Innovations with the greatest added value

by **Richard Roštecký**, Co-founder and Executive Director, Touch4IT; Expert on innovative software solutions, lecturer on IT conferences and universities.

Digital transformation is an ongoing process. There is always a new trend, new technology that brings something innovative and pushes the boundaries of the IT world another step forward. Digital transformation is the key to success for companies and can be best achieved through a synchronization of the whole company, its processes, design thinking and assertion of advanced and progressive technologies.

There is a great number of innovative trends today, but the biggest potential lies undoubtedly in AI & machine learning, Big Data and IoT (Internet of Things). These three innovations are able to provide a complete digitalization of company processes, an unrivalled operative efficiency, a functional business model and the necessary optimization of in-house processes.

Today we can say that we have surpassed the era of data collection. We can fully focus on processing and analyzing the data already at our disposal, creating predictions that can help us optimize all processes. As soon as we know how a company behaves, we can predict its revenues, marketability, profitability and overall development based on data which was previously overlooked in prediction-making. Big data analysis offers companies a great competitive advantage.

Obviously, the extent of data that we are able to collect will only become larger, creating the need for efficient processing and analyzing. AI and machine learning nowadays offer a great number of new opportunities to make better use of big data and at the same time they bring new possibilities of digitalization, which will be manifested e.g. in the health and automotive industries. AI is already being widely used in healthcare. This field offers unlimited possibilities of use and it is only up to us and our machines, how many designs and ideas will be put into practice. Today this technology is utilized for example for early diagnosis of various diseases, the setting up of correct treatment, the scanning and analysis of clinical findings and much more. In combination with augmented and virtual reality we are capable of visualizing various organs and physiological processes of the body, which helps doctors to diagnose and patients to better understand their health status.

It became clear already in 2019 that digital transformation is a matter of survival for automotive companies: either they react and innovate or they enter the path of doom. AI is the driving force of the biggest changes in the industry. Automobile producers gradually implement various technological interfaces on the human-machine level (HMIs), such as voice control and hand movement control, as well as the control of cameras or touch-sensitive surfaces. It is also important to bear in mind that there is a delay between the creation of designs and schemes and the actual production of the automobiles. In this regard it would perhaps be a good idea to think about a digital solution that would make this industry constantly up to date, meaning that new cars would not be released on the market with software that is already three years old.

The third strong field of digital transformation is IoT that is starting to be used on a large scale for the improvement of our environment. IoT platforms can nowadays be integrated with various supplier systems, they can do a fully-fledged data analysis and send it to the cloud solution. They can measure air quality, detect the presence of viruses, help us spread information to places where these would not normally be available, or collect information from places that we have not collected from before or that we had to collect from manually. Developers are aware that every building has to be smart: ecological, featuring automatized air ventilation, efficient lighting etc. This helps not only to protect our natural environment, but also to continually optimize our everyday lives.

Considering the current global situation, we are facing great trials of how we can overcome all of this together. We live in difficult times that will in some – yet unknown – way leave a mark on us all. And yet, it is the digital age that can help us in our current situation. I understand that not all industries are able to take advantage of it in full (as of now we cannot build houses from the comfort of our homes), but for many companies, digitalization offers great advantages. Our era indirectly forces companies to streamline their processes as much as possible, digitalize and come up with new technologies that are going to help us considerably.

Digitalization and modern technologies are very important today and will be even more so in the future. They can bring a remarkable added value to our working lives, but they also affect our private sphere and therefore have to be handled with responsibility and care.

Above all, I wish everyone good health. As long as we have that, we can push this world forward.

Richard is one of the co-founders and executive directors of the IT company Touch4IT, focusing on design and development of custom-made innovative software solutions. Due to his technical education at the Faculty of Informatics and Information Technologies at the STU and his will to push forward himself and his company, he is today in charge of amazing projects for big clients. He often gives lectures and talks at conferences on the technological solutions that he has developed with his company.