

## **Work 4.0 in the Czech Republic**

The 4th Industrial Revolution is a term for the current trend of new qualitative level of digitalisation and automation, which brings revolutionary changes not only in the field of production, but fundamentally transforms all sectors and economic relations. In future, machines and technologies will take over a lot of repetitive and easily algorithmizable tasks, which will deeply change the labour market. On one hand, many low- and medium- qualified activities within jobs can disappear, while, on the other hand, it is assumed that new jobs will emerge that will require a higher level of qualification.

For the Czech Republic as an export oriented country with a high share of industry, the 4<sup>th</sup> Industrial Revolution represents a fundamental challenge and an opportunity at the same time, with the country's future competitiveness depending on it to a large extent. That is why in August 2016 the Czech Government adopted the Industry 4.0 Initiative. The document was prepared by the Ministry of Industry and Trade. It provides key information about the 4<sup>th</sup> Industrial Revolution, shows possible directions of future development and drafts suggestions of adequate general actions to support the readiness of the economy and whole society for the forthcoming technology changes. A collective of more than 70 experts of various relevant disciplines and sectors, led by Professor Vladimír Mařík of the Czech Technical University, authored the paper.

As a follow-up to the Industry 4.0 Initiative, the Ministry of Labour and Social Affairs published in December 2016 a paper titled Work 4.0 prepared by the team of the National Training Fund. The paper outlines impacts of 4<sup>th</sup> Industrial Revolution on the labour market, employment, human resources and on selected relevant social aspects. A high attention is paid to the area of further education, as its development and a level of participation is seen as an inevitable precondition for acquiring knowledge and skills newly demanded by the labour market. While, on one hand, depending on the ratio of the costs of labour to the costs of technological equipment, the companies will no longer need workers to perform activities that can be performed by robots, on the other hand, completely new business branches and jobs will emerge due to a higher production productivity and need for new technologies, especially in research and development, in services, but also in industry. In coming years, the number of so called STEM jobs (jobs in science, technology, engineering and mathematics) will grow significantly. Even workers performing lower qualified professions will need to master new technologies, operate smart machines and information systems. New disciplines will need employees with a high level of soft skills, ability to learn continuously, to improvise, to be flexible and creative. Communication skills will be also essential, as well as complex problem solving, critical thinking, entrepreneurial skills and leadership.

The Work 4.0 paper outlines possible directions for future measures to mitigate negative impacts of changes and, to the contrary, maximize their great potential. The suggested areas of measures are aimed especially at the support of employment and employability of the population and at ensuring equal chances for a full-fledged life. In the core of the suggested directions of actions, there is the support of labour market flexibility and continuing education, which means for instance that retraining provided within the public employment services should be better targeted and its higher quality ensured, the tools to support self-employment and training of employees should be introduced, etc. A research and an analysis in the area of taxes and insurance system should be

launched to prepare feasible complex solutions as well as a better monitoring and anticipation of labour market needs including sector and foresight studies.

It will be necessary to introduce new mechanisms for new forms of employment – especially a better regulation of distance work (e.g. the right of employees to be unavailable in their free time), a better regulation of work through online platforms, an equal access to insurance, further education and other services for all working people regardless of the form of their work etc. The paper also suggests examining further the various mechanisms of reducing working hours. For the next effective progress it will be necessary to widely discuss these suggestions and options with all the key labour market partners and stakeholders.

As another follow-up from the Industry 4.0, the document Education 4.0 is currently being prepared by the Ministry of Education, Youth and Sports that will summarize priorities related to the initial and further education.