



# DIGITAL CZECH REPUBLIC 2019

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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 of society. We cannot face such things ourselves, but only as a common Europe.

During the Keynote speech of the Digital Czech Republic 2019 Conference, Vera Jourova- European Commissioner for Justice, Consumers and Equality of Women and Men emphasized on the topic of 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 and that people do not suffer from technological xenophobia.

The main issue is not some internet regulations, but more the place of technology in our lives. We are moving somewhere in between, and we deal with risks that exist and they 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 GDPR was adopted, since privacy, as a human right, is a fundamental value of Europe. On the other hand, money is also a data because we buy and transmit digital data to digital content. 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 is also 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.

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. However, 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 for 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 lord. It has been to our advantage during several years, but it is also a challenge of democracy.

Roberto Viola, Director General for Communications Networks, Content and Technology (DG CONNECT) at the European Commission, addresses the development of Artificial Intelligence (AI) in a European context, mentioning both opportunities and challenges. Namely, Viola is emphasizing four areas in which efforts should be concentrated according to the newly agreed EU Coordinated Plan on Artificial Intelligence.

Firstly, the partnerships and the need for cooperation on a European level for the development of AI. As an example, the European Union common enterprise on supercomputing. Indeed, the decision for all members to invest in the project to create the largest supercomputer was taken in only one year. Viola argues that only through such deepened cooperation in pursuit of a common goal can the EU challenge major actors, such as the United States and China. This will be done in the next few years through initiatives such as the *Digital Europe Programme*, and *Horizon Europe*.

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 and personalized medicine is also based on distribution of data.

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, they 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. Through this, innovation will be diffused, including in middle-scale enterprises. Secondly, and simultaneously, they must work to make people see this development in a positive light. According to Viola, there is compelling evidence that such developments enable to "relocalize" production, since work is coming back to 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 done in an ethical manner. Last aspect is the development of an ethical and trustworthy AI. As of now, there are EU "Draft AI Ethics 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.

The potential of the European AI is high despite the strong competition of USA 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. 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 for instance, are needed. A good example is the GDPR. Its aim is to provide a clear legal framework for companies and researchers developing AI technologies.

Concerning the National AI strategy of Czech Republic, one of the main goals is the 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 concerned by that. A strategy that focuses 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.

## Intelligent Mobility and Transportation

If we define smart mobility, we understand that it is not just about autonomous cars, but also about drones, and more generally about the transport infrastructure. It is also

about the reliability and safety, the reduction of emissions and the increase in efficiency of the transport system.

Minister of Transportation Dan Ťok emphasizes on the safety of the drones. According to him, 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. The problem is not about legislation, but more about technology, because of the large number of cars in the country. Concerning the European Union's activities on this topic, a high number of achievements of emission reduction policies and transport infrastructure regarding the Dieselgate affair. According to MEP Dita Charanzová, the call for mobility remains a key topic for Europe. Autonomous cars will be the topic no.1 during the next four years in Brussels. From the legal point of view, this topic gives a whole scale of questions. Is it necessary to create separate legislation? The question of liability in the event of car accident also remains on the table.

Bohdan Wojnar from Škoda Auto points out that the wave of rapid changes has started. There is a huge change in the automotive industry, the interconnection of models and systems. The structure of car industry will change rapidly over the next few years.

Shared mobility and the solutions for the reduction of pollution and congestion with new technology and infrastructure is also an important subject. The solution, as presented by Mark Boris Andrijanič from UBER, 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 not only sharing services like Uber, but also electric bicycles, scooters and public transport.

Moreover, healthy competition and investments, the automotive industry is and will continue to be the driving force of the European economy. Furthermore, Dan Ťok explains that it is up to the car makers to keep up with this trend. The minister believes that carmakers will not let the IT giants to take over their power.

Regarding the trends, alliances and co-operations. Innovative foundation will help the traditional industry. For the private area and the region's differences, carmakers of the future will therefore sell mobility rather than cars. Mark Boris Andrijanič thinks that everything is about partnership, and we need to work together to ensure maximum security. He points out that more than one million people die in car accidents each year, most of which are caused by human factor. That is why the cooperation in the field of security is particularly important.

## Future of Work

Regarding the impact of digitalization on the labor market, digitalization is often perceived as a threat to employment. However, according to Martina Dlabajová, Member of European Parliament, 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.

Former Prime Minister Taavi Rõivas points out that the 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. According to Nicolas Colin, Co-Founder and director of “The Family”, 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.

## AI Regulation and Ethics

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 creates 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. Annika Agélii Genlott, Project manager at national action plan for the digitalization of school in Sweeden, assures that she will suggest initiatives where different stakeholders will need to cooperate.

AI is not there to replace human beings, but to compliment them and free up the human mind to doing other things it's more suited to. This idea sparked comments from different sides of the panel about how incredible the development of Artificial intelligence has really been. The example of AlphaGo defeating the world top players, highlighting the speed of change in technology, and its surprises.

The question of how to ethically implement these technologies within a business model is therefore very important, both for humanistic reasons as well as for legal and distribution reasons. The steps taken by the Google to tackle these issues were explained, that includes working with human rights organizations, publishing data sets and heavily regulating the usage of facial recognition. Milan Zubiček from Google describes 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.

It will be necessary to have a strong legal framework and regulation in order to safeguard ethics, using the example of the GDPR (General Data protection regulation) and provisions on testing. In this regard, it is interesting to note that Chinese investments in AI are down due to the ethical nature of European regulation. Therefore, while self-regulation may be good, the usage of unified governmental regulations can also be essential.

Concerning AI in the justice system, it is used in the United States and many concerns have been raised due to its ethical complexity. Citing for example the inherent bias in the AI itself when giving out sentences. Therefore, these things show a crucial aspect of this debate, which is the idea that ethics in AI is particularly difficult considering we give the AI the ethical example in the way we program it. The debate ended with the idea of whether it is truly prudent to give AI that much control considering this fact, or whether it is truly just an accessory to human skills.

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