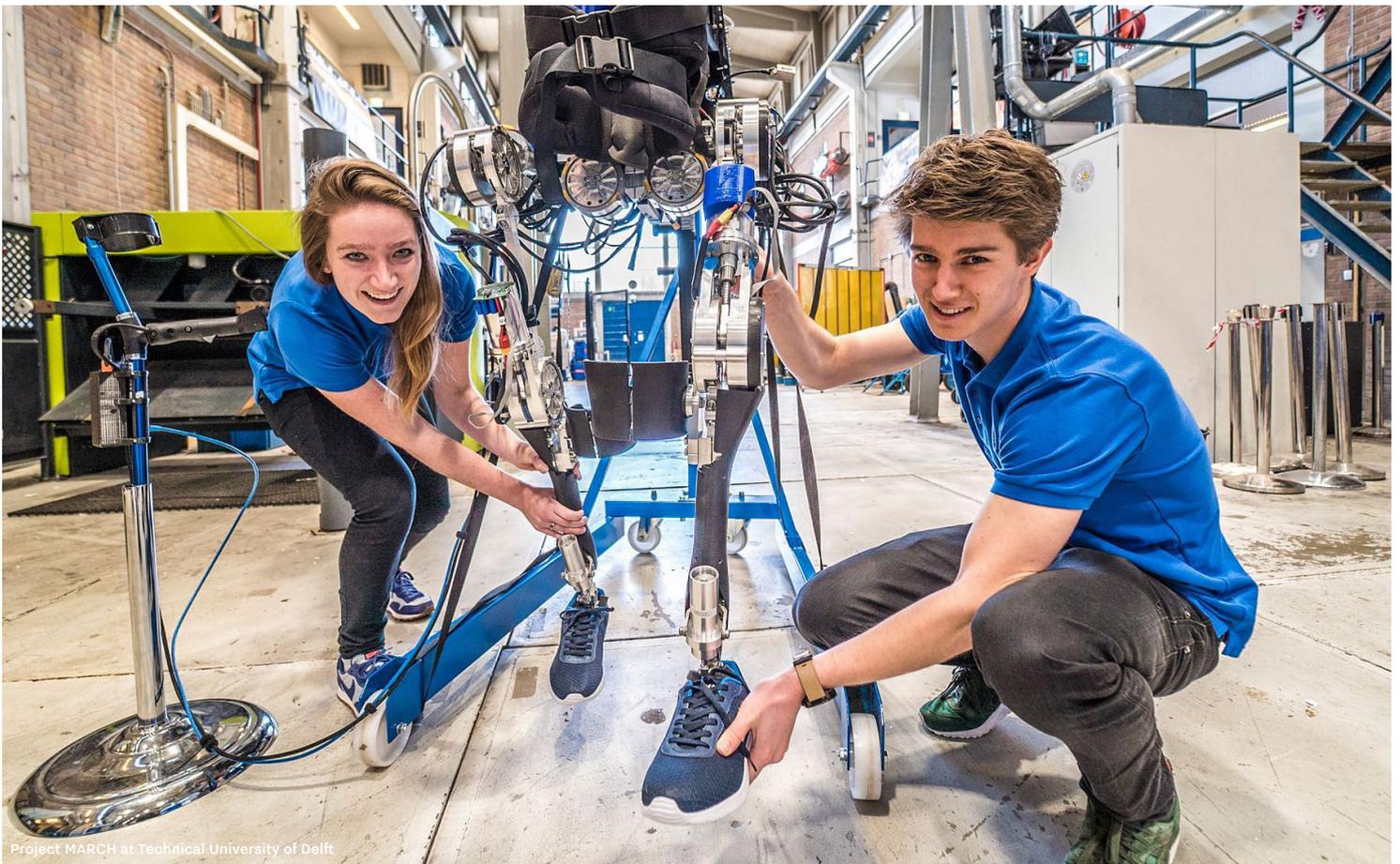


# Tech that transforms lives

How can we make great strides in solving urgent and complex challenges facing the world today? How can we battle climate change and health crisis, while enhancing security and mobility? Let's work together and harness the power of innovation to serve societies, protect our planet and inspire the world.



Project MARCH at Technical University of Delft

# NL

# Netherlands



DUS Architects, 3D Print Canal House

**Top sector High Tech Systems and Materials (HTSM) unites the innovative power of Dutch tech industry and research communities to solve the most pressing challenges of our times. HTSM develops key enabling technologies, product and services, which enable us to create smart and sustainable solutions that are also economically feasible.**

HTSM focuses on solving five grand societal challenges as part of its technology roadmap: health, security, climate (energy and water), mobility and sustainability (circular economy and food). Each is managed by a dedicated team of experts from private companies, research institutions and universities. This way, R&D collaborations can be stimulated further in the crossovers between key enabling technologies and societal innovation. HTSM liaises with the government, particularly in mission-driven programming of national and regional public agendas.

### **Pioneering and collaborative solutions**

HTSM strives to develop new technologies and materials that can be applied to various products. From communication systems to large-scale solar energy generation. From aviation to electric cars. In the medical field, Dutch companies collaborate in creating advanced devices to detect and treat diseases earlier and more effectively.

### **Open and collaborative innovation**

Dutch HTSM companies are actively involved in international partnerships, such as the DISAC High Tech to Feed the World project, and the Innovative Medical Devices initiative, which focuses on optimising surgical methods, home care and assistive devices. In Ghana, a Dutch public and private initiative developed a tracking software to battle tuberculosis and COVID-19.

Partnerships and open innovation are key to our success. The Brainport region in Eindhoven fosters collaboration between original equipment manufacturers (OEMs), specialised suppliers and knowledge institutions. Over 100 companies and institutions, such as Philips, NXP, IBM and Intel, work together to develop new ideas that are shared through strong regional and sectoral networks.

### **Robotics**

Robotisation can contribute to various areas of production and services. Medical robots enable precise execution and early diagnostics. Tech enables agri entrepreneurs to increase food production more efficiently. The logistics sector continues to benefit from digital automation, leading to new methods of transportation and new job creation. Finally, robotics can be used to create safer work environments and easier maintenance.

### **Integrated photonics**

Today, integrated photonic chips are applied in the aviation, agriculture, medical, data and telecommunications sectors. But it can be applied to many more areas, to improve the wellbeing of mankind. Within the European photonic cluster, the Netherlands plays a key role in advancing the growth of this sector through public and private partnerships.

### **Nanotechnology**

The Netherlands invests significantly in nanotechnology research and secured 100 new patents in 2019. NanoNextNL is one of the research programmes where the Dutch government collaborates with companies and scientific institutions focusing on health, food, energy and water research. In addition, the MESA+ institute for technology located at the University of Twente, is one of the largest nanotechnology research institutes in the world.

By bringing companies, institutions and the government together, the Netherlands gains extensive experience in designing, developing and producing high-tech equipment, and micro- and nanocomponents.

### **Research & Development**

In line with EU agreements, the Dutch government invests heavily in R&D and innovation. In 2020, the authorities earmarked € 7.7 billion. HTSM is the largest top sector in terms of production, added value and employment, with over € 21.6 billion worth of HTSM products exported from the Netherlands in 2016.

**Let's innovate together!**

Visit [www.NLplatform.com/htsm](http://www.NLplatform.com/htsm)