

**DIGITAL  
CZECH** REPUBLIC



# **DIGITAL CZECH REPUBLIC CONFERENCE 2019**

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REPORTS / MARCH 2019  
CONFERENCE

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# DIGITAL CZECH REPUBLIC CONFERENCE 2019

## CONFERENCE REPORTS - MARCH 2019

In 2016, the Institute for Politics and Society held the first edition of the Digital Czech Republic Conference. Its aim was to sparkle public debate on the matter and bring examples of good practice from abroad. Gradually, digitalization became one of the main topics of public space, and the conference grew into a year-round series of activities, meetings and publications.

This year's Digital Czech Republic Conference focused on the development of e-Government and e-Health, on education as a state service for citizens, as well as on the recommendation that the Czech Republic should become the leader in state-of-the-art Artificial Intelligence (AI) and blockchain technologies.

The conference took place on February 7th and 8th, 2019. Below, there are the main outputs from the individual panels. The topic of each panel and more information about the conference can be found [www.digital-czech-republic.eu](http://www.digital-czech-republic.eu)

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## KEYNOTES I

<b>SPEAKERS:</b>	<b>ANDREJ BABIŠ</b>	Prime Minister of the Czech Republic
	<b>TOMÁŠ PETŘÍČEK</b>	Minister of Foreign Affairs of the Czech Republic
	<b>MARTINA DLABAJOVÁ</b>	Czech Member of the European Parliament, Member of the Committee on Employment and Social Affairs, Vice-president of the ELF
	<b>VĚRA JOUROVÁ</b>	European Commissioner for Justice, Consumers and Equality of Women and Men
	<b>DITA CHARANZOVÁ</b>	Czech Member of the European Parliament, Vice-Chair of the Committee on the Internal Market and Consumer Protection

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The ongoing digital revolution in the economy and society represents a huge opportunity for Europe and especially for the small and medium-sized EU member states. The breakthrough technology transforms the structure of the economy and opens opportunities for the emergence and growth of new businesses in all areas of the economy. At the same time, we are facing new and fundamental challenges in the area of politics, regulation and the whole society. We cannot face such things ourselves, but only as a Common Europe.

Věra Jourová puts an emphasis on the Internet. This topic creates more and more preoccupations, not only for politicians but also for ordinary people. That is why, it is essential to collaborate closely with the IT sector. Moreover, it is necessary to have respect and dignity for every human being. The main topic is the place of technology in our lives. We are moving somewhere in between, and we deal with risks that exist and will continue to exist in the future. Europe must also consider the imbalances, the strength of multinational corporations, and the inability of European smaller companies to compete. In Europe, the General Data Protection Regulation (GDPR) was adopted, since privacy, as a human right, is a fundamental value of Europe. The main goal is to give people control by giving to them the ability to have more information about the recipients of their data and to offer them the possibility to request their data back. Today, Europe wants to promote the development of artificial intelligence, however, by doing that, it will be necessary to follow its own European values. In addition to investing, it is also necessary to increase data volumes, create centers and conditions for keeping talents and give people an opportunity to work in this area.

The goal should also be to gradually adapt the legislation to create a European model for digital intelligence. This model includes the fact that the priority will be privacy and security. Cooperation with Japan as a member of the G20 is also essential. It is also key to analyze foreign investments and to ensure that the market is not dominated by one big giant.

*„We cannot be an assembly shop of Europe forever, we have the most precious thing in our heads.*

*We need to support innovation, science, research, start-ups, with a faster adoption of new technologies and link all this to the digital state.*

*Our goal is not only to have a liberal digital society, but also a company that has a reputation in the world and that is a positive example for other countries.”*



*Andrej Babiš*

Furthermore, we could ask the question “Is the Czech Republic digital?”. By this question, two conclusions can be made. The good news is that in the statistics, the Czech Republic has improved over the last year in the field of digitalization, but this improvement is less important if we compare it with the results of the other European Union countries – Czech Republic is ranked on the 17th place out of the 28 countries. Moreover, in the digital world, top companies do not come from Europe, but from the US and China. Despite having several major companies, we do not reach the level of these countries.

The key is about finding solutions to increase scientific-research projects. According to the OECD, China's spending on this department is more than 2%, Europe is at this threshold, but the target is 3%.

Moreover, Europe should concentrate on making investments directly to the European industry. Competition is also important, but in the global world, we cannot think about competition only at a European level. Development will go in the right direction if we focus on supporting European products.

It is essential to say “yes” to artificial intelligence as it is also a challenge for the future of Europe. Artificial Intelligence and ethics can be connected, and it is important to concentrate on what the financial technologies bring to our companies and our citizens. The Internet is a good servant, but a bad master. It has been to our advantage during several years, but it is also a challenge for democracy.

## KEYNOTES II

**SPEAKERS:** **MARGRETHE VESTAGER** Commissioner for Competition

**MARTA NOVÁKOVÁ** Minister of Industry and Trade, Government of the Czech Republic

Digital technology is creating a new kind of society that connects citizens, governments and businesses says Margrethe Vestager, Danish politician serving as the European Commissioner for Competition. Innovation can help our society to create jobs and make our lives healthier, but it has also some drawbacks. That is the reason why it is important to have rules to make sure that modern technologies like AI support our fundamental values. Unfortunately, some digital companies do not pay their fair share of taxes. This problem has direct consequences on government policies that will have to cut vital services or put more costs onto people who are least able to pay.

Furthermore, innovation is costly, time-consuming, and uncertain, therefore, to encourage companies to invest, it is necessary to have competition. Competition makes companies innovate, it is the way they can survive in a truly competitive environment. Platforms like search engines, social media networks and online marketplaces need to be a driver for innovation, not the opposite. Unfortunately, their interests are often conflicting with the interests of their users.

The future of competition policy will be more and more challenging. The need to protect innovation and competition will be higher and the new rules/policies will have to be able to protect the new digital world.

The Czech Republic and Ministry of industry and trade focuses on the support of small and medium sized companies and wants to build an industrial zones as attractive places for new entrants that could build on technical tradition. One of the current main priorities is Artificial Intelligence that can also help with the transformation of the Czech economy to the digital one and is the key element of industrial policy.

*„Digital technology is not just about finding different ways to do a few things. It's really creating a new kind of society. We can't just trust that innovation will break down every barrier. Innovative ideas can be the fuel for our future. But for that to happen, we need to make sure they have a chance. Because in the end, it's not technology that will decide our future. It's us.“*



*Margrethe Vestager*

## SCENE SETTER

**SPEAKER: ROBERTO VIOLA** Director General for Communications Networks, Content and Technology, DG CONNECT

Roberto Viola emphasizes on the development of AI in a European context, mentioning both opportunities and challenges. According to the newly published EU Coordinated Plan on Artificial Intelligence, efforts should be concentrated on four areas.

First, it is necessary to have partnerships and cooperation on a European level for the development of AI, with, as an example, the European Union common enterprise on supercomputing. The EU can challenge major actors, such as the United States and China only through such deepened cooperation. This will be done in the next few years through initiatives such as the new Digital Europe Programme, and Horizon Europe.

Second, our era is characterized by the need for vast amount of data, even in an individual's phone. The advancement of AI in the EU requires an even greater amount of data and new challenges will arise in fields such as traffic management. Thus, the role of European politicians concentrating on technological development is to ensure the increasing availability of data. The focus then lies on creating effective EU data spaces, a goal which the GDPR legislation will enable. The aim is for all EU citizens to benefit from such advancements: data-sharing in the EU namely permits for healthcare to be practiced across member states' borders, innovation specialists work on AI-powered healthcare.

Third, it is also relevant to mention the importance of skills. According to European Commission statistics, people are accepting less and less that AI or robots could replace them in their job. Thus, the EU's role in this sphere is twofold. Firstly, it should guarantee that the new generation is prepared for new jobs created by this societal and economic change with initiatives such as the Digital Opportunity Traineeships. Thanks to this, innovation will be diffused, including in middle-scale enterprises. Secondly, they must work to make people see this development in a positive light. According to Mr. Viola, there is compelling evidences that such developments enable to "relocalize" production, since work is coming back to the EU thanks to automation. Through explanation, the EU must build a system of trust between people and AI development, explaining that the process is human-centric and is done in an ethical manner.

As of now, there are EU "Draft AI Ethical Guidelines," which will be discussed in April 2019. Discussions will include five main ethical challenges of AI development. Firstly, transparency, so that people know when and to what extent an AI was or was not used. Secondly, to ensure that there is no bias in the AI's algorithm. Thirdly, cope with inevitable jobs losses and tackling the subsequent inequality by transforming the economy. Fourthly, guarantee security and safety in relation to AI development. Finally, the last aspect concerns humans staying in control of the AI, making sure that it complies with the collective interests of the liberal society. Mr. Viola also states that a combination of excellence and

*„In today's world, Europe can compete with the United States and China in technology only if they work closely together to achieve a common goal.”*



Roberto Viola

collaborative teamwork would help us to succeed becoming a major player in the AI field.

## PANEL: CZECH REPUBLIC AS AI HEART OF EUROPE

<b>MODERATOR:</b>	<b>JAN KLESLA</b>	External Expert, Institute for Politics and Society
<b>SPEAKERS:</b>	<b>VĚRA JOUROVÁ</b>	European Commissioner for Justice, Consumers and Equality of Women and Men
	<b>MICHAL PĚCHOUČEK</b>	Professor at the Czech Technical University in Prague, Deputy head for research at Department of Computer Science
	<b>PETR OČKO</b>	Deputy Minister for New Technologies, Ministry of Industry and Trade of the Czech Republic

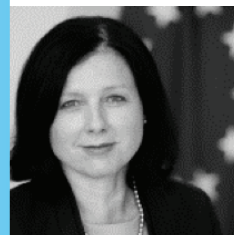
The potential of the European AI is high despite the strong competition of the United States and China. The European Union can develop its own model based on the respect of the people and fundamental rights. A close cooperation of top universities, research facilities, corporations and governmental bodies is crucial for building a strong ecosystem. European commissioner for Justice, Consumers and Gender Equality, Věra Jourová strongly believes that our companies can catch up and compete with Big Tech Giants thanks to the rise of AI technologies. However, some rules to protect people, their privacy and personal data are needed. A good example is the GDPR. Its aim is to provide a clear legal framework for companies and researchers developing AI technologies.

Professor Pěchouček is the head of the Center for AI at the Czech Technical University in Prague. One of his projects is the building of an ambitious AI superhub. It includes a cooperation between technical universities, the city and the government. This project is inspired by similar projects in Canada and Singapore. It shall become one of the European centers of excellence in AI. Prague is a great brand that can and is already attracting young talents. However, as a small country in the very heart of Europe, we cannot do it alone, but we need to work together with our partners in Bratislava, Warsaw, Budapest and other cities with great universities and research centers in the field of AI.

Concerning the National AI strategy of Czech Republic, one of the main goals is building of European centres of excellence in AI in Prague. Undoubtedly, strong R&D and its financing and support will be needed, however, it must also cover other areas that will be impacted by the AI. Education, labour market, regulation, ethics and international cooperation are good examples. A strategy that focus on building flexible structures consisting of both public and private stakeholders is planned. The National AI strategy shall be adopted by the Czech government by the end of April 2019.

*„We need to address the influence that artificial intelligence will have on transforming our lives and our entire society.*

*When you look at what is happening in this area in Europe and in the world, it is clear that it is our last chance to do that.”*



Věra  
Jourová



## PANEL: INTELLIGENT MOBILITY AND TRANSPORTATION

<b>MODERATOR:</b>	<b>IVAN HODAČ</b>	Founder and President of the Aspen Institute Central Europe
<b>SPEAKERS:</b>	<b>DAN ŤOK</b>	Minister of Transport, Government of the Czech Republic
	<b>DITA CHARANZOVÁ</b>	Czech Member of the European Parliament, Vice-Chair of the Committee on Internal Market and Consumer Protection
	<b>BOHDAN WOJNAR</b>	Board Member for HR Management, Škoda Auto
	<b>TOMÁŠ SVOBODA</b>	Chair of Department of Cybernetics, Czech Technical University in Prague
	<b>MARK BORIS ANDRIJANIČ</b>	Director of External Relations for Central and Eastern Europe, Uber

Smart mobility is not just about autonomous cars, but also about drones, and more generally the transport infrastructure. It also concerns issues of reliability and safety, reduction of emissions and increase in efficiency of the transport system. The state is committed to create a legislation for new types of transport. However, it is unlikely that we would soon reach the 6th level of autonomous driving despite the wave of rapid changes in the automotive industry and in the interconnection of models and systems having started. According to Tomáš Svoboda, science is far from ready. The problem here lies not on legislation, but rather on the rate at which the large number of cars already present in the country could be replaced.

There is a high number of European achievements regarding emission reduction policies and transport infrastructure especially for the Dieselgate affair. The call for mobility, and especially with autonomous cars, remains a key topic for the EU. Indeed, this topic generates many legal questions: is it necessary to create a separate legislation? What about the liability in the case of a car accident? Shared mobility and the solutions for the reduction of pollution and congestion is also an important subject. The solution, as presented by Mark Boris Andriyanič, would be to provide and to promote reliable shared mobility. It is important to cooperate with the automotive industry, state regulators and cities. The challenge is to integrate sharing services like Uber with electric bicycles, scooters and public transport. Healthy competition, investments, and the automotive industry will continue to be the driving force of the European economy. It is up to the carmakers to keep up with this trend. Minister of Transportation Dan Ťok believes that carmakers will not let the IT giants take over their market power.

Innovative endowers will help the industry, since carmakers of the future will sell mobility rather than cars. In this way, partnership and teamwork will be needed to ensure maximum security and to decrease the number of accidents, most of which are caused by human factor. Traditional car manufacturers' excellency is twofold. The first one is about combustion engine, gearboxes and chassis. The second excellency concerns the efficient mass production. Therefore, an automobile's threat is not in its autonomy, but the way it is being driven.

*"None of the top technology companies come from Europe. All are Americans or Chinese.*

*We must therefore rethink about what we do in Europe. We have to ask about what we can do to increase the research and development projects and what we should focus on."*



*Dita  
Charanzová*

## VIP TALK:

# CYBERSECURITY IN THE AGE OF THINKING MACHINES

**SPEAKER:** ONDŘEJ VLČEK CEO of Avast Software

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According to surveys, people are afraid of cybercrime, especially from stealing and misusing their identity and financial data. In 2017, worldwide financial damage was over \$172 billion. In today's world, we are witnessing more than 400,000 cyber-attacks of different intensity, and it is quite difficult to keep pace with the new technological capabilities needed to ensure security, i.e. to deter these attacks.

Avast focuses on cyber security - as early as 2001, the unpaid version of its antivirus software was introduced.

Avast focuses on five main areas:

- Malware detection and blocking
- Artificial intelligence and machine learning
- The Internet of Things
- Localization technology
- Optimization and cleaning of computer devices

In 2013, thanks to long-term research, it was a breakthrough when artificial intelligence and machine learning were used to detect potential viral threats. Machine learning makes it easy to create adaptive algorithms that can assess the dangers of a situation on their own. The process begins with data collection then extraction and recognition. Within 12 hours, individual models are updated and subsequently classified and evaluated for their safety. Thanks to this system, Avast also won the CIA test, as it identified the malware "Brutal Kangaroo".

Government and European Union regulations must not bind companies' capabilities and prevent new ideas and innovations from emerging. Regulations must be well balanced, not restricting companies, but at the same time protecting consumers' data.

The government must support education and the formation of critical thinking. At the same time, it needs to set the right environment for foreign companies and professionals to bring new ideas to the country. The government and the authorities need to employ experts who will not only effectively manage their agenda, but also support the work of individual companies.

Only through appropriate regulations, education support and the creation of friendly conditions can the Czech Republic become an innovative leader in Europe.

*„Regulations must not hinder the emergence of new ideas and innovations. They must be properly balanced, not only by restricting companies, but also by protecting consumers' data.*

*The government must then mainly support education and the formation of critical thinking.”*



Ondřej Vlček

## PANEL: FUTURE OF WORK

<b>MODERATOR:</b> MILENA JABŮRKOVÁ	Vice President, Confederation of Industry of the Czech Republic
<b>SPEAKERS:</b> MARTINA DLABAJOVÁ	Czech Member of the European Parliament, Member of the Committee on Employment and Social Affairs, Vice-president of the ELF
TAAVI RÕIVAS	Former Prime Minister and former Vice President of Estonia
ALEŠ CHMELAŘ	Deputy Minister of Foreign Affairs for European Issues of the Czech Republic
NICOLAS COLIN	Co-founder and Director of “The Family”
ANNIKA AGÉLII GENLOTT	Project Manager at National Action Plan for the digitalization of school

Regarding the impact of digitalization on the labor market, digitalization is often perceived as a threat to employment. However, according to the member of the European Parliament, the Committee on Employment and Social Affairs (EMPL), ALDE/ ANO, and vice president of the European Liberal Forum, Martina Dlabajová, digitalization and robotization will create new opportunities and new types of jobs. Professions will change, and new skills will be required. Consequently, it will be necessary to adapt to these changes. Some of the main necessities will be to invest continuously on Research and Development but also to focus gradually on new types of jobs. Digitalization of jobs is happening, and nothing can stop it. Some sectors are more concerned than others. For example, agriculture is a sector where the digitalization has a big impact, services are also more and more concerned by that. Furthermore, to recruit the best people, it is necessary to consider two main ideas, Computing and Networking. These two elements are very important. Nowadays, consumers expect more from companies, they expect companies to act faster, to deliver higher quality products and with lower prices. That is why, companies need to constantly innovate. The flexibility of mindset for entrepreneurs is necessary. This new environment creates a lot of instability for employers, and the ones who will be the most able to face these instabilities will be the ones who will succeed.

Concerning the changes on labor market, if we do not create new structures adapted to the labor market, contestations will increase. There is a polarization of the job market, some segments are cheaper, and others more expensive. We can clearly see the effects of this polarization during the Brexit and the US elections. Some people feel to be a part of the digitalization, others feel to be left behind. In the end, people are more divided.

Finally, it is hard to implement digitalization to education, even in countries like Sweden. The changes in education create uncertainties because we do not know how the new education system will impact, and how students of the current education will be in the future. Some people defend the idea of returning back to the education system of the 1990's. The Swedish project manager at national action plan for the digitalization of school, Annika Agélii Genlott promised that she will suggest initiatives where different stakeholders will need to cooperate.

*“Digitalization and robotics will create completely new opportunities and jobs. Professions will change, new skills will be needed, and we will have to adapt to the changes.*

*One of the top priorities is R&D investments.”*



Martina  
Dlabajová

## PANEL: EDUCATION FOR THE DIGITAL AGE

<b>MODERATOR:</b> MARTINA DLABAJOVÁ	Czech Member of the European Parliament, Member of the Committee on Employment and Social Affairs, Vice-president of the ELF
<b>SPEAKERS:</b> ROBERT PLAGA	Minister of Education, Government of the Czech Republic
LOUISE PALLUDAN KAMPMANN	Director, Division for Digital Overview and Communication, Danish Digitalization Agency
PAVEL KYSILKA	Founder, 6D Academy, former Vice Governor of the Czech national bank

The main tool to tackle impact of digitalization and automation on economy, labor market and society is the improvement of education. It is not only a matter of incorporating technology in the system, but also a matter of teaching students how to use this technology, stressed minister of education Robert Plaga. The task of politicians is to create a framework helping all people to acquire new qualifications, which is the only way Czech Republic can develop into a knowledge-based economy. Teachers' skills should be adjusted for a changing world, mainly through the inclusion of digital skills in pedagogical faculties' curriculum. Schools themselves should emphasize media literacy and digital skills.

There are two key features essential to the improvement of the current situation, said Pavel Kysilka, founder of the 6D Academy. Teachers should learn how to use IT and then include it in their class routine. Secondly, students should learn key soft social skills which companies are looking for in order to improve both their professional and private life. Such as the ability to distinguish correct info and high-quality sources, adaptability to change of environment, creativity, persuasion, leadership in a more empowering hierarchical structure, cooperation with different people, and finally the ability to "sell" outputs. One of the biggest challenges is also

inclusion of older age groups in the digital age and education. The barrier is often psychological. and the government, through the education system, should cooperate with private companies to overcome it. Palludan Kampmann explained the Danish approach to digitalization, since the country was elected 2018 World Champion in public digitalization by the United Nations. Denmark builds on high levels of trust in the public sector and on the strong political mandate on digitalization. Joint public-private digitization strategies were implemented in successive four-year time frames. Digital portals were made, and national and local campaigns were performed. Libraries and citizen service centers staff were trained, and voluntary organizations were involved. In Denmark, the new education system has a more individual approach and focuses on

elderly who are not yet able to use digital tools as well as on the youth, who knows how to use such platforms but largely chooses not to. Political compromise and cooperation are one of the most important tools in making education's digitalization successful.

*"Two things are key to improve the current education system.*

*First, teachers should learn to use IT and use that knowledge in their teaching.*

*Second, pupils should learn to use the so-called soft skills that will be needed for their future jobs."*



*Pavel Kysilka*

## PANEL: AI REGULATION AND ETHICS

<b>MODERATOR:</b>	<b>ALEX IVANČO</b>	Head of International Law Unit, Ministry of Industry and Trade
<b>SPEAKERS:</b>	<b>ZSUZSANNA MÁTRAI</b>	Corporate Affairs Director for Central and Eastern Europe, Microsoft
	<b>DANIEL BRAUN</b>	Deputy Head of Cabinet of the Commissioner for Justice, Consumers and Gender Equality
	<b>ALŽBĚTA KRAUSOVÁ</b>	Researcher at the Institute for State and Law, Czech Academy of Sciences
	<b>MILAN ZUBÍČEK</b>	Public Policy and Government Relations Manager, Google Czech Republic

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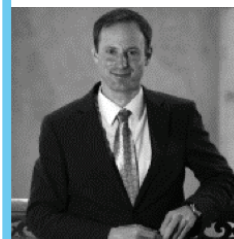
AI is not there to replace human beings, but to compliment it. This idea sparked comments from different sides of the panel about how incredible the development of AI has really been.

The question of how to ethically implement these technologies within a business model is very important, both for humanistic reasons as well as for legal reasons. The steps taken by Google to tackle these issues includes working with human rights organizations, publishing data sets and heavily regulating the usage of facial recognition. In that regard, there are series of ethical principles to describe the Google mindset, some of which were for AI to be: socially beneficial, avoid creating bias, built for safety and primacy by design.

Regarding the AI regulations we should adopt, it will be necessary to have a strong legal framework and regulations to safeguard ethics, using the example of the GDPR. In this regard, it is interesting to note that Chinese investments in AI are down due to the ethical nature of European regulations. Therefore, while self-regulation may be good, the usage of unified governmental regulations can also be essential.

However, AI also has a long way to go; while people are already asking about the ethical concerns with self-driving vehicles, automated surgery and usage of AI in judicial proceedings, many of these elements are still far away. In the case of automated cars, the legal requirements that would have to be imposed are very large. Automated vehicles would have to be able to drive alongside non-automated ones.

*“Self-regulation in the field of artificial intelligence is the right way, but coherent regulation at European and global level can be crucial.”*



*Daniel Braun*

Concerning AI in the justice system, it is used in the United States and many concerns have been raised due to its ethical complexity. Therefore, it shows a crucial aspect of this debate, which is the idea that ethics in AI is particularly difficult since we give the AI the ethical example in the way we program it. Thus, it is worth asking: is it truly prudent to give AI that much control or is it necessary to use it more as an accessory to human skills?

## BUSINESS BREAKFAST: CZECH DIGITAL GOVERNMENT

<b>MODERATOR:</b>	<b>JAN KLESLA</b>	External Expert, Institute for Politics and Society
<b>SPEAKERS:</b>	<b>ADAM VOJTĚCH</b>	Minister of Health, Government of the Czech Republic
	<b>VLADIMÍR DZURILLA</b>	Chief Digital Officer, Government of the Czech Republic

Some experts and public officials consider the digitalization of health to be a key point in the whole process of digitalizing public administration. Such a change should bring benefits to every stakeholder affected by health care.

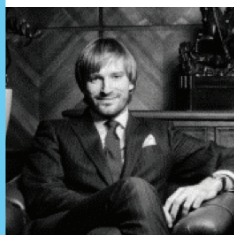
The benefits of “electronization” for patients should include access to their full medical documentation, including the possibility for others to provide access to this documentation. Regarding the benefits of this system to providers, the basis is clear legislative standards for the preparation and sharing of these documents. Accurate data standards to secure communication and data exchange are also important. With this legislative change, precise standards for operating the system will be defined without unnecessary complications. Benefits for healthcare professionals include availability to provide comprehensive documentation to their patients to better adjust their treatment.

Whole system should be based on the registers that are necessary for the future functioning of e-health. These registers will include, for example, a registry of all health professionals, including doctors, or a registry of clients of healthcare institutions. These registers will simplify a wide range of activities, such as the possibility for doctors to do simplified online orders, a survey of specialists and occupancy deadlines for individual doctors.

Currently, the lack of legislation is the biggest obstacle to digitalizing healthcare. E-Government tools and services are missing, including the state guarantee to have relevant technical equipment needed to ensure the functionality of the system. On the other hand, it must be acknowledged that the new legislation is already in place and the envisaged deadline for the submission of a new draft law to Parliament is the end of April 2019.

*“We want to share data not only about drugs, but also about examinations and laboratory tests, and their results.*

*We want to offer to people services and solutions that are so beneficial for the users that they will want to accept them themselves, because it will be useful for them and their non-acceptance, on the contrary, will lead to uncompetitiveness.”*



*Adam  
Vojtěch*

Digitalization should also serve to train new doctors through virtual reality in the future. Such a system of education is still in its infancy, but where it is already being implemented, positive results are already visible. Statistics show a higher success rate of students who have been trained through virtual reality compared to students who have been trained through classical methods.

The Government of the Czech Republic is considering the possibility of building such a training health center. The problem, however, is the question of affordability.

## VIP TALK: BOHEMIAN INTERNET AND DATA

**SPEAKER: JAROMÍR NOVÁK** Chairman of the Council, Czech Telecommunications Office

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The old world of telecommunications is gone, and as the world changes, the telecoms sector itself is also changing. We stand on the threshold of another time. Its common denominator is the Internet connection everywhere and for everything.

Competition is also crucial for building a new world characterized by ubiquitous connection everywhere and for everything. In this new era, we will not be just consumers but also creators of content. However, a lot of people are still afraid to use new services as they worry about data consumption and limits belonging to the old analog world. It shall be changed by the new mobile carrier that government plans to attract to Czech Republic to deepen competition on the telco market. It shall also improve the quality of services and the development of infrastructures.

The Czech Republic lacks a suitable environment for smart investments and business models. While in the old world, everything was built on counting pulses and minutes, in the new world, people are not only consumers, but also authors of the content. We want to be always and everywhere online. Therefore, service offers are increasing, but the average cost of data is falling.

But many people are still afraid to use these services because they are used to the old model of data counting. This is also linked to the poor awareness of data consumption by people, with the result that their quantity will not increase significantly in the future. We also struggle with the need to improve the quality of security services, or the need for development criteria in the context of public transport, which are the subject of public consultation.

*“We are on the threshold of another time. Its common denominator is the Internet connection everywhere and for everything.”*

*The Czech Republic still lacks the right environment for smart investments and business models.”*



*Jaromír  
Novák*

## PANEL: CZECH BLOCKCHAIN REPUBLIC

<b>MODERATOR:</b>	<b>MARIA STASZKIEWICZ</b>	Executive Director, Czech Fintech Association
<b>SPEAKERS:</b>	<b>PĒTERIS ZILGALVIS</b>	Head of Unit for Digital Innovation and Blockchain, Digital Single Market Directorate, DG CONNECT
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Innovation improves our lives only if it improves real and useful products and services and make them solve real problems. At this stage, there is now a breakthrough blockchain technology or, in general, a decentralized database technology. It works on a network of computers that securely perform transactions and store data about them. There is no need for a single central server or central authority. At the same time, this technology ensures the credibility of electronically written information: it is clearly visible what the original is, who is the author, who is authorized to change the data and to what extent.

Blockchain technology completely changes old business models. It brings automation and greater clarity in supply chain management and business finance, as well as significant time and cost savings. Therefore, banks are the first to use them in traditional sectors. For example, it is estimated that up to a fifth of the cost of global transport is spent on transport documentation, and one business financing transaction will employ an average of 20 middlemen who carry out up to five thousand activities during document processing.

The job is often manual, it generates almost no financial value. In addition, these costs are often insurmountable for SMEs. Therefore, blockchain solutions are emerging in the financial sector - simple platforms - that replace complex business transactions and automate administrative activities with self-enforcing contracts. This reduces the error rate and the risk of fraud, as all retailers, including banks and insurance companies, have access to the same, secure, real-time database.

*"We need to ensure legal entrepreneurial certainty in the form of clear and good rules for innovative entrepreneurs. Citizens can be sure that innovation will be used for the benefit of society."*



*Pēteris  
Zilgalvis*

Reducing administrative burdens and increasing the credibility of electronic documents is one of the basic features of blockchain. It can also be applied to other areas, including the public sector. However, it is a nascent technology that changes not only the way businesses and institutions operate, but also encounters outdated regulations. In order to make a full use of it in a globalized world, we need the involvement of the state and international organizations. An innovative entrepreneur must gain legal certainty for his commercial project and the citizen must be sure that innovation will be used for the benefit of the society.



This effort is being developed by the European Union through the Blockchain Observatory and Forum and pilot blockchain projects, for example, in the field of electronic identity and cross-border diploma register. Earlier, modern rules for the recognition of electronic documents - the MLETR model law - were developed at the UN (UNCITRAL), with the Czech Republic making a significant contribution. Now the Czech Republic also needs an accommodating legal environment for blockchain technology, including the adoption of the above-mentioned MLETR rules. Therefore, it will remain as a part of global retail chains. It seeks to bring Czech business in the Blockchain Republic initiative, with which the government recently signed a cooperation memorandum.

## NOTES

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