustainable development: prospects and challenges

1. **Could you share specific examples, projects or initiatives that have used or plan to use blockchain technology for the SDGs in your country? What are the main challenges confronted while trying to implement these projects/initiatives? (Examples may include blockchain solutions for financial inclusion, trade facilitation, supply chains, health, energy, e-Government, etc.)**

Latvia encourages e-government in all domains of government and has also explored the use of blockchain systems in the public sector and government provided services. Latvia has examined two main areas for blockchain use: blockchain-based cash register and blockchain systems in the State Enterprise Register.,

The work has been ongoing already for two years to identify the most appropriate solution for **blockchain-based cash register** with an aim of strengthening the supervisory capacity of the State Revenue Service and reducing unregistered cash flow. Blockchain-based cash register solution is also expected to ensure environmental sustainability by reducing paper use. We also see the blockchain technology use linkage to SDG 9 – development of industry, innovation, infrastructure.

As blockchain is still an emerging technology, one of the challenges have been how to bring together and involve all the public and private sector stakeholders in order to build the understanding and start modelling the potential pilotprojects. As a result, an active communication channels have been established between government representatives and local and global blockchain experts.

As a cross-industry collaboration platform between start-ups, IT companies and the public sector the **Hackathon for Public service blockchain based solution development** took place in April 2019 with an objective to develop a solution that addresses several challenges: tax fraud, online cash register, big data and modern technologies and digital transformation. Participating teams was given a task of coming up with a proposal for potential solution and problem-solving processes, as well as creating a prototype solution through experiment and research. There were 40 participants in the hachaton from 12 countries, including such industry experts as *MICROSOFT, ACCENTURE, PWC, Start-up Wise Guys* and *SWEDBANK.* The main prize went to the *Z Book* who developed blockchain based solution to eliminate tax fraud on every transaction by adding blockchain electronic signature as QR code on every document from Enterprise Resource Planning and cash register systems.

Following the hackathon, efforts are ongoing to start implementation of the cash register pilotproject. A conceptual framework of pilotproject is expected to be ready by March 2021. There are several players involved: Ministry of Finance is working to determine the legal status of cryptocurrencies; Ministry of Economics continue efforts to expand the explanation of the blockchain technology; Financial and Capital Markets Comission`s is developing guidelines on the possibilities and the applicable regulation of the usage of virtual assets and Initial Coin Offerings. To co-ordinate all necessary action, the working group group had been established under leadership of the Ministry of Finance.

2. **National systems of innovation affect how different countries can harness blockchain for increasing competitiveness, growth and sustainable development. Please share information about the ecosystem of innovation in blockchain in your country by informing: What are the key industries/specific sector that are pioneer in blockchain innovation in the country? What are the key actors in the national ecosystem of innovation (entrepreneurs, development teams (firms), venture capital, Banks and financial services, academia, regulators)? What are the key networks of the ecosystem in your country (including online networks, innovation hubs, forums, etc)? What are the national strategies, policies, laws and regulations (in place or preparation) related to blockchain?**

In 2018, the **Action Plan for the Development of Start-up Ecosystem** was adopted in Latvia. One of it's main objectives is to raise public awareness and promote cooperation between startups and the academic sector and corporations. Since 2019, more focus has been brought towards the cooperation between start-ups and ICT companies, state owned companies, corporations and other public sector bodies.

The business climate in Latvia is favourable to start-ups. Latvia incentivises the local blockchain start-up scene by having a **flexible tax system**, **tax benefits** for early companies with the need of funding, and issues **special visas** for the founders to become residents in the country. Latvia scores 3rd place in the OECD rankings for the attractiveness of tax system and has lowest financial requirements for start-up founders. **StartUpLatvia** is a government-supported initiative for further fostering the ecosystem.

In 2017, the **Latvian Blockchain Association** was established. The development and implementation of blockchain technologies is also supported by the industry professionals like *CryptoLab, Blockvis* that provide professional consulting and education on blockchain and cryptocurrencies. Since 2017 Riga is hosting annual **Baltic Honeybadger** conference, a major blockchain event in Latvia and the world, dedicated to blockchain and the technologies built around it. The event have had speakers from most successful blockchain initiatives and has been well received and earned a big deal of popularity in the industry. Last conference held in 2019 was attended by more than 700 blockchain enthusiasts. Several other events and annual forums are being organized, such as **Techchill**, **Riga COMM**, **Digital Freedom Festival** and others that bring blockchain community together to discuss the potential and implementation of the technology.

Latvia has a highly qualified and skilled pool of thousands of **IT professionals and software developers,** out of 1.9 million population 30,000 is employed in IT. Foreign companies have been outsourcing their IT projects in Latvia for the past years and software development outsourcing plays a crucial role in the country's exports. Latvia has around 6,500 ICT companies and over 400 start-ups, many of them have already started specializing in blockchain-based development and offer full service to outsource. *AXIOMA Group, Blockvis, Netcore, Soft-FX* are some of most widely known blockchain development companies who have served *Binance, Bitfinex, Bitstamp, Kraken* and many more big names in the industry.

There are several **successful blockchain companies** that were started in Latvia: The *Bitfury Group* is the largest full-service blockchain technology company in the world that develops and delivers cutting-edge software and hardware solutions necessary for businesses, governments, organizations and individuals to securely move assets across the blockchain. *Notakey* is another startup that provides various identification and authentication solutions. In

order to support further blockchain solution development and implementation, startups may join specialized pre-acceleration programmes and attract venture capital through *Overkill Ventures* which is funding blockchain projects.

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

There are currently two main challenges:

- a clear vision on how to develop and obtain already existing blochain technology solutions;
- how to adapt existing IT systems as to enable compatibility with new innovative solutions, including blockchains.

4. **What are the actions that the international community, including the CSTD, can take to contribute to harnessing blockchain for sustainable development?**

International community can play an important role in promoting blockchain technologies for sustainable development. Latvia already is a member of several initiatives. To support blockchain initiatives and share experience a **memorandum of understanding** have been signed **between the Baltic States** (Estonia, Latvia, Lithuania). Latvia is also a member of the **European Blockchain Partnership** that provides for establishment of a **European Blockchain Services Infrastructure** to support the delivery of cross-border digital public services, in full compliance with the highest standards of security and privacy. Under this initiative, several pilot projects have been started and a number of cross-border digital services have been identified, where blockchain technology might be implemented.

In our view, by utilizing multilateral approach, internation community and the CSTD could establish a cluster where blockchain technologies could be jointly developed by member states in close collaboration and experience sharing. Similarly to COVAX initiative which is realized to develop Covid-19 vaccine.

5. **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.**

Edgars Ozoliņš-Ozols. Ministry of Economy, Edgars.Ozolins-Ozols@em.gov.lv, +371 67013011
Jānis Ratkevičs, Ministry of Environmental Protection and Regional Development, janis.ratkevics@varam.gov.lv, +371 67026542
Edijs Ceipe, Ministry of Finance, edijs.ceipe@fm.gov.lv, +371 67083804
Deniss Fiļipovs. Bank of Latvia, Deniss.Filipovs@bank.lv, +371 67022483
Andris Melnūdris. Latvian Information and Comumunication Technology Association, andris@likta.lv, +371 29289429

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

Information report on use examples, perspectives and further action to promote development of the blockchain technology
http://tap.mk.gov.lv/mk/tap/?pid=40469165

Information report on the feasibility of using blockchain technology in cash registers and other devices for the purposes of grey economy mitigation
http://tap.mk.gov.lv/mk/tap/?pid=40488256

Information report on the benefits and risks of the use of virtual currencies and the follow-up to the development and mitigation of identified risks
http://tap.mk.gov.lv/lv/mk/tap/?pid=40461133&mode=mk&date=2018-08-14

Blockchain Hackathon Results https://www.linkedin.com/pulse/tax-blockchain-hackathon-results-liza-aizupiete/