# SMART INDUSTRY FIELDLABS 2019

**smart industry**

Fieldlabs are practical environments where businesses and knowledge institutions develop, test and implement Smart Industry solutions in a targeted way. In addition, they allow people to learn how to apply these solutions. Fieldlabs also strengthen the links to research, education and policy in relation to a specific Smart Industry theme and transfer knowledge to other businesses. In 2019, 41 Fieldlabs are up and running, with a regional, national or international focus.

For more information go to www.smartindustry.nl/fieldlabs.

## 1. ULTRA PERSONALIZED PRODUCTS AND SERVICES
UPPS is developing new methods for designing and creating personalized products and services. It focuses on the entire process: from data acquisition, concept development and scanning to engineering and data-processing for production. Location: Delft.

## 2. REGION OF SMART FACTORIES
Consortium of 40 businesses from the Northern Netherlands (including Philips and Fokker) developing concepts for the Factory of the Future, with a focus on zero-defect manufacturing and 'first-time-right' product development. Location: Northern Netherlands.

## 3. SMART DAIRY FARMING 3.0
Increasing the sustainability (animal health and production) and (economic) efficiency of dairy farming by collecting data from dairy cows in real time and sharing this within the chain. Location: Amersfoort.

## 4. SMART BENDING FACTORY
Ultramodern factory for laser cutting and bending of steel, controlled entirely via the internet. Aim: reduce total cost of ownership by 20% and make time to market five times faster. Location: Varsseveld.

## 5. THE GARDEN
Secure collaboration within the chain. Security in Smart Industry, with a first project focusing on EPLM (Extended Product Lifecycle Management). Location: Hengelo.

## 6. FRESHTEQ.NL
Technological innovation for greenhouse farming. Smart solutions for fully automated production, cultivation and distribution of fresh fruit and vegetables. Location: Westland.

## 7. MULTI-MATERIAL 3D PRINTING
Focus on developing completely new value chains, based on next-generation, multi-material 3D-printing technologies and associated data-management systems. Location: Eindhoven.

## 8. SMART CONNECTED SUPPLIER NETWORK
Fieldlab that aims to make the exchange of information in the supply chain more efficient through standardization and interoperability. Location: Eindhoven.

## 9. CAMPIONE FIELDLAB
This first Fieldlab in the process industry aims to make maintenance 100% predictable. Condition-based maintenance: sensors monitor the status of installations to predict with precision when maintenance is needed. Location: Gilze Rijen.

## 10. FLEXIBLE MANUFACTURING
This Fieldlab aims to make production processes more flexible through robotics, ICT and operator support systems. Location: Eindhoven.

## 11. DIGITAL FACTORY FOR COMPOSITES
Facility for open, cross-sector innovation and demonstration centre for automated, digital production of composites. Location: Ypenburg.

## 12. AUTOMATED COMPOSITES AND METAL MANUFACTURING & MAINTENANCE ACM³
Centre for development of lightweight structural components in composites and metal and associated manu-facturing technologies and maintenance concepts. Location: Marknesse.

## 13. RAMLAB
Develops knowledge relating to metal 3D printing and certification of large parts for the port-related sector. Location: Rotterdam.

## 14. 3D MAKERS ZONE
3D Makers Zone is focusing on applied innovation for Smart Industry. We create innovative products and solutions for businesses by applying innovative technologies, with a strong focus on industrial 3D printing/ Additive Manufacturing. Location: Haarlem.

## 15. SMART WELDING FACTORY
Flexible and fully automated manufacturing and 3D printing (WAAM) using welding robots and with zero programming time: 'first-time-right' and 'one-piece-flow'. Location: Enschede.

## 16. PRACTICAL CENTRE FOR PRECISION AGRICULTURE
Makes measurement and other data accessible for (collective) use by farms, suppliers, the processing industry and knowledge institutions. Location: Reusel.

## 17. THE SUSTAINABILITY FACTORY
Promotes development and exploitation of innovations linked to the maritime sector and energy transition and facilitates 'lifelong development'. Location: Dordrecht.

## 18. 3D MEDICAL
Making far-reaching improvements to personalized care by means of SMART technology, such as 3D imaging and 3D printing. The Fieldlab gives start-ups and other companies access to research facilities, students and scientists. Location: Utrecht.

## 19. COMPOSITE MAINTENANCE AND REPAIR
The purpose is to fully automate the maintenance and repair of composite components, mainly in aircraft. The Fieldlab aims to strengthen the innovation system by connecting small and medium-sized enterprises and involving the research world even more strongly in the region. Location: Hoogerheide.

## 20. THERMOPLASTIC COMPOSITES NETHERLANDS (TPC NL)
Fundamental and applied research centre for thermo-plastic composite manufacturing. Key focus areas are tape laying, compression moulding, insert moulding, recycling and automation (robotics). Location: Enschede.

## 21. CAMINO FIELDLAB
The ambition is to make maintenance of infrastructure works 100% predictable. Work takes place in two clusters, Rail and Water, with new clusters for Smart Energy and Tunnels currently being developed. Location: Enschede.

## 22. SMASH FIELDLAB
The ambition is to make maintenance 100% predictable. Condition-based maintenance in the shipbuilding sector: collection and analysis of real-time information on a ship's condition to allow prompt maintenance and prevent downtime. Location: Rotterdam.

## 23. SMART BASE
A testing platform for developing a 'Smart Base' for the Ministry of Defence. Together with innovative businesses, the Ministry will be conducting experiments to develop solutions linked to protection, energy, water and support & services. Location: Amersfoort.

## 24. 5G FIELDLAB
5Groningen makes North Groningen the testing ground for the newest generation of mobile internet. Businesses and non-profit organizations are working together with experts to test 5G applications. Location: Groningen.

## 25. INDUSTRIAL ROBOTICS
Develops certified secondary and higher professional education courses on robot programming and operation. Offers the opportunity to develop and experiment with new technologies and applications. Location: Harderwijk.

## 26. TECHNOLOGIES ADDED
The first Shared Smart Factory with a shared production site for smart manufacturing, incubators and service providers in the field. Location: Emmen.

## 27. DUTCH OPTICS CENTRE
Dutch Optics Centre brings together knowledge and research capacity to support Dutch businesses. Location: Delft.

## 28. ROBOHOUSE
Facility and innovation programme for further developing robotics in the Netherlands. Focuses on accelerating the adoption of state-of-the-art robotics solutions within organizations. Location: Delft.

## 29. HIGH TECH SOFTWARE COMPETENCE CENTRE
Consortium of 20+ high tech software firms focusing on virtual prototyping & design, model-based software and data analytics & services. Location: Eindhoven.

## 30. BLOCKLAB
Blocklab is working on a decentralized future. Together with engineers, developers and chain partners from the logistics and energy sectors, it is developing blockchain use cases that will radically change chains, grids and market models. Location: Rotterdam.

## 31. DUTCH GROWTH FACTORY
Innovation cluster to speed up the digital transformation of manufacturers and open up new markets. Aim: to develop and scale up production processes of 50 scale-ups, SMEs and multinationals by 2025. Location: Rotterdam.

## 32. TECHPORT
The Techport Fieldlab aims to link real-time data from factory installations to production and quality data to fully integrate data - and therefore control - within the process industry. Location: Velsen-Noord.

## 33. T-VALLEY
In Fieldlab T-Valley (high tech), machine builders, manufacturing companies, system integrators, suppliers, engineers and knowledge institutions work together on a radical goal: first time right development and deployment of mechatronic systems. Location: Enschede.

## 34. ROBOTICS FIELDLAB
The goal of this Fieldlab is to develop integrated process solutions for the realization of single unit production (customer-specific) at cost of a mass product. Location: Roermond.

## 35. SPARK FIELDLAB
SPARK Campus accelerates the renewal of the built environment. The Fieldlab offers an open makers lab where companies, students, artists, start-ups and enthusiastic doers can get started. Location: Rosmalen.

## 36. SMART ADVANCED MANUFACTURING XL
Smart Advanced Manufacturing XL (SAMIXL) is a collaborative research center where technology is developed and demonstrated for the automated production of large lightweight composite parts for aircraft, wind turbine blades, spacecraft and maritime applications. Location: Delft.

## 37. CHIP INTEGRATION TECHNOLOGY CENTRE
Fieldlab Chip Integration Technology Centre (CITC) is developing a new generation of chips to improve healthcare, make the transition to sustainable energy and make the world a safer place. Location: Nijmegen.

## 38. ADVANCED MANUFACTURING LOGISTICS
The goal of Fieldlab Advanced Manufacturing Logistics (AML) is to build a state-of-the-art AML system on the Brainport Industries Campus that can be rolled out to other high tech clusters. Location: Eindhoven.

## 39. INDUSTRIAL REALITY
The aim is to organize AR / VR information in European industry and to make it accessible and usable for industrial workers. This ensures higher product quality and improved efficiency. Location: Enschede.

## 40. INCLUSIVE FIELDLAB
In the Inclusive Fieldlab new technologies and social innovations are developed and applied that contribute to a better connection to the regular labor market for people who are distant from this. Location: Amersfoort.

## 41. ZEPHYROS FIELDLAB
The goal of Fieldlab Zephyros is to develop, test and demonstrate innovations and to develop knowledge and skills. The ultimate goal: no unnecessary downtime and no need for on-site maintenance of the offshore wind energy system. Location: Breda.

# SMART INDUSTRY
# 2018 - 2021

Smart Industry is being driven by the development of new ICT and manufacturing technology and is having a far-reaching impact on industry. Securing a position in the vanguard of industrial digitization is crucial for jobs, future economic growth and the sustainability of industry. The key objective of the Smart Industry Implementation Agenda 2018-2021 is to speed up digitization within Dutch businesses, so that by 2021 the Netherlands has developed the best and most flexible digitally connected production network in Europe.



Flexible Manufacturing

Smart Products

Advanced Manufacturing

Manufacturing technologies

3D

Smart Industry

Servitization

Network Centric

Digital Factory

Smart Working

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Digitization

Sustainable Factory

Connected Factories

## Nine acceleration projects to drive the process forward

**1. Smart Industry Assessment Programme**
Helping businesses get started in the area of Smart Industry.

**2. Smart Industry Expertise Centre**
One-stop shop for businesses. Focus on speeding up developments across the wider industrial SME sector and supporting implementation in achievable steps.

**3. Smart Industry Hubs**
Creation of a network of regional Smart Industry Hubs.

**4. National Smart Industry Roadmap**
The combined NWA/HTSM/ICT Smart Industry Roadmap describes the intended development of Smart Industry knowledge.

**5. Linking SkillsLabs to Fieldlabs**
Helping every Fieldlab also become a SkillsLab.

**6. Human-oriented Technology Programme**
This programme is developing best practices in this area as a source of inspiration and a guide for developers and users of human-oriented technology.

**7. Cybersecurity Programme**
Making manufacturing firms digitally resilient by setting up a Smart Industry Digital Trust Centre.

**8. Data-sharing Programme**
Establishment of a Data Value Centre and Data-sharing Coalition.

**9. International Smart Industry projects**
Organization of concrete collaborative projects between businesses and knowledge institutions in the Netherlands, Germany and Belgium.

## www.smartindustry.nl

*For more information go to* **www.smartindustry.nl/fieldlabs** *or contact us via* **info@smartindustry.nl** *or +31 (0)79 - 353 14 05.*