



# Digitisation. Even here. Even at your place.

Get inspired by the companies in your region.

Become part of the digital hub and get information support.

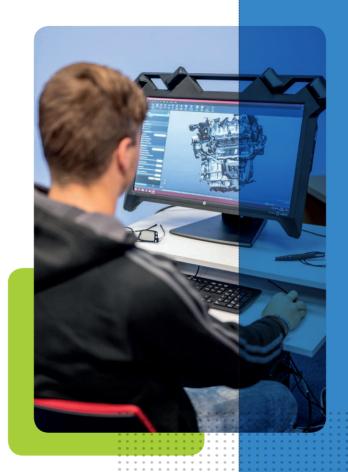


www.jvtp.cz/digihub



- Creates a **network of regional entities** that provide comprehensive services for the digital transformation of processes, products and services.
- Provides consultancy services in the field of digitisation, including funding opportunities.
- Organises **educational events** and other events in the field of digitisation.

The South-Bohemian Digi Hub is a unique comprehensive platform for the solution of digitisation issues and associated challenges. The platform assists with the complete solution of the digitisation process, especially in small- and medium-sized enterprises within the South Bohemian region. Representatives of the public administration, academia or scientific-research environments can also utilise the services, knowledge and experience offered within the South-Bohemian Digi Hub.. The South-Bohemian Digi Hub aids the development of enterprise, especially with respect to the utilisation of digital technologies that lead to increased competitiveness and the market attractiveness of products, services and entire enterprises, even beyond the territory of South Bohemia.



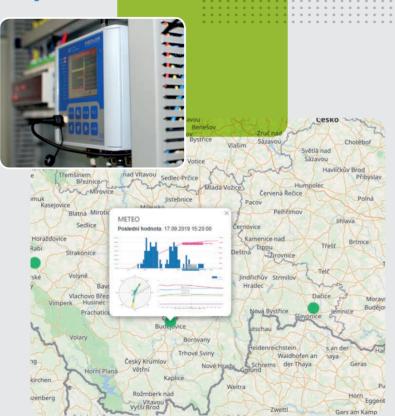
#### Digitisation. Even here. Even at your place.

The development of technology and digitisation impacts all areas of life. It involves gradual society-wide change, which is in principle associated with the use of the internet, the Internet of Things, the development of robotisation, automation, artificial intelligence, virtual reality and other fields of expertise, as well as a huge volume of generated and processed data, which has to be properly used, stored, maintained and protected. The extent to which we must account for the links between industrial production systems, transport networks, power-generation systems, service areas, commerce, telecommunications, systems of raw-material supply and social systems into consideration is ever-increasing. Societal digitisation is an interdisciplinary agenda extending beyond economic sectors such as IT and telecommunications, industry, construction, finance, power-generation and services to other fields, e.g., culture, agriculture, healthcare, social services and public administration. It makes sense to systematically support the development of the Czech economy by means of modern technologies and commercial models, introduction of innovation and production with high added value. The assurance of uniform regional development and acceleration and simplification of the digitisation process requires the implementation of regional centres for digital innovation - so-called digital innovation hubs. The centres serve as a tool to support the digital transformation of small- and medium-sized businesses, provide access to digital knowledge, technologies, prototype solutions and introduce businesses into the innovative ecosystem of the region. Digital innovation hubs are a useful contact point with a large range of support services for companies in the region and beyond.

Digitisation is a path to maintain competitiveness

## The Internet of Things (IoT)

The Internet of Things (IoT) is an ecosystem of software tools that enable the connection of a wide range of devices from various IoT networks and, through them, to collect and store received data, its subsequent analysis, visualisation or display in maps. The internet provides us with an overview of, e.g., water consumption, power consumption. surrounding air quality, traffic situations and weather forecasts. The Internet of Things can control road intersections, switch on public lighting, assist the integrated emergency services and enable intelligent administration of cities and municipalities. The Internet of Things, complemented by an appropriate administration interface or a mobile application, helps us to "stay in touch".



#### Automation and robotisation

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Automation and robotisation are processes in which automated machines, computers and the artificial intelligence take on human tasks. Automation and robotisation can be implemented independently or complement each other in a meaningful way. Robotic manufacturing can react to a shortage of market labour and enable the improvement of operational productivity. Automated devices help people keep technological processes efficient and safe, improve precision by eliminating human error and, last but not least, relieve employees of monotonous, repetitive tasks to free their time for more creative endeavours. Automated machines and robots are instrumental components of digital factories and therefore an integral part of Industry 4.0, however, they can still only undertake certain activities of a given job as human creativity, emotional intelligence and cognitive flexibility traits remain irreplaceable.

### Virtual reality

Virtual reality is a technology that allows the user to enter a simulated environment and preferably interact with it. Virtual reality technologies create an illusion of the real world across different fields of expertise. Virtual reality can also be utilised for significant savings in manufacturing by eliminating the necessity to create real and functional prototypes of various products. Using so-called digital twin modelling, it is possible to create a complete digital image of a product, improve its flexibility and shorten the innovation cycle. The virtual environment not only enables creation of prototypes. but also simulation of their function and operational parameters. The digital twin manufacturing process allows the use of flexible automation elements and autonomous robots.





Additive manufacturing is a term for gradual controlled application of material in thin layers to create the final product. This manufacturing method is usually called 3D printing, but it includes further steps regarding the definition of requirements (e.g. 3D scan). The indisputable advantage of additive manufacturing in comparison to traditional manufacturing is the creation of complex shapes. Additive manufacturing can create shapes that cannot be made using common methods. Additive manufacturing changes the way in which engineers and part designers think.

The digitisation process is assisted by other, equally important topics, such as high-speed communication networks, high-capacity computing systems, ICT administration, data storage facilities, big data, autonomous control elements, artificial intelligence, cybersecurity, laser manufacturing systems, etc.



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The South-Bohemian Digi Hub is a part of the network of European digital innovation hubs approved by the European Commission, and as such it is listed in the European Catalogue of Digital Innovation Hubs.









