elf

INSTITUTE FOR POLITICS AND SOCIETY

REPORTS

INTERNATIONAL CONFERENCE

DIGITAL CZECH REPUBLIC

January 16, 2017, Schebek Palace, Politických vězňů 7, Prague,

The second annual international conference titled Digital Czech Republic 2017 is organized by the European Liberal Forum in co-operation with the Institute for Politics and Society and other partners. The conference promotes social debate, discussion between politicians as well as the private sector on key issues of digital technology, the digital economy, and the digitization of the public sector with aims towards more efficient and user-friendly administration. There is a gap between the drive and enthusiasm towards digitization expressed by citizens, entrepreneurs and Czech companies compared to the more tempered attitude displayed by state institutions. The OECD and the European Union have criticized Czech state institutions for their lukewarm stance towards digitization. The aim of our conference is to identify the most serious problems related to digitization and to try to find answers to questions such as:

- **What steps should be taken by the government, public administration as well as state and public institutions to become more efficient and more responsive to the needs of citizens?**
- **In which areas should the state intervene to enable and support the development of the digital economy?**
- **The development of the digital economy brings new challenges and threats. How can we prepare for these challenges and what is the best way to prevent new threats?**

elf

DIGITAL CZECH REPUBLIC

INSTITUTE FOR POLITICS AND SOCIETY

An event organised by the European Liberal Forum (ELF). Supported by Institute for Politics and Society and partners. Co-funded by the European Parliament. Neither the European Parliament nor the European Liberal Forum are responsible for the content of the programme, or for any use that may be made of it. The views expressed herein are those of the speaker(s) alone. These views do not necessarily reflect those of the European Parliament and/or the European Liberal Forum asbl.

ABOUT THE CONFERENCE

Keynote Speakers

DR. DITA CHARANZOVÁ, Member of the European Parliament, ALDE
PAVEL KYSILKA, Czech Economist, Former Head of the Czech National Bank
TOMÁŠ PROUZA, Coordinator for Digital Agenda, Government of the Czech Republic
ONDŘEJ MALÝ, Board Member, Czech Telecommunication Office

Moderator: **JAN KLESLA**, Deputy Head of the Economic Section, Lidové noviny

IMAPCT OF DIGITAL REVOLUTION ON THE CZECH REPUBLIC

DITA CHARANZOVÁ:
The Need of Legal Steps

Dita Charanzová promotes shared economy and the services of shared accommodation or transport. She appreciates access to fast internet, which allows us to use these services. Another very important development necessary to undertake is legal steps that will protect consumers and prevent misuse.

PAVEL KYSILKA:
New Digital Era

Pavel Kysilka spoke about the current age as an era of radical change. A large amount of labour force will be substituted by artifical intelligence. He also mentioned innovations of today´s age - virtual reality, 3D printers and autonomous transport.

The most important task is to not stay behind and to still be competitive. We can follow Switzerland as an example - they implement digitization even in traditional spheres. Our government has to regulate education, infrastructure and the development of e-Government.

TOMÁŠ PROUZA:
Siuation of e-Government in Czech Republic

Even though e-Government in Czech Republic is developing (we have more than 700 electronic apps) and many services/ documents are available online, we still lack one connected vision for the future arrangement of e-Government.

One vision of a well functioning e-Government can be found in Estonia. The priority for the Czech Republic should be in implementing electronic elections, for example.

ONDŘEJ MALÝ:
Overpriced Czech Mobile Operators

One of the big problems of the Czech Republic are telecommunication sites. Czech operators charge too much money while offering little service. In the statistics of European Union, the Czech Republic has a very bad position - the prices for offered services are disproportionate.

The decrease in the price of services, unfortunately, only concerns big companies, non-company customers still overpay the operators.

It is a big problem for continuing development - if there are no low prices, people will not use the internet, and online services and apps will not be used more.

Czech Republic is also behind in fixed sites. Fast internet works properly only in cities. Investments are also not carried out.

Panelists

MATS LÖFSTRÖM (Finland), Member of Parliament, Eduskunta

DR. BURTON LEE (USA), Lecturer, European Innovation, Stanford University

MIROSLAV LUKEŠ, General Director for Czech Republic and Slovakia, Mastercard

Moderátor: **JAN KLESLA** Deputy Head of the Economic Section, Lidové noviny

The speakers for the Digitization of Payments and Finances panel introduced their visions of a new digitized world. This world brings many possibilities and questions like how to simplify everyday life? What is the future of digital payments? What is the situation in other States like? And what is the situation in the Czech Republic?

PANEL A

DIGITIZATION OF PAYMENTS AND FINANCES

Impact of the digital revolution on payments and finances

The digitization trend influences behaviour of all subjects and consumers in the financial market. Digitization of payments provides benefits to people all over the world, and the financial sector has never been as dynamic as it is today.

Currently, more than 50% of interactions between banks and clients are online and because of this trend, banks closed over 3500 of their subdivisions in 2015. This number will increase proportionally as the online interactions between banks and clients grow. Almost 40% of banks could close their offices in 2020 and the number of online interactions might increase to 95%. This process of digitization could create a large problem for banks in the future - the threat of losing most or all of their clients. However, this situation only exists in Europe and developed countries. The situation in developing countries is completely different. There are more than 2.5 billion people without a bank account in the world. In developing countries only 41% of adults have access to a bank account. The situation for women in these countries is even worse - only 37% have a account in a bank, compared to 46% of men. Without access to financial and banking systems, women, poor people, small companies, and others must rely on their own (extremely limited) savings.

One of the main goals of the G20 economic group is the process of digitization of payments and remittances. According to various studies, participation and access to financial systems help to create new jobs, limit wage inequality, and also help poorer people moderate financial shocks. Continual development and increasing extension of digital platforms and payments have brought contactless payments, swiftness, transparency, time saving, security of payments, restriction of grey economy, and an increasing amount of paid taxes. All of these benefits help to increase economic growth. Thanks to smartphones, financial services can be accessed in a matter of minutes. Examples of the contribution of digitization to economies can be seen in Tanzania, where the digitization of payments between operators of ports and the government brought 175 million USD worth of savings, and in Brazil where the government saved more than 30% of transaction expenses.

Government and private sector play an important role in effectivity and accessibility. It is necessary to digitalize governmental payment and cash receipts, set up policies that motivate implementation of digital payments and regulations that promote innovation. The most important task of government is to improve accessibility and the conditions of digital payments.

MATS LÖFSTRÖM:
Finland as an Example of Financial Literacy

Finland is at the top of digital progress. Internet payments were introduced there in the 1980s. Card payment or smart phone payment is the most commonly used method of payments, but real time payments via apps like Siirto or Swish - where only a phone number is needed - are also used.

Currently, Finland faces many challenges. One of them is a new law coming into force - Payment Accounts Directive (PAD). This law provides citizens more transparency and an easier way to change providers of bank services.

Another new law is PSD2 - regulation of payment services. Banks will no longer have a monopoly to access information of their clients. Banks will share this information with a “third party”, that allows payment without using a credit card. It is a benefit for citizens with many bank accounts, because users will have all information on a single connected platform. Who will provide this service? In neighbouring Sweden this service was already put into action through the Tink app.

BURTON LEE:
The Paradox of the Large Financial Market

Even though the United States is one of the biggest financial markets in the world, financial literacy and, especially, digitization are not in a good condition. The proof might be the use of paper checks. The approach to innovation, according to Lee, is mainly a question of personal attitude and many people do not want to learn new things even if they are easier.

The solution lies in the culture of technical universities. Universities should be more progressive and they should focus on development of the IT field, which is usually taught only in a theoretical way. The question of financial literacy is as important as good medical care.

MIROSLAV LUKEŠ:
Future of Digital Payments

The Czech Republic often is inspired by Scandinavia. Even though our financial literacy is still low„ this number is still slowly increasing. Czech people begin to discover modern ways of payments, especially when it brings them comfort and security. Some innovations, like fingerprint payments, still face Czech conservatism.

Despite increasingly cashless payments, in some fields the possibility to pay by card (for example hospital, post office, etc.) is still missing. Because of the absence of quick cashless payment (and this is not the only reason) new services working on app platforms are becoming more popular.

What are the visions for the future? The priority is to reduce cash payments and put cashless payments into practice in public transport. The use of smartphones as a wallet or terminal is also discussed.

Panelists

PROF. JIŘÍ ZLATUŠKA, Member of the Chamber of Deputies, Dean of the Faculty of Informatics, Masaryk University

DR. BURTON LEE (USA), Lecturer, European Innovation, Stanford University

JAN MAŠEK, Founder, Red Button, Brain&Breakfast

PAVEL KYSILKA, Czech Economist, Former Head of the Czech National Bank

Moderator: **PETR KOUBSKÝ**, Analyst and Publicist

Speakers of the panel Education 4.0 and its impact on the labour market focus especially on questions concerning the educational situation today and potential reforms, that can move education closer to its ideal. What is the biggest problem of the current education system, and how can we solve this situation?

PANEL B

EDUCATION 4.0 AND THE IMPACT ON THE LABOUR MARKET

Impact of the Digital Revolution on Education and Labour Market

One of the tools to deal with the digital era is an education system that projects into every social field. This influences not only our present, but most importantly, our future.

The requirements of education are currently going through a radical change. The influence of digitization has had an impact on the structure of employees, the content of teaching, and also on the training of future teachers and students. With the increase of digitization in education, access to computer literacy is just one of the things that must be improved. Some schools still require drill and exact repetition of learned propositions instead of creative and innovative thinking. Is it still necessary in the digital age?

Employers increasingly require an orientation with many different fields, not simply one-dimension specialization. An emphasis on the connection of humanistic and technical education is needed. Education is expected to provide a vast spectrum of methodically arranged knowledge and skills. Under these terms, it is understood that employees will have to understand IT skills, production, economic and social processes, and particularly critical interdisciplinary and systematic thinking. It is also important to educate oneself in a lifelong process of learning and adaptation. Only 30,1% of the elementary school teachers are qualified for IT teaching and just 31,6% of secondary school teachers. These figures show the importance of teachers adapting to the new digital age. Education of the current generation should not be neglected, because the future belongs to them.

But this is not enough. According to European Union statistics, almost half of working citizens in the European Union lack sufficient IT skills. This insufficiency will have an impact on the IT sector, in which the number of job vacancies in the European Union will increase from 700 000 to approximately 850 000 in 2020. The problem of insufficient IT literacy is caused by a vacuum in existing educational systems. According to data provided by Eurostat, only one fourth of all employees have learned required skills at schools or universities. Most people have learned their skills with help of their friends or colleagues. These statistics show the clear importance of integrating so called digital skills into the education system. Society will not be able to face newly created demands without sufficient education. All of the new digital cybernetic changes are related to education.

The quality of graded teachers will play a fundamental role. The labour market will require innovative and creative graduates. We can then expect that the teaching profession will change from its foundations. The main task will not be to teach only facts, but to find them and to learn how to work with them.

In the era of globalization we can find many educational systems with free online access, for example TED talks, conference videos, and lectures on actual issues. Also important is the Khan´s School project, which publishes free educational videos for students.

JIŘÍ ZLATUŠKA:
New Profesionals Education Problem

The Czech school system is lagging in many spheres of education regarding the overall concept of education, and the main deficiency of Czech students is language skill. An example worthy of following is Scadinavia. Our school systems produce so-called “walking encyclopedias” and graduates often can not find application in the labour market. An emphasis should be given on so called soft skills, which are practical skills that are still very important for communication and for finding a job.

The situation of our system is related to a lack of programmers and their problematic education. It is necessary to understand in practise, how each part of the computer works and to allow students to test and play with programmes. Students need to learn these skills through real world practice. But this is often lacking in Czech Republic, because the emphasis is put on theoretical knowledge. Only through practice we can educate the new generation of programmers, which we are currently lacking.

BURTON LEE:
Theory versus Praxis

Presently we are in an era of technological development. The problem of the education system in many countries and universities is that instead of a praxis, emphasis is placed only on theory. As an example, he mentioned Germany, where universities focus on the mechanical approach of teaching with a large amount of math lectures. Graduates with only theoretical knowledge have a lower starting position in the job market, than graduates with praxis.

The lack of programmers and other technical professionals is a large problem overall, not only in Germany. It is due to a low quality of universities, where even professors do not have sufficient practical knowledge nor know how to code and program. How can we educate new generations? Universities should be the drivers of growth, but that rarely happens.

JAN MAŠEK:
Education as a Black Box

Jan Mašek considers education as a black box. A man is a tabula rasa, a blank slate that is influenced by an external environment. That is why education should be the highest priority.

Education is not only about school; in each phase of life different groups have an affect on us - family, friends or colleagues. People also learn many things on their own. Even though school plays a main role in our lives, our education system is still based on 18th century practices.

For success in today's technological world, a person has to know more than one skill (we have to be so called multi skilled), he has to be developing all the time and he should have attitudes we learn during our lives - empathy, critical thinking, cooperation, networking or the ability to share ideas with other people.

PAVEL KYSILKA:
The Investment to Education is the Most Important One

The purpose of education in the digital age is a priority for our whole society. In the past Czech exportal economy succeeded with its competitors thanks to an advantageous geographical location near Germany. But this is slowly drawing to an end. That is why we have to focus on education, which is considered as a weak point of Czech competitiveness. We have to prepare for a new age.

The aching point of the Czech Republic is mainly education. An example for us can be Singapour. We first have to take care of those who educate students and pedagogical schools have to prepare prospective and quality teachers.

Pavel Kysilka holds a "The best ones to schools" attitude. But this is not possible without salary increases because people do not have the motivation to teach. Financial sources for this exist, we just need to invest them into quality school systems. That will be an advantage for us in the future.

Panelists

DAN ŤOK, Minister of Transport of the Czech Republic
MICHAL KADERA, External Affairs Director, Škoda Auto
TOMÁŠ PEŤOVSKÝ, General Manager, UBER
ONDŘEJ KRÁTKÝ, Co-Founder, Liftago

Moderator: **ZDENĚK LOKAJ**, Associate Professor, Faculty of Transportation Sciences, Czech Technical University

The participants of the panel debate on the topic of E-mobility provided their visions regarding the future in car industry and services. This sphere, like others, is influenced by digitization and modern technologies. Discussion brought questions to many answers - for example the shared economy.

PANEL C
E-MOBILITA

Impact of Digital Revolution on Mobility

The future of transport is undoubtedly connected to modern technologies and their use in the public space. The European Union provides grants to many car companies and ecological projects, for example recharging stations for electric cars in order to save the environment and improve the traffic situation.

Modern technologies have been primarily utilized in setting up new Intelligent Traffic Systems (ITS). These systems have security, information, detection, and controlling functions. They help to increase safety and reliability of traffic, decrease the length of journeys, and lessen the impact on the environment. The systems are able to solve extraordinary stress and conflict situations. Development of ITS does not mean only creating new systems, but optimizing existing ones as well. It is important to improve utilization of data and its quick sharing. Continual technological development and integration of traffic systems brings a demand for experts who will be able to work with these systems.

The utilization of modern technologies is also connected to public transport. Among the main priorities are decreasing air pollution, reduction of traffic jams, and problems with parking. Transport for people means strain on time and money. It is thus a big challenge to cut expenses. Plans for the future involve large capacity public transport or so called taxi-bots (self driving taxi). Decreasing the number of vehicles on the roads would lead to clearing of public space. To give an idea - a city the size of Prague is approximately 200 football stadiums. Currently many new innovative companies are trying to work effectively with current transport capacity (taxi, public transport, passenger cars). It is also suggested to deregulate commercial transport and to enact so called shared taxis (the transportation of people with the same journey in one cab) and also noncommercial shared journeys, where the driver and passenger share expenses.

Climate changes require a radical change in the transport system according to the European Environment Agency. Electric transportation continues to be a large issue and topic of discussion for car producers. Even though environmental laws are becoming more strict, the transport sector produces almost one fourth of the greenhouse emissions in Europe. This is a big problem in China and the United States as well.

The percentage of electric cars might increase to 80% in 2050. However, it is still necessary to overcome the obstacles (for example sufficient amount of recharging stations) for the development of electric transportation.

DAN ŤOK:
Future of Interactive Infrastructure

According to the Minister, the future is in interactive infrastructure - when the individual parts communicate between each other, they share information and collect data. Transport signs can sensor car motion, evaluate their amount and, via information boards, continually inform drivers about potential threats or speed limits.

The preparation for the digital era is connected with a complex list of tasks. Beside construction of infrastructure and creating legal frameworks, it is also necessary to educate users in technical issues and teach then how to administrate such technologies. The backwardness of Czech education, whose structures were created many years ago, is one of the main obstacles to creating a comforting transition for effective e-mobility and the digital economy overall (for citizens and employees).

MICHAL KADERA:
Development and Challenges of Future

Michal Kadera introduces an ambitious vision of technological development, development of electromobiles and participation in making transport systems. The electromobiles should be a significant sell in the future. The main emphasis is providing quality improvement to citizen´s lifes.

Also mentioned were new steps; for example setting low-emission zones and ecological plaques for cars, development of new types of motors (alternative fuels) such as LPG or creating smart infrastructure, that could help cities with their transport utilization.

TOMÁŠ PEŤOVSKÝ:
Future is in the Shared Economy

Tomáš Peťovský sees the future of car transport in the shared economy. He promotes the opinion that companies providing transport via personal automobiles are significantly connected to public transport. This is another combining factor in the transport of people around the city and another complement to today's system as alternative to automobile transport, which unequally burdens cities.

The aim of these companies is to improve effectivity of passenger transport. Transport of the future is synergic, integrated and data-driven.

It is also necessary for another development not to block regulation, because they set clear rules that are essential for the market environment. But a legal framework will also soon be required.

ONDŘEJ KRÁTKÝ:
Czech Republic and Preconditions to be No. 1 in Transport

Ondřej Krátký thinks that Czech Republic has got the preconditions to become, according to orientation of the industry, number one in e-mobility. Also needed is the transparency of state administration, clear legislation, cooperation with car companies (testing new modes of transport), and the willingness to test new approaches.

What is the aim of transport in the future? Thanks to the digitization of passenger transport 10% of today's cars would serve the same amount of passengers because of smart planning and journey shares. This can be achieved only through the creation of quality infrastructure that allows for the collection of necessary data.

Panelists

DR. IDDO MOED (Israel), Cyber Security Coordinator, Ministry of Foreign Affairs of Israel
KAMIL TICHÝ, Deputy Director, National Cyber Security Centre (Ministry of Defense of the Czech Republic)
DR. ANDRZEJ KOZŁOWSKI (Poland), Research Fellow, Casimir Pulaski Foundation
ALBERTO ZILIO (Italy), Director Public Affairs Europe, AT&T
JAROSLAV ŠMÍD, Deputy Manager of the National Security Authority
PROF. VÍT VOŽENÍLEK, Head of Department of Geoinformatics, Palacky University in Olomouc

Moderator: **MILENA JABŮRKOVÁ**, Member of the Board, Confederation of Industry

Speakers of the panel Cybersecurity began their part with factographic overview into statistics of cyberattacks: in the last year there was a historically large amount of attacks carried out at, and more than a billion were successful. It took 201 days on average for companies to find out about such attacks. Is it possible to defend against these attacks? And, if so, how?

PANEL D

CYBERNETIC SECURITY

Impact of the Digital Revolution on Cybernetic Security

More and more activities are shifting from the physical sphere to cyberspace. The threat of cyberattacks in the world is increasing. In 2016, the NATO Warsaw Summit supported strengthening the cooperation of NATO and the EU in the field of cybersecurity and hybrid threats. It was mentioned at this summit that cyberattacks are carried out very precisely in order to gain secret information or to share propaganda, as we know this lesson from Russia, ISIS, or North Korea.

Cyberspace is now considered by NATO to be an operational domain of warfare, which creates new tasks and challenges. The Czech Republic has, along with other countries, had a long term concern about the problems of cybersecurity. In some cases, the Czech Republic has been ahead of some other member countries in addressing cybersecurity, especially in legislation. Czech Republic is one of three countries (together with Estonia and Slovakia) that enacted the cybernetic law, whose goal is to guarantee security of cybernetic aims.

Currently, the Czech Republic has enacted new regulations, which might avert possible attacks. One of them is a law amendment to army intelligence which founded the state defense of cyberattacks. This law helps to gain information about suspicious cyber attacks faster. The second important law is the amendment to cyber security. This law orders providers of electronic communications services to notify cybersecurity threats and incidents on their site. Administrators of information systems are obliged to set up steps for better site security. Recently, new EU regulation was enacted which takes necessary steps to better secure sites and cybernetic environments. Its aim is to harmonize and unify legal acts in member countries in the field of information systems and set up a united level of cybersecurity in all member countries.

An important role for Czech cybersecurity has been the National Cyber Security Centre and its Action Programme which has been in effect since 2015 and will last until 2020. The main goal is to create effective models of cooperation on the national level among each individual subjects, and to create a methodology for evaluating risks in the Czech Republic as well as to create active international cooperation. At the same time, we have many challenges to face: insufficient trust of the public in the state, increasing number of internet users and mobile platforms, and security risks connected to the introduction of electronic devices in state administration.

Space information (maps, area information systems, satellite and navigation systems) also influence the security system of a state. An insufficient amount of these technologies is a big security threat, and thus, the new project GeoInfoStrategie has been established with the help of the Ministry of Interior. This project promotes infrastructure development for spatial information, it also accents questions of effective IT utilization and support for establishing new geoinformation companies.

There are important questions left. How is the Czech Republic prepared for potential threats and how can we effectively address these risks in the world, which are developing and changing all the time?

IDDO MOED:
Privacy versus National Security

According to Moed, one of the most important parts of the debate about cybersecurity is a conflict between privacy and national security. Israel recently established the Department of National Cyber Bureau, which is a centre for the coordination of resort cyber defence. Flexibility must be provided to a state legal system to be effective in facing cyberthreats.

KAMIL TICHÝ:
Relative Protection of Czech Republic

According to Kamil Tichý, the Czech Republic is neither an aim nor a source of cyberattacks. More than 80% of all attacks in Czech Republic are made up of cybercrime in order to steal money. Espionage and war attacks are only a small fraction of all issues that the Ministry of Defence faces.

Tichý focused especially on introducing activities and the organizational structure of the National Cyber Security Centre. Its primary task is to coordinate the national and international level while preventing cyberattacks. It also coordinates the steps taken during incidents and attacks that are already going on.

ANDRZEJ KOZLOWSKI:
The Change of Sittuation in Poland

Unlike in the Czech Republic the level of cybersecurity in Poland is not good. There was a lack of coherence and a 2015 audit revealed that the cybersecurity is tragic - the National Centre for Cybersecurity worked for only 8 hours a day. Reforms in the last years and the implementation of legal norms, CERT (Computer Emergency Response Team), changed this situation. Currently it is possible to limit access to internet. Polish cybersecurity is built by motto: “Cyberspace has no limits, internet does.”

The coordination of cybersecurity is Poland is provided by Ministry of Digital Affairs and Ministry of Defence. Implementation of laws is delayed because of the political conflicts among the Ministry of Internal Affairs, Digital Affairs, and Defence. Lastly, there has not been enough means to create cybersecurity on its own, so it has got only a coordinative character.

ALBERTO ZILIO:
Priorities of National Governments

Cybersecurity is connected with political leaders and the willingness to accept strict steps. Governments should focus on the protection of cloud sites rather than hardware protection, which can only ensure bilateral openness of private and state sector.

JAROSLAV ŠMÍD:
The Necessity of Experience

The National Security Bureau is the administrator of cybersecurity. The basis is to establish a system of responsibility, standardization and certification. Reporting of cyberattacks by companies is essential for the state to create a flexible defence strategy. The task for the Czech Republic is to also implement a European framework.

The New Action plan with 141 concrete tasks was created for 17 subjects. Additionally, a new strategy for Czech cybersecurity was created for another five years. However, it is clear that the Czech Republic is behind, especially when the state service deputies talk mainly about structure and not about visions, ideas, and experiences.

Šmíd also appreciated cooperation of Czech Republic and Israel in the issue of cybersecurity and the project of expert internships in Israel and USA, where the Czech professionals educate.

VÍT VOŽENÍLEK:
Cybersecurity from the View of Geography

Professor Voženílek introduced a geographical perspective of cybersecurity. It is necessary to protect not only data, but also coordinates. The aim of defence should be spacial information - for example, safe systems and even the army use spatial information about the position of each member and function. Every society integrates and keeps this information in its own way, even very old ones. Data is also very significant for business.

According to all panelists it is very important to pay attention to education: to teach citizens what and how to share things, how to invest in professional education and to deepen cooperation between state service and universities or to offer added value for graduates, that will equalize salary differences compared to the private sector. It is necessary to make technologies attractive for people and get rid of the stigma of the asocial behaviour connected to it.

Panelists

PROF. MILOŠ TÁBORSKÝ, Chairman of the Czech Society of Cardiology

DOC. JIŘÍ KOFRÁNEK, Associate Professor at the First Faculty of Medicine, Charles University

JAN PETŘÍK, Partner, Nordic Investors

JIŘÍ POTŮČEK, CEO, Mediware a.s.

Moderátor: **ADAM VOJTĚCH**, Leader of Group on Health, Ministry of Finance

The main issue of the panel E-health was electronic health system and the future of Czech Republic in a new digitalized world. What are the benefits of quick data transfer and how these electronic systems work?

PANEL E
E-HEALTH

Impact of the Digital Revolution on Health Services

The process of sharing information between patients, health service providers, and hospitals is the foundation for improving the medical care of patients. Information and communication technologies serve these purposes and they are used for the support of treatment, prevention, medical administration, and education.

The aim of the European Union is to create and extend electronic health records or portable means for patient monitoring. This system faces many problems in the whole of the European Union. The main one is insufficient communication between doctors and hospitals. Doctors often chose a system suitable only for themselves instead of implementing the integrated system promoting cooperation between hospitals and doctors. In order to promote integration, a new system was created - eHealth. This programme provides a long term vision of integrated European healthcare to 2020.

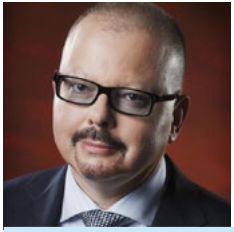
The eHealth system provides clear arrangement and comfort to all participants. In an integrated system doctors can find information in tenths of a second. The speed of searching can save many human lives. Doctors will have access to a patient's entire health condition, which is especially important because of patients who often conceal some information from them. This system can also prevent potential complication during acute intervention. Another system is the module MwPharm created by Mediware. This programme serves the right dosage of medicine. Moreover, this system can also prevent medicinal overdosing.

Another service is telemedicine, which provides long distance, online communication between doctors and patient. This service helps to gain early important information about a patient's health conditions. Other innovations are robot operation or software for creating schedules for operating rooms.

In the Czech Republic, the idea of connected online patients background has a long history. In 2001 the project IZIP was established, also know as the Electronic Health Book. This project started functioning in 2004. There were over 2.5 million registered users and approximately 20.000 hospital workers. The system was meant to prevent duplicity of prescribed medicine and save money for Czech healthcare. But the system was stopped in 2012 as it was useless and non-functional. The problem was lack of finance transparency, as money used for the system´s operation ended up in different companies that had nothing in common with IZIP. In the future it is necessary to have transparent financing. The fact is online electronic patient history systems are really useful only if everything works precisely.

The problem is not only insufficient transparency. The development of electronic communication is often blocked by insufficient and incomplete legislation. The main goal is to ensure its credibility and make it law binding.

The development of technologies is also important for future doctors. The availability of fast internet promotes the creation of many interactive programmes and education games. One answer to this question of whether or not Czech schools able to create educational content, is the METANET project. This project is part of the open book WikiSkripta, which collects materials for Czech and Slovak medical students.



MILOŠ TÁBORSKÝ:
Telemedicine and Another Means of Electronic Healthcare

What is the current situation of e-health in Czech Republic? We have approved strategies for electronic healthcare and sophisticated technologies for long distance monitoring. Young doctors and students view this in a positive light. Despite these benefits, we still lack many laws about healthcare and a spinal network for sharing information.

One of innovative tools for improving the Czech medical situation promoted by Táborský is the use of telemedicine. Telemedicine is useful especially nowadays, when the population is getting older (2.2 million seniors) and personal and financial demands are increasing.

This system brings long distance monitoring, fewer complications, and enables high-quality care without increasing time demands.

Norway was first country that used telemedicine, and in the Czech Republic this system is getting more and more popular, but it is still not being paid out by insurance companies.

JIŘÍ KOFRÁNEK:
How to Protect Our Data?

The protection of sensitive personal data is a necessary condition for a functioning healthcare system. With proceeding digitalization, new laws were enacted in the European Union. They concern not only all companies and institutions, but individuals and online services, which are processing user data.

The basic structure of eGovernement in Czech Republic is not only a concept, but a functioning system, which can also be used for e-Health. The connection of e-Health with the basic structure of Czech eGovernment enables the realization of the demands of the European Union without problems.

While creating e-Health, it is very important to focus on mutual communication and interdisciplinary understanding among informatics, doctors and politics.

JAN PETŘÍK:
Future of e-Health Systems

Jan Petřík thinks the future of healthcare is in the Electronic Health Record - EHR. This is a long term electronic record of patient healthcare. This service collects information about vaccinations, diagnosis and vital functions. It also works as a calendar.

What are benefits of EHR? It brings less administration, quickness of shared data or complexity. The owner of the data are the patients themselves. That enables easier communication and an increase in health literacy.

Another important service is the database Zdravel. It is the largest database in Czech Republic and European Union, with 2.5 million patients connected.

The only useful foundation of e-Health structure is the EHR database. EHR systems brought extreme financial spare apart from time spare and its usefulness.

JIŘÍ POTŮČEK:
Pharmacology and Telemedicine

Pharmacology and telemedicine are used as superstructure modules for e-Health. We can use the analogy of a pilot in a plane. He decides the best solution from the many that are offered by the plane devices. This is how these systems work during patient medication.

This superstructure system primarily serves to determine the right amount of medication. It works by combination of EHR information, specialists´advice, and doctors´recommendation. The patient himself decides on the process of medication.

The aim is to shorten hospitalization, prevent intoxication, and to ease communication among doctors.

INSTITUTE FOR POLITICS AND SOCIETY

WWW.DIGITAL-CZECH-REPUBLIC.EU

HEADQUARTERS

INSTITUTE FOR POLITICS AND SOCIETY
Martinská 2, 110 00 Prague 1
+420 602 502 685
office@politicsandsociety.cz

VENUE

SCHEBEK PALACE
Politických vězňů 7
110 00 Prague 1

CONTACT PERSON

ŠÁRKA PRÁT
CEO
+420 602 502 685
prat@politicsandsociety.cz

MARCELA VOŽENÍLKOVÁ
Analyst
+420 736 257 819
vozenilkova@politicsandsociety.cz

CONTACT

WWW.LIBERALFORUM.EU
EUROPEANLIBERALFORUM
EURLIBERALFORUM

WWW.POLITIKASPOLECNOST.CZ
POLITIKASPOLECNOST
INSTITUTPS

THE EUROPEAN LIBERAL FORUM

The European Liberal Forum (ELF) is the foundation of the European Liberal Democrats, the ALDE Party. A core aspect of the forum´s work consists in issuing publications on Liberalism and European public policy issues. The foundation also provides a space for the discussion of European politics, and offers training for liberal-minded citizens. The aim is to promote active citizenship in the European Union.

The foundation is made up of a number of European think tanks, political foundations and institutes. The diversity of membership provides a wealth of knowledge and is a constant source of innovation. In turn, we provide our members with the opportunity to cooperate on European projects under the ELF umbrella.

ELF works throughout Europe as well as in the EU neighbourhood countries. The youthful and dynamic nature of ELF allows us to be at the forefront in promoting active citizenship, getting citizens involved with European issues and building an open, liberal Europe.

INSTITUTE FOR POLITICS
AND SOCIETY

INSTITUTE FOR POLITICS AND SOCIETY

The Institute for Politics and Society is a Czech think-tank founded in October 2014. The mission of Institute is to cultivate the Czech political and public sphere through an in-depth and open discussion and to create a living platform which terms problems and offers recipes for their solutions through international conferences, seminars, public discussions, political and social analyses available to the whole Czech society. We believe that an open discussion is a prerequisite for any successful solution to political and social problems.

Our main themes are foreign and security policy, defence, European matters, but also schooling, digitalisation, power industry, urbanism, life in a city and in the public space, values in politics and human rights in our country and abroad.

PARTNERS


elf


mastercard.


ERSTE
Corporate Banking


zech
Industry


UBER


Liftago


mafra
mediální skupina