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## Legal Information

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COMPASS FOR SMART ENGINEERING INITIATIVES  
AND POLICIES IN THE EUROPEAN UNION

2018

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## 1. Introduction

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The greatest challenge for Europe's engineering economies is the so called Smart Industry, which is understood as the intelligent IT-based components and systems within all key areas of supply, production and distribution chains. This irreversible leap forward in industrial development is comparable with the introduction of steam power, electricity or basic IT at previous stages and is, therefore, known as the fourth industrial revolution.

The terms Smart Industry and Smart Company refer to the historic changes that modern IT and communication systems introduced to all economic areas for many years. According to its technical orientation and historic development, the manufacturing industry is one of the most effected sectors since "businesses will establish global networks that incorporate their machinery, warehousing systems and production facilities in the shape of Cyber-Physical Systems (CPS). In the manufacturing environment, these Cyber-Physical Systems comprise smart machines, storage systems and production facilities capable of autonomously exchanging information, triggering actions and controlling each other independently." (Recommendations for implementing the strategic initiative INDUSTRIE 4.0) [1].

To avoid staying left behind many global development standards as well as national strategies across Europe have been started. However, by putting focuses on different issues, being driven by different stakeholders and by starting on different national development levels little reconciliation on European level can be expected. Currently, there is a real threat that Europe's answer to the challenge of Smart Industry is too much based on individual activities of the partner countries without the possibility to exchange and learn from each other and with too little real support and impact for small and medium-sized enterprises (SMEs).

Missing links between separate efforts of different countries in the field of Smart Industry were addressed by the European project SMeART, which stands for Knowledge Alliance for Upskilling Europe's SMEs to meet the challenges of Smart Engineering<sup>1</sup>. 15 research institutions and companies from seven European countries – Spain, Italy, Slovenia, Austria, Belgium, the Netherlands, and Germany – have been jointly conducting the project since January 1<sup>st</sup>, 2017. The SMeART project aims to build up sustainable cooperation between higher education institutions (HEIs) and engineering SMEs to ensure the successful transition to Smart Industry. To this end, practical supporting tools will be jointly developed by business and university partners helping them to tackle Smart Industry-related challenges, such as:

- Compass for major Smart Industry initiatives in all 28 European member states;
- Report on business and learning consultant needs of engineering SMEs in relation to Smart Engineering;
- Guidelines for implementing Smart Industry in engineering SMEs and developing related staff skills;
- Online-based stress test-tool to assess the level of "smartness" of companies and to provide relating suggestions for improvements;
- Learning, exchange and networking online-portal to ensure further cooperation amongst different European stakeholders in the field of Smart Industry.

As Smart Industry progresses, companies are experiencing major problems with this venture. In Europe, many SMEs have problems implementing the technical tools of Smart Industry. Since there is no network among them and the competitiveness of SMEs plays an important role, the SMeART project has set itself the goal to support the SMEs by getting them funding in the right places and by eliminating their weaknesses.

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<sup>1</sup> Learn more about SMeART by visiting our website: [www.smeart.eu](http://www.smeart.eu)



So far, there is a small learning effect among each other in Europe. The organizations that support the SMEs are not perfectly interlinked in their projects yet. SMeART wants to give this venture a structure. Certain difficulties arise because of the large mass of those involved. The branches of the nations are different, and the SMEs all have different problems and demands.

Furthermore, there are no exact areas of responsibility for progress in the sense of Smart Industry. This is what the EU wants to take care of. In addition, the SMeART project presents greater difficulties as it is difficult to obtain a suitable overview that meets the requirements of realizing the goals.

The number of participants / competitors also raises the difficulty of taking a survey and of obtaining sufficient answers and facts.

However, the major problems remain that:

- SMEs still know too little about Smart Industry and its character to affect all business areas;
- SMEs need urgent help to tackle the challenges of Smart Engineering, not only through formal learning activities but through cooperation and consulting models with HEIs focussing on workplace-based learning, transnational learning mobility, exchange and networking with other SMEs.

Changing this situation is the main objective of the SMeART project. Thus, the present Compass for Smart Engineering Initiatives and Policies is considered a contribution of SMeART towards interlinking different stakeholders engaged in Smart Industry across the European Union.



## 2. Research Design of the Compass

The main objective of this Compass is to present an overview of the most important national initiatives and policies that were recently brought into effect to tackle the challenges of Smart Industry and Smart Engineering, learning about their aims, objectives, similarities and differences.

### 2.1. Research Methodology

To achieve these aims, the following research methodology has been designed and implemented:

- In the first step, a standardized online-based questionnaire has been developed to describe the most important Smart Engineering initiatives and policies in each EU country. This questionnaire asked for key data such as the name of the initiatives, the funding bodies behind them, their contact data, aims, goals and target groups of the initiatives, features specifically focusing on demands and needs of SMEs, benchmarks defined, best practice examples presented etc.
- The related online-survey was implemented by all HEIs and research institutes of the partnership by dividing all 28 between them. Data were collected by desk and internet research, by contacting responsible bodies for these initiatives.

The research design for the Compass is demonstrated below in the Figure 1:

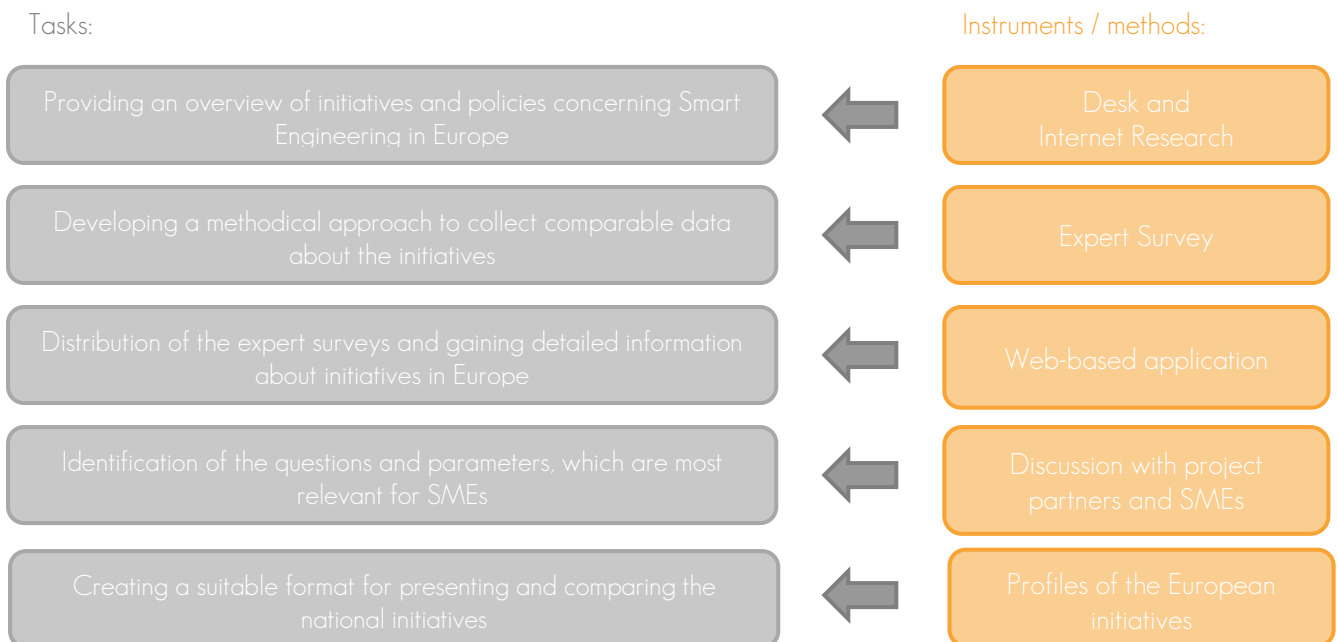


Figure 1: Research design for the Compass (own illustration/ IPH 2018).

### 2.2. Research Instrument

The online-based questionnaire, being a main research instrument, included a total of 42 questions. Essentially, the questions were focused on the key information about the funding program, the project leader, the funder and the orientation of the funding program. In addition to those questions, a description of the funding program was requested.





The following is an excerpt of the main questions of the survey:

Name of the funding program:

- What is the name of the funding program?
- Is the funding program only directed at projects in the context of Smart Engineering or also at projects with other topics?

Key information about the project leader:

- Is there a project leader?

Key information about the funder:

- How many official funders exist for the funding program?
- Where is the main funder located?
- What is the name of the main funder?
- What is the type of the main funder?
- How many employees does the main funder have?
- What is the address of the funder?

Key information about the funding program:

- What is the start date of the funding program?
- Do you know the end date of the funding initiative and is the funding initiative still running?
- What is the budget of the funding program?
- How many projects are supported by the funding program?
- How many publications result from the funding program?
- How many patents or other industrial property rights are acquired within the projects in the funding program?

Orientation of the funding program:

- Is there a special step of Smart Engineering which is supported by the funding program?
- Is a special branch of SME addressed or could every SME participate?
- Which skills or competencies of the SME are to be improved by the funding program?

Description of the funding program:

- Please enter a detailed description of the funding program and its aims

Rating of the funding program and forecast:

- How do you rate the success of the funding program?
- How many projects were completed successfully?
- Did the projects adhere to the timetable?
- Did the projects adhere to the budget?
- How has the number of employees in the SMEs changed based on the funding program?
- How has the extent of using Smart Engineering in the SMEs (e.g., the usage of IT systems) changed?
- In which steps of Smart Engineering do you see need for official or private research?

### 3. Theoretical Background of Smart Engineering

#### 3.1. Basic Information of Smart Engineering

Smart Engineering or Smart Industry is the current trend of automation and data exchange in manufacturing technologies. Smart Industry is an industrial evolution concept with four stages. The term is mainly used in Europe, having its roots in Germany.

The term "Industrie 4.0" is a German word creation but there is, for example, the expression "Smart Industry" as an English equivalent. There are, however, similar initiatives in many countries. In the US, it is called "Industrial Internet Consortium" (IIC). The IIC was founded in March 2014 by the companies AT&T, Cisco, General Electric, IBM and Intel. New internet technologies are to be jointly promoted, although the approach is not limited to the industrial sector. There are further initiatives in Japan called "Industrial Value-Chain Initiative" (IVI). Initiators are major Japanese companies. China also established initiatives similar to the German political initiative "Smart Industry" in the five-year plan of 2015. They are intended to play a decisive role in the shift from low-wage countries to global industrial power. South Korea also invests in so-called Smart Factories. In several European countries, there are other activities comparable to the German political initiative "Industrie 4.0", such as France with "Industrie du future".

The chronological sequence is represented in Figure 2. The first industrial revolution is understood as the introduction of water-power, steam-power and the mechanization. It was followed by the second industrial revolution, which is considered as the introduction of mass-production techniques by using electric energy. The third industrial revolution is based on the application of electronic systems and information technology for enhancing manufacturing automation. A significant breakthrough is now expected as the fourth industrial revolution by introducing so-called Cyber-Physical Systems [2].

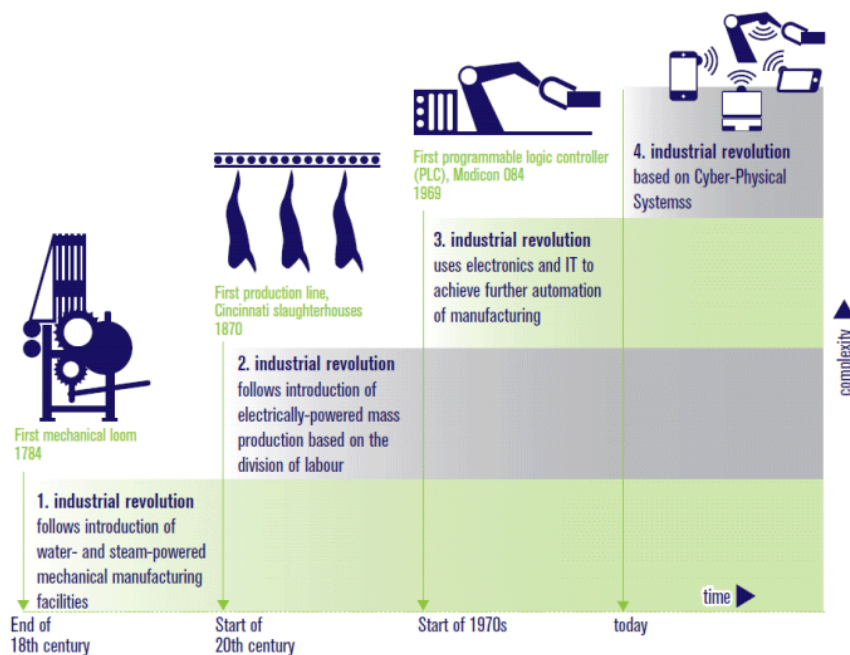


Figure 2: Industrial Revolution [2]

Smart Industry and Smart Engineering have their basic focus on the production process within a "Smart Factory", while the Internet of Things (IoT) focuses on the utilization phase of digitalized and connected devices and products. Smart Industry includes Cyber-Physical Systems, the Internet of Things and cloud computing [3]. The term "Smart Industry" strongly focuses on Smart Factories. To describe general digital transformation processes, resulting value chain changes and effects related to non-industrial small and medium enterprises (SMEs), we consider the term Smart Industry as too constricted.



In the context of Smart Engineering the world of production will become more and more networked until everything is interlinked. This means that the complexity of production and supplier networks will grow enormously. So far, networks and processes have been limited to one factory. However, in a Smart Industry scenario, these boundaries of individual factories will no longer exist. Instead, they will be lifted in order to interconnect multiple factories or even geographical regions.

The main point of future industrial products and machines are integrated intelligence, connectivity, user-friendliness and a high degree of customizability. Today, mechatronic high-tech products have reached a very high level of quality so that the customers cannot perceive any differences between them. The only way to make a product better than other high-end products is to improve the functionality by advancing the software or making it more customizable [4].

One part of Smart Industry is the use of cyber-physic-systems (CPS), which are characterized by reconfiguration and self-optimized adaption to changing production orders and operating systems. The basic technology of CPS comprises embedded systems, which are basically mini-computers. These mini-computers are able to measure physical stats by sensors and to process those data. The embedded systems are equipped with an IP address and modern communication interfaces. The CPS technology is now able to detect where and in what state of completion a product is and by what machine it will be processed next – as long as the machine is able to communicate, too. As a result, production can be decentralized in real time and not be organized centrally [5].

### 3.2. Targets of Smart Engineering

The main target of Smart Engineering is to improve the value-added processes and to develop new business models in order to strengthen industrial competitiveness. Therefore, it is necessary to have machines that can predict failures and trigger maintenance processes autonomously or to have self-organized logistics that react to unexpected changes in production. It will provide the management with more insight on the status of the factory. In this stage, the utilization of data for understanding current operating conditions and detecting faults and failures is an important topic to research [6].

Smart machines are the main part of Smart Engineering. The targets and demands on smart machines are versatile. They include transparency of technological processes, optimizing the quality and supporting the maintenance of production equipment. To reach these multiple targets, different levels of artificial intelligence are necessary. The stages range from communication and distributed functionality through adaptive and autonomous system behavior to self-optimization of entire process chains [7].

Smart Industry has big economic potential. For example, it will have a positive macroeconomic effect. The macroeconomic potential is difficult to quantify because Smart Industry is not defined uniformly and there is no single technological innovation but rather a combination of various technologies that can only unleash their full potential together. Some of these technologies are in an advanced stage of development. However, it will take time before they are ready for the market. The various levels of technological maturity make it difficult to predict the speed with which the new technological applications will come into commercial use. Nevertheless, it is indisputable that the widespread deployment of networked production facilities in SMEs be important for the future competitiveness of the German economy [8].

Another potential of Smart Industry is the more flexible production with declining production costs. Induced by the already described CPS, which are integrated in "Smart Factories", a higher productivity can be realized. Parts of the production can thus communicate not only with one another and with manufacturing plants, but also, via human-machine interfaces. Humans can intervene directly in this communication process. The emerging machine-machine and human-human networks are able to optimize themselves automatically and, in interaction with people, solve problems themselves. In this way, stocks can be reduced, personnel planning improved, logistics optimized, and complexity and maintenance costs lowered. In addition, an increase in product quality can be expected, along with more flexible manufacturing options. It is even possible that the maximum of flexibility will be achieved with batch size one. This means that a customized product can be made for customers at the same price as a serial product today.

A new potential market caused by Smart Industry, especially by CPS, is using virtual creation networks. Via virtual platforms in the cloud, companies could access production according to their need in order to coordinate production stages in real-time. In this context, one could also imagine additional services. For example, companies with capacity shortages could offer free machine capacity for rental. Nevertheless, platforms are only one technology. In Figure 3, an overview of technologies in the area of Smart Engineering can be found.

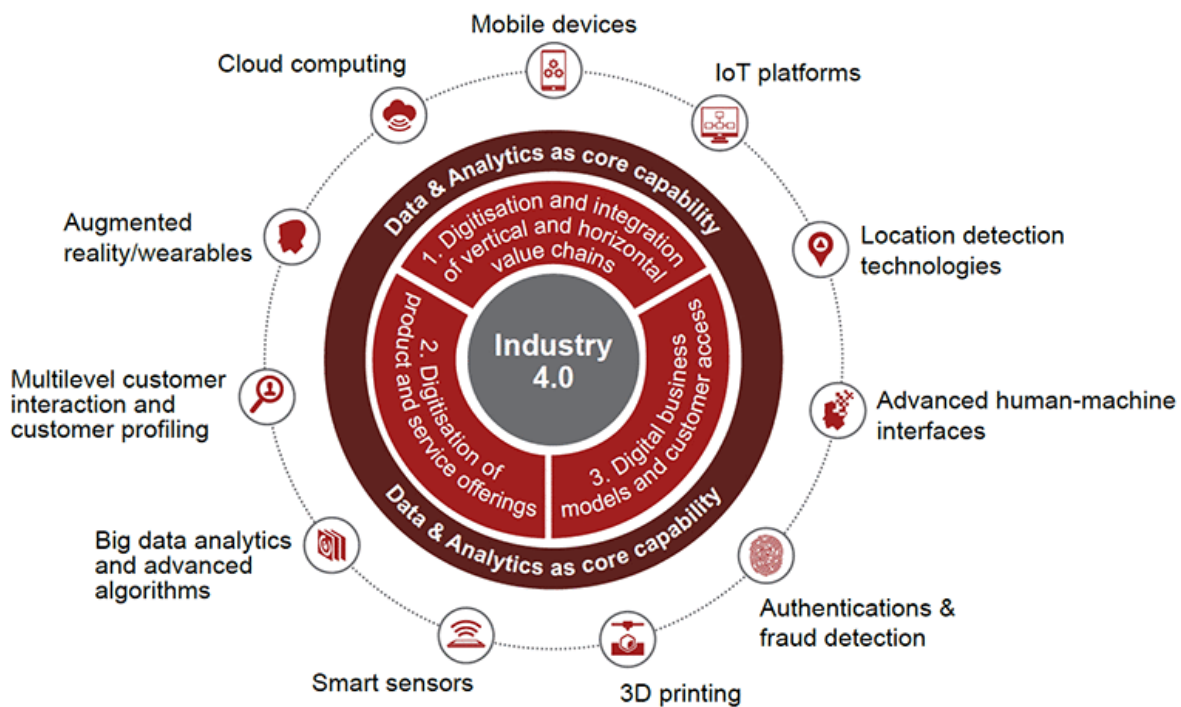


Figure 3: Overview Smart Industry [9]

### 3.3. Current state of Smart Engineering in SMEs

Small and medium enterprises (SMEs) need to find a way to use the potential of Smart Industry in order to develop their existing businesses. Many enterprises already have products that are equipped with sensors but do not exploit the potential of the technical opportunities to the full extent. The development of new products and ideas at the age of Smart Industry has a significant impact on the future targets of the companies.

Many companies have not done any systematic steps to implement Smart Industry yet, although there are many applications available. Often, SMEs do not dare to take the next step because they have concerns about data security and information deficits in the context of Smart Industry. Another reason is that many enterprises do not see the advantage of Smart Industry for themselves. In addition, SMEs often have machines and IT-systems from different manufacturers and on a different technical level. For that reason, the upgrade of machines and software is closely connected with high costs. Many companies are afraid of that, especially if they do not have their own IT department and, therefore, do not have the technical knowledge to decide which system to choose. They need help finding suitable solutions, otherwise the connection to international competitors may be lost. Therefore, the "Plattform Industrie 4.0" worked on an online map to show SMEs where Smart Industry is already integrated in Germany. This map helps SMEs to get in contact with each other and exchange experiences about Smart Industry. The map also shows test environments that allow companies to test new technologies and applications without the risk of investing in infrastructure or software [10].



To improve the standards of SMEs and to distribute Smart Industry it is important not only to improve the framework conditions and options nationally, but also to involve the European Union. Today, the European Union takes a lot of effort to prepare SMEs in the field of Smart Industry. There are several barriers that exist despite there being a single market. The European framework is currently geared towards analogue and not for digital transfers. That is why only a small percentage of SMEs provide their goods and services across national borders. To force that problem the European Union is about to create a Digital Single Market<sup>2</sup>.

Additionally, the European Union sees Smart Industry not only as a way to create products with high added value but also as a way to promote environmentally and socially sustainable manufacturing. New technologies should help build up economically and ecologically sustainable value chains, especially with internationally competitive companies in Europe [11].

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<sup>2</sup> [https://ec.europa.eu/commission/priorities/digital-single-market\\_en](https://ec.europa.eu/commission/priorities/digital-single-market_en)



#### 4. Overview of Smart Industry Policies in Europe

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As Smart Industry is considered a relevant approach towards fostering high-value, environment- and social-friendly manufacturing and increasing companies' international competitiveness, the European Commission is committed to support a broad launching of smart processes, products, and services across the EU member states' enterprises. To this end, a significant number of strategies and funding programs were initiated by the European Commission and Governments of the EU member states aiming at promoting Smart Industry and Smart Engineering.

##### 4.1. European Commission's Policy towards Smart Specialisation

To support a specific socio-economic development of EU member countries, the so-called Smart Specialisation<sup>3</sup> approach was put in place. It means, each EU member state or even region should elaborate its unique Smart Specialisation strategy (short S3) by identifying strategic areas for development, which then are considered priorities for future investments. Typically, these areas represent specific competitive strengths and realistic growth potentials supported by a critical mass of activity and entrepreneurial resources. Thus, Smart specialisation is a place-based approach: it builds on the assets and resources available to regions and Member States and on their specific socio-economic situation.

Moreover, Smart Specialisation is an innovation- and knowledge-based approach: the identified areas should include a broad view of innovation, supporting technological as well as practice-based and social innovation.

Well-shaped S3 is a prerequisite for receiving investments from the European Structural Funds ESF, in particular, from the European Regional Development fund ERDF.

Following the S3 recommendations, over 120 smart specialisation strategies have been developed by both prosperous and less developed EU countries, with a total budget of approx. 67 billion EUR composed of ESF and regional/national funds. Many countries defined the development of smart industrial processes and technologies as one of the priorities within their S3s. Even if the term Smart Industry is not mentioned explicitly, the formulated priorities demonstrated the related efforts (i.e. Lithuania: New manufacturing processes, materials and technologies; Latvia: Smart materials, technologies and engineering systems). Therefore, S3s set the course for the digital future of Member states.

Furthermore, since 2011, the European Commission provides recommendations to regional and national bodies concerning the development and implementation of S3s via Smart Specialisation Platform S3P<sup>4</sup>. This Platform promotes mutual learning, data gathering, analysis, and networking opportunities for around 170 EU regions and 18 national governments.

##### 4.2. Digitising European Industry initiative (DEI)

In April 2016, the European Commission launched the Digitising European Industry initiative (DEI)<sup>5</sup>. As part of the Digital Single Market strategy, the DEI initiative aimed to reinforce the EU's competitiveness in digital technologies and ensure that every business in Europe regardless the sector, location, and size can take advantage of digital innovations. Moreover, the DEI aimed to establish links between national and regional initiatives, ensuring the necessary level of coordination and helping to reach critical mass where individual initiatives cannot achieve the right scale on their own.

A central element of the DEI forms, as Fig. 4 illustrates, the European platform of national initiatives on digitising industry, which should bring together all Member States to build a critical mass of initiatives and investments for Smart Industry, and to ensure the commitment of Member States, regions and private sector to achieve the DEI goals.

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<sup>3</sup> <http://s3platform.jrc.ec.europa.eu/what-is-smart-specialisation>

<sup>4</sup> <http://s3platform.jrc.ec.europa.eu/home>

<sup>5</sup> <https://ec.europa.eu/digital-single-market/en/policies/digitising-european-industry>



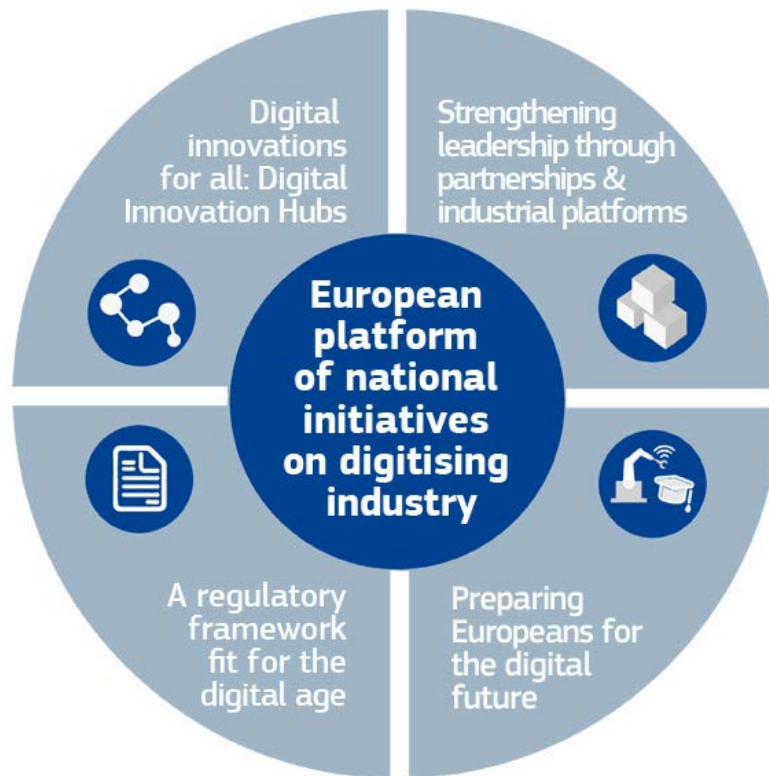


Figure 4: Pillars of the DIE (European Commission<sup>6</sup>).

The further four pillars are:

1. Digital innovations for all - Digital Innovation Hubs DIHs: DIHs are one-stop-shops where companies - especially SMEs, startups and mid-caps- can get practical advice to improve their business, production processes, products and services by means of digital technology.
2. Strengthening leadership through partnerships and industrial platforms: focus on Public-Private Partnerships (PPPs) that provide the digital technology building blocks of the future.
3. A regulatory framework fit for the digital age: update of regulations in key fields for industry such as cybersecurity and free flow of data.
4. Preparing Europeans for the digital future: Adapting the workforce and education and learning systems to the new challenges.

Up to EUR 50 billion were supposed to be mobilized for implementing the DEI. The funds allocation looked like:

- EUR 37 billion investment to boost digital innovation;
- EUR 5.5 billion national and regional investments in digital innovation hubs;
- EUR 6.3 billion for the first production lines of next-generation electronic components;
- EUR 6.7 billion for the European Cloud Initiative.

In the context of this Compass, the European platform and DIHs might be of a special interest.

<sup>6</sup> <https://ec.europa.eu/digital-single-market/en/pillars-digitising-european-industry-initiative>



### 4.3. European platform of national initiatives on digitising industry

The European Platform of national initiatives<sup>7</sup>, launched in March 2017, is at the core of the coordination effort of the European Commission. The Platform plays an essential role in the roll-out of digitalisation of industry across Europe by supporting experience exchange, collaboration, triggering joint investments, common approaches to regulatory frameworks, measures for staff up- and re-skilling.

As of October 2017, 15 Member States have already launched national initiatives for the digitisation of industry. They are:

- Austria (Industrie 4.0 Österreich: <https://plattformindustrie40.at/?lang=en>, Digital Roadmap Austria <https://www.digitalroadmap.gv.at/>);
- Belgium (MADE DIFFERENT – Factories of the future <http://www.madedifferent.be/>, Flemish initiative on Industrie 4.0 <https://www.vlaanderen.be/nl/publicaties/detail/vision-2050>, Digital Wallonia <https://www.digitalwallonia.be/made-different-digital-wallonia/>);
- Czech Republic (Průmysl 4.0: <https://www.mpo.cz/en/industry/industry-four/>);
- Denmark (MADE - Manufacturing Academy of Denmark <http://made.dk/>);
- France (Alliance Industrie du Futur <http://www.industrie-dufutur.org>, Programme des Investissements d'Avenir <http://www.gouvernement.fr/investissements-d-avenir-cgi>, Transition Numerique [www.transition-numerique.fr](http://www.transition-numerique.fr));
- Germany (Plattform Industrie 4.0 [www.plattform-i40.de](http://www.plattform-i40.de), Mittelstand 4.0 <http://www.mittelstand-digital.de/DE/Foerderinitiativen/mittelstand-4-0.html>, Autonomik for Industrie 4.0 <http://autonomik40.de>);
- Hungary (IPAR4.0 Technology Platform <https://www.i40platform.hu>);
- Italy (Piano Nazionale Industria 4.0 <http://www.mise.gov.it/index.php/it/industria40>);
- Lithuania (Pramonė 4.0 <http://www.industrie40.lt/platform/>);
- Luxembourg (Digital4Industry - D4I <http://digital4industry.lu/>);
- Netherlands (Smart Industry - Dutch Industry fit for the Future <http://www.smartindustry.nl>);
- Portugal (Indústria 4.0 [www.i40.pt](http://www.i40.pt));
- Spain (Industria Conectada 4.0 <http://www.industriaconectada40.gob.es>);
- United Kingdom (Digital Strategy <https://www.gov.uk/government/news/uk-digital-strategy-the-next-frontier-in-our-digital-revolution>).

Seven more initiatives in the countries Bulgaria, Croatia (Digitising impulse 2020), Cyprus (National Integrated Industrial Strategy 2017 - 2030), Finland (Digitising Finnish Industry program), Poland (Platforma Przemysłu Przyszłości - PPP), Romania, and Slovakia (Conception of Smart Industry for Slovakia) are under preparation.

We collected a comprehensive overview of the most relevant initiatives within the chapter 6 of this Compass.

In the meantime, however, the European Commission monitored the state of digitisation across the EU through different indexes (i.e. Digital Economy and Society Index (DESI), which summarises relevant indicators on Europe's digital performance such as connectivity, human capital/digital skills, use of Internet services by citizens, and integration of digital technology by businesses. That way, the evolution of EU countries in digital competitiveness can be tracked. As per the DESI 2018<sup>8</sup>, Denmark, Sweden, Finland, and the Netherlands have the most advanced digital economies in the EU followed by Luxembourg, Ireland, the UK, Belgium and Estonia. Romania, Greece and Italy have the lowest scores on the DESI).

The monitoring results were published in the first analysis draft report based on the 15 national Smart Industry initiatives<sup>9</sup>.

<sup>7</sup> <https://ec.europa.eu/digital-single-market/en/cordination-european-national-regional-initiatives>

<sup>8</sup> <https://ec.europa.eu/digital-single-market/en/desi>

<sup>9</sup> [https://ec.europa.eu/futurium/en/system/files/ged/national\\_initiatives\\_for\\_digitising\\_industry\\_across\\_the\\_eu.pdf](https://ec.europa.eu/futurium/en/system/files/ged/national_initiatives_for_digitising_industry_across_the_eu.pdf)





The related findings can be summarized as follows:

It is evident that digitisation is a core element of national industrial policies. However, a distinction between so-called 'trend-setters' like Denmark, Sweden, the Netherlands, and 'fast-followers' such as Croatia, Greece, Bulgaria can be made.

The 'trend-setters' launched, for example, dynamic discussion platforms, driven by industry and societal authorities. They made investments in basic infrastructures and skills development, developed strategic agenda and presented innovative ideas concerning DEI that are not yet evident in other EU countries.

The 'fast-followers' mostly adopted topics identified by the trend-setters. This adoption led to the delays in launching prerequisites of the digital transformation such as building up research community or setting up strategic priority areas. Therefore, the fast-followers are not capable of setting the next trend.

EU-collaboration has a positive impact on the development of digital economies of Member states, such as legal certainties, co-investments, strengthening of leadership positions in critical business areas. Thus, many Member States attracted investments in research, development and innovation (R&D&I) related to digitization, and launched measures for upskilling staff. Moreover, the real needs of national industrial enterprises were recognized, increasingly addressed, and launched under the Member States' priorities.

In general, 18 months after the launch of the initiative, clear alignment of national and European initiatives is evident. This is a good foundation for defining together the longer-term visions and actions for the digital transformation of Europe. However, more efforts and investments are required to close the gap between top- and lower-performing countries and to leverage the digital opportunities.

A more detailed glance at the Europe's digital industry landscape shows that more than 30 European, national, and regional initiatives on digitizing industry can be identified, as Fig. 5 presents:

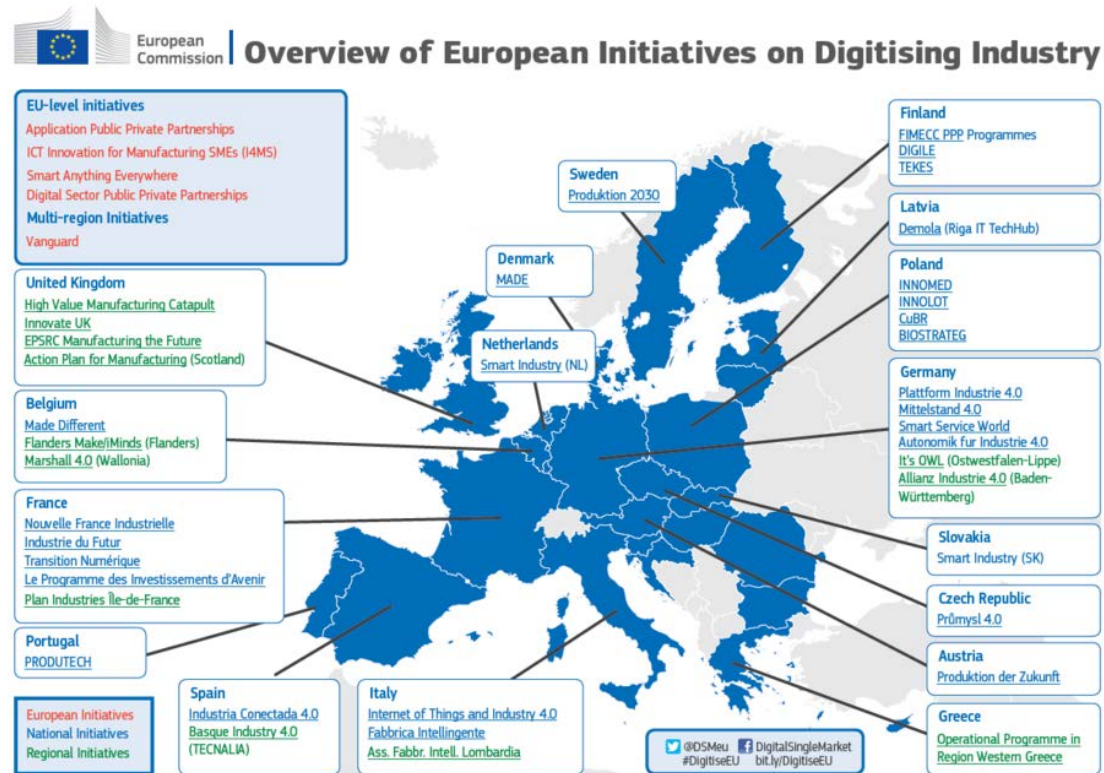


Figure 5: Overview of European Initiatives on Digitizing Industry [11].

Some of these initiatives are presented within the chapter 6 of this Compass.

#### 4.4. Digital Innovation Hubs<sup>10</sup>

The mission of DIHs is to contribute to the development of the economy and society through innovation, technological research and digital transformation. The latter one is considered a core element of DIH's activities involving all industrial sectors. In particular, SMEs should benefit from the DIHs as they have difficulties to recognize in which technologies to invest and how to ensure financing for the digital transformation.

Currently, 191 fully operational DIHs are launched across the EU, and 298 are in preparation. Most of them are co-funded with the European support (such as European Social Fund, European Regional Development Fund). Additionally, regional funds were attracted to ensure a sustainable development of DIHs.

Technical competences of the DIHs are widespread. Below we provide an overview of some of them by indicating DIHs in the selected EU countries:

- Internet of Things (i.e. ATHENA Research and Innovation Center in Greece <http://www.athena-innovation.gr>, Advanced Manufacturing Digital Innovation Hub in Lithuania <http://dih.linpra.lt/>),
- Data mining/Big Data (i.e. Demola Budapest in Hungary <https://www.demola.net>, DIGIMAT: South-Moravian Digital Manufacturing Hub in Czech Republic <http://www.intemac.cz/en/>),

<sup>10</sup> <http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs>



- Augmented and Virtual Reality/visualization (i.e. Dinapsis Operation & Lab in Spain <http://www.dinapsis.es>; Flanders Make in Belgium <https://www.vlaio.be/nl>),
- Additive Manufacturing/3D printing (i.e. Luxinnovation in Luxembourg <https://www.luxinnovation.lu/>, Smart Industry Centre (SmartIC) in Estonia <http://www.smartic.ee>),
- Laser based manufacturing (i.e. Jožef Stefan Institute in Slovenia <http://tehnologije.ijs.si/>, European Technology Platform on Smart Systems Integration (EPoSS) in Germany <https://www.smart-systems-integration.org/>),
- Artificial intelligence and cognitive systems (i.e. CYBERSEC HUB in Poland <http://cybersechub.eu/>, Know-Center GmbH in Austria <http://www.know-center.at>),
- Robotic and Autonomous systems (i.e. AMSYSTEMS Center in the Netherlands <https://www.tno.nl/nl/>, Copenhagen Fintech in Denmark <http://copenhagenfintech.dk/>),
- Cyber-Security including biometrics (i.e. Sofia Tech Park in Bulgaria <http://sofiatech.bg/en/>, Ventspils High Technology Park (VHTP) in Latvia <http://www.vatp.lv/>).

Of course, each DIH covers a bunch of different competences.

Services provided by DIHs are wide-ranged, too. Below a few examples are listed:

- Concept validation and prototyping (i.e. Axelera in France <https://www.axelera.org/>, Centre for Applied Data Analytics Research CeADAR in Ireland <https://www.ceadar.ie/>),
- Pre-competitive series production (i.e. iMan Norte Hub - Digital Innovation Hub for Customer-Driven Manufacturing @ Norte in Portugal <https://www.imannortehub.com/>, Sunderland Software City in United Kingdom <http://www.sunderlandsoftwarecity.com/>),
- Visioning and strategy development for businesses (i.e. MITA Innovation Hub in Malta <https://mitainnovationhub.gov.mt/en/Pages/About/Approach.aspx>, t2i - DIH Triveneto in Italy <https://www.t2i.it/dih>),
- Market intelligence (i.e. Arctic Drone Labs in Finland <https://www.arcticdronelabs.com>, Infrastructure and Cloud data centre test Environment (SICS ICE) in Sweden <http://ice.sics.se>),
- Education and skills development (i.e. BIC EURONOVA S.A. in Spain <http://www.bic.es>, EIT Digital Budapest Node in Hungary <https://www.eitdigital.eu/about-us/locations/budapest-node/>).

However, you autonomously can find and contact a DIH in your country, with tailor-made technological competences and services provided by entering your individual parameters into the developed online-tool<sup>11</sup>. This unique interactive tool has been launched by the European Commission to support Europe's businesses in identifying appropriate contacts and competences concerning Smart Industry in their countries and/or regions as well as building up cross-countries digital industry networks. With this online-based tool, the EU implements one of the key DEI priorities towards supporting a strong network of DIHs to ensure that every company in Europe can take advantage of digital opportunities.

As a rule, DIHs have strong links to national or regional initiatives for digitising industry: their activities mirror the efforts of regional governments towards implementing a multi-partner's cooperation approach, interacting with business associations and other actors at local, national and European level in the field of Smart Industry.

#### 4.5. Networking Digital Innovation Hubs through Horizon 2020

Member States and regions play a key role in establishing DIHs. The role of the European Commission is to link them up in a strong pan-European network of DIHs. For this, the European Commission is annually investing €100 million from 2016 to 2020 within the funding program Horizon2020<sup>12</sup>.

<sup>11</sup> <http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool>

<sup>12</sup> <https://ec.europa.eu/programmes/horizon2020/>



There are already several EU initiatives to shape the pan-European network of DIHs, which are contributing to boost competitiveness of existing industries – notably for SMEs and mid-caps – and to create additional business opportunities:

- Innovation for Manufacturing SMEs (I4MS): <http://i4ms.eu/>
- Smart Anything Everywhere (SAE): <https://smartanythingeverywhere.eu/>
- Open Data Incubator Europe (ODINE): <https://opendataincubator.eu/>
- European Coordination Hub for Open Robotics Development (ECHORD++): <http://echord.eu/>
- Access Center for Photonics Innovation Solutions and Technology Support (ACTPHAST):  
<http://www.actphast.eu/>
- Supercomputing Exercise for SMEs (SESAME NET): <https://sesamenet.eu/>

A working group within the Digitising European Industry initiative brings together relevant stakeholders and helps to keep making progress towards the implementation of the European Commission's priorities on Digital Innovation Hubs<sup>13</sup>.

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<sup>13</sup> [https://ec.europa.eu/futurium/en/system/files/ged/dei\\_working\\_group1\\_report\\_june2017\\_0.pdf](https://ec.europa.eu/futurium/en/system/files/ged/dei_working_group1_report_june2017_0.pdf)



## 5. Contacts

The most important contacts and partners on the subject of Smart Engineering in the respective countries are listed below.

Country	Austria
Main Initiative	Produktion der Zukunft
Coordinator	Austrian Research Promotion Agency (FFG) Sensengasse 1 1090 Vienna Austria
Web page	<a href="http://www.ffg.at">www.ffg.at</a>
Time Period	started on 2011-01-01
Budget	117,000,000 €
Branch	manufacturing Industry

Country	Belgium
Main Initiative	Plan Marshall 4.0
Coordinator	Walloon Government Rue Mazy, 25-27 5100, Namur Belgium
Web page	<a href="http://gouvernement.wallonie.be">gouvernement.wallonie.be</a>
Time Period	started on 2015-01-01 and continues to 2019-12-31
Budget	2,900,000,000 €
Branch	all sectors

Country	Bulgaria
Main Initiative	Innovations and Competitiveness
Coordinator	Ministry of Economy - European Funds for Competitiveness Directorate General "6th September" street, 21 Sofia 1000 Bulgaria
Web page	<a href="http://www.mi.government.bg/en">www.mi.government.bg/en</a>
Time Period	started on 2014-01-01
Budget	1,079,615,516 €
Branch	all sectors

Country	Croatia
Main Initiative	Establishment of Innovation Network for Industry and development of Thematic Innovation Platforms
Coordinator	Ministry of Economy Ul. gr. Vukovara 78 1000 Zagreb Croatia
Web page	<a href="http://www.mingo.hr/en">www.mingo.hr/en</a>
Time Period	started on 2016-01-01
Budget	242,731,457 €
Branch	all sectors



Country	Czech Republic
Main Initiative	Aplikace
Coordinator	Agentura pro podnikání a inovace Žitná 18 120 00 Prague Czech Republic
Web page	<a href="http://www.agentura-api.org">www.agentura-api.org</a>
Time Period	started on 2016-11-29 and continues to 2020-04-30
Budget	175,000,000 €
Branch	all sectors

Country	Denmark
Main Initiative	AAU Smart Production
Coordinator	Aalborg University, Department of Mechanical and Manufacturing Engineering Fibigerstræde 16 DK-9220, Aalborg East Denmark
Web page	<a href="http://www.mp.aau.dk">www.mp.aau.dk</a>
Time Period	started on 2015-01-01
Budget	13,700,000 €
Branch	education industry

Country	Estonia
Main Initiative	Support for applied research in smart specialisation growth areas: NUTIKAS
Coordinator	Archimedes Foundation L. Koidula 13a 10125 Tallinn Estonia
Web page	<a href="http://archimedes.ee/en/archimedes-foundation">http://archimedes.ee/en/archimedes-foundation</a>
Time Period	started on 2017-01-23 and ended on 2017-12-20
Budget	9,000,000 €
Branch	all sectors

Country	Finland
Main Initiative	Research, development and innovation program ICT 2023: Industrial Internet
Coordinator	Juha Latikka Hakaniemenranta 6 FI-00531 Helsinki Finland
Web page	<a href="http://www.aka.fi/en/funding/apply-now/ict-2023">www.aka.fi/en/funding/apply-now/ict-2023</a>
Time Period	started on 2017-01-01 and continues to 2023-01-01
Budget	10,000,000 €



Country	France
Main Initiative	La French Tech
Coordinator	Banque Publique d'Investissements (BPI France) / French Public Investment Bank Boulevard Haussmann, 6-8 75009, Paris France
Web page	<a href="http://www.bpifrance.com">www.bpifrance.com</a>
Time Period	started on 2013-11-27
Budget	200,000,000 €
Branch	all sectors

Country	Germany
Main Initiative	PAiCE (Platforms  Additive Manufacturing   Imaging   Communication   Engineering)
Coordinator	DLR Project Management Agency Linder Höhe 51147 Cologne Germany
Web page	<a href="http://www.dlr.de/pt">www.dlr.de/pt</a>
Time Period	started on 2015-10-31 and continues to 2021-12-31
Budget	50,000,000 €
Branch	all sectors

Country	Hungary
Main Initiative	National initiative IPAR4.0 Technology Platform
Coordinator	Institute for Computer Science and Control (SZTAKI), Kende u. 13 1111 Budapest Hungary
Web page	<a href="https://www.i40platform.hu/en/about_us">https://www.i40platform.hu/en/about_us</a>
Time Period	IPAR 4.0 is an ongoing initiative, which has been established by May 2016.
Budget	322,600,000 €
Branch	all sectors

Country	Ireland
Main Initiative	Strategy for Higher Education-Enterprise Engagement
Coordinator	Higher Education Authority Dublin Ireland
Web page	<a href="http://hea.ie">hea.ie</a>
Time Period	started on 2014-01-01 and continues to 2020-12-31
Branch	all sectors



Country	Italy
Main Initiative	Piano nazionale Industria 4.0
Coordinator	Stato italiano Piazza Colonna, 370 187 Roma Italy
Web page	<a href="http://www.governo.it">www.governo.it</a>
Time Period	started on 2017-06-01
Budget	13,000,000,000 €
Branch	all sectors

Country	Latvia
Main Initiative	State Support Programmes for Innovation Development
Coordinator	Investment and Development Agency of Latvia Perses iela 2 1442 - Riga Latvia
Web page	<a href="http://www.liaa.gov.lv/en">www.liaa.gov.lv/en</a>
Time Period	started on 2014-01-01 and continues to 2020-12-31
Budget	818,950,000 €
Branch	all sectors

Country	Lithuania
Main Initiative	Program on the Implementation of the Priority Areas of Research and (Socio-Cultural) Development & Innovation (Pramone' 4.0)
Coordinator	Ministry of Economy of the Republic of Lithuania Gedimino Av. 38 01104 Vilnius Lithuania
Web page	<a href="http://www.industrie40.lt/platform/">http://www.industrie40.lt/platform/</a>
Time Period	2017 - 2020
Budget	79,800,000 €
Branch	all sectors

Country	Luxembourg
Main Initiative	Digital Tech Fund
Coordinator	Expon Capital Boulevard Royal 59 2449 Luxembourg Luxembourg
Web page	<a href="http://www.exponcapital.com">www.exponcapital.com</a>
Time Period	started on 2016-05-01
Budget	20,000,000 €
Branch	all sectors





Country	Netherlands
Main Initiative	Smart Industry
Coordinator	Several ministries of the Dutch Government, main coordination by "economic affairs"
Web page	<a href="https://www.smartindustry.nl">https://www.smartindustry.nl</a>
Time Period	started on 2014-01-01
Budget	25,000,000 €
Branch	all sectors

Country	Portugal
Main Initiative	Estratégia Nacional para a Digitalização da Economia - Indústria 4.0
Coordinator	Cotec Rua Eng.º Ferreira Dias, n.º 728 4100-246 Porto Portugal
Web page	<a href="http://www.cotecportugal.pt">www.cotecportugal.pt</a>
Time Period	started on 2017-01-30
Budget	4,500,000,000 €
Branch	all sectors

Country	Romania
Main Initiative	The National Strategy for RDI 2014-2020
Coordinator	Ministry of National Education and Research, Technological Development and Innovation 21-25, Mendeleev st. 010362 Bucharest Romania
Web page	<a href="http://www.research.gov.ro">www.research.gov.ro</a>
Time Period	started on 2014-10-21
Budget	3,300,000 €
Branch	automotive industry

Country	Slovakia
Main Initiative	Operational Program Research and Innovation (OPRI)
Coordinator	Ministry of Education, Science, Research and Sports of the Slovak Republic (MoESRS SR) and the Ministry of Economy of the Slovak Republic (MoE SR) Stromová 2665/1 831 01 Nové Mesto Slovakia
Web page	<a href="http://www.minedu.sk">www.minedu.sk</a>
Time Period	started on 2016-03-15
Budget	3,988,000 €
Branch	automotive, electrical engineering, plastics, ICT and services industry



Country	Slovenia
Main Initiative	Strategic development and innovation partnerships
Coordinator	Ministry of Economy Kotnikova 5 1000 Ljubljana Slovenia
Web page	<a href="http://www.mgrt.gov.si">www.mgrt.gov.si</a>
Time Period	started on 2016-01-29
Budget	10,490,783 €
Branch	raw materials, machine or plant manufacturing, pharma/ healthcare, food, smart cities, houses and mobility industry

Country	Spain
Main Initiative	Industria Conectada 4.0
Coordinator	Gobierno de Espana Av. Puerta de Hierro 28071 Madrid Spain
Web page	<a href="http://www.lamoncloa.gob.es">www.lamoncloa.gob.es</a>
Time Period	started on 2016-10-01
Budget	165,500,000 €
Branch	all sectors

Country	Sweden
Main Initiative	Produktion2030
Coordinator	Cecilia Warrol Storgatan 5 114 85 Stockholm Sweden
Web page	<a href="http://produktion2030.se/en">http://produktion2030.se/en</a>
Time Period	started on 2017-01-01
Budget	4,800,000 €
Branch	all sectors

Country	United Kingdom
Main Initiative	High Value Manufacturing Catapult
Coordinator	Innovate UK North Star Avenue Swindon United Kingdom
Web page	<a href="http://www.gov.uk/government/organisations/innovate-uk">www.gov.uk/government/organisations/innovate-uk</a>
Time Period	started on 2012-01-01 and continues to 2018-12-31
Budget	164,000,000 €
Branch	all sectors



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## 6. Profiles of Europe's countries in relation to Smart Industry

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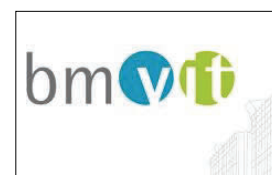
The analysis of the Europe's endeavours towards digitizing industry shows that Member States undertook numerous actions to support related processes through the development and launching national and/or regional programs and initiatives. Certainly, the synergy effects between these initiatives could significantly contribute to the mutual exchange and to the consolidation of European stakeholders' efforts in the field of Smart Industry. Therefore, the questions arise whether national decision makers and SMEs are aware of the initiatives of other Member states in relation to Smart Industry, to which extent they are interlinked, and whether the information sources about these strategies are available.

To facilitate the linkages between Member states in relation to Smart Industry, we collected and analysed the most relevant initiatives of all 28 EU countries and presented them in this section in short profiles. Each profile contains data about the funding and coordinating body, available budget, time period, and main goals and objectives.

That way, we hope to provide the visibility of individual countries' initiatives and contribute to building up the pan-European network in the field of Smart Industry.



## ICT of the Future



### Funder

Austrian Ministry for Transport,  
Innovation and Technology  
Radetzkystraße 2  
1030 Vienna  
Austria

### Coordinator

Austrian Research Promotion Agency (FFG)  
Sensengasse 1  
1090 Vienna  
Austria  
[www.ffg.at](http://www.ffg.at)

### Time period

The funding programme "ICT of the Future" started on 2012-01-01.

### Orientation of the funding programme

The target group are SMEs, large enterprises, universities, universities of applied sciences, competence centres, research facilities, start-up, non-profit organisations, regional administrative bodies in the field of information technology.

### Budget

The programme "ICT of the Future" has funded up to now 47 projects with a total budget of 27,000,000 €. So far, 16 publications have been published.

### Brief description

"ICT of the Future" is the funding programme of the Federal Ministry for Transport, Innovation and Technology (bmvit) for the promotion of high-quality research, development and innovation in information and communication technology, interlinked with application areas and societal challenges. The programme supports ICT innovation in a comprehensive manner and aims to contribute towards the goal of the federal government to lead Austria from the group of Innovation Followers to the group of Innovation Leaders, making it one of the most innovative countries in the EU.



## Produktion der Zukunft



### Funder

Austrian Ministry for Transport,  
Innovation and Technology  
Radetzkystraße 2  
1030 Vienna  
Austria

### Coordinator

Austrian Research Promotion Agency (FFG)  
Sensengasse 1  
1090 Vienna  
Austria  
[www.ffg.at](http://www.ffg.at)

### Time period

The funding programme "Produktion der Zukunft" started on 2011-01-01.

### Orientation of the funding programme

The funding programme contains projects with the subject of Smart Engineering. It is addressed to SMEs from manufacturing industry.

"Produktion der Zukunft" is supporting product planning, product design, production planning and control as well as manufacturing.

### Budget

The programme "Produktion der Zukunft" has funded up to 226 projects and has a total budget of 117,000,000 €.

### Brief description

The manufacturing industry is the backbone of Austrian economy. Almost every fifth euro in Austria is earned by the domestic manufacturing industry, almost two thirds of the workforce depend directly on it. All the more reason why producing internationally competitive products is an essential factor for prosperity. Therefore, the goal is to keep the manufacturing industry in Austria and to make it fit for the future. Many outstanding production companies are located in Austria, not few of them are global and technological leaders. Still, the pressure from international competition is enormous and domestic industry can only survive if it can develop innovative technologies and improve in productivity.



## Produktionsstandort OÖ 2050: Industrie 4.0



### Funder

Land Oberösterreich

Bahnhofplatz 1

4021 Linz

Austria

[www.land-oberoesterreich.gv.at](http://www.land-oberoesterreich.gv.at)

### Coordinator

Austrian Research Promotion Agency (FFG)

Sensengasse 1

1090 Vienna

Austria

[www.ffg.at](http://www.ffg.at)

### Time period

The funding programme "Produktionsstandort OÖ 2050: Industrie 4.0" started on 2015-01-01 and continues to 2020-12-31.

### Orientation of the funding programme

"Produktionsstandort OÖ 2050: Industrie 4.0" is supporting product planning, process planning, production planning and control and manufacturing. It should improve the skills in real-time operating systems, robotics and communication (network, protocols, ...).

### Budget

The programme "Produktionsstandort OÖ 2050: Industrie 4.0" has funded up to 10 projects with a total budget of 3,000,000 €. So far, 7 publications have been published.

### Brief description

This funding programme offers funding in Smart Engineering with focus on „Digital Factory“ and „Automatization at Lightweight Design“. The main objective is making Upper Austria a leading industry region in Europe. New products should be developed and the productivity improved. Furthermore, the enterprises are supported to make their production more sustainable. Also, SMEs research and the cooperation between enterprises and funding institutions in Upper Austria should be intensified.



## Smart and Digital Services



### Funder

Federal Ministry of Science, Research and Economy  
Stubenring 1  
1010 Vienna  
Austria  
[www.bmwf.gv.at](http://www.bmwf.gv.at)

### Coordinator

Austrian Research Promotion Agency (FFG)  
Sensengasse 1  
1090 Vienna  
Austria  
[www.ffg.at](http://www.ffg.at)

### Time period

The funding programme "Smart and Digital Services" started on 2014-09-15 and continues to 2020-12-31.

### Orientation of the funding programme

The target groups of the programme are SMEs, large companies, universities, universities of applied sciences, competence centres, research institutions, start-ups and multipliers / intermediaries in the subject areas of service innovation, society, information technology, careers in research, life sciences, materials and production, mobility, security, space, environment and energy.

### Brief description

Innovative Services and Smart Services are important factors in Smart Engineering. With data from sensors and linked systems there are many opportunities to offer Smart Services, e.g. monitoring, simulation, predictive maintenance or developing new business models. To get the best quality, it is important to adjust the developing process for these Smart Services. The funding initiative should improve this process, productivity and make enterprises more innovative in the sector of Smart Services.



## Digital Poland



### Funder

European Regional Development Fund  
Avenue de Beaulieu 5  
1160 Brussels  
Belgium  
[https://ec.europa.eu/commission/index\\_en](https://ec.europa.eu/commission/index_en)

### Coordinator

European Regional Development Fund  
Avenue de Beaulieu 5  
1160 Brussels  
Belgium  
[https://ec.europa.eu/commission/index\\_en](https://ec.europa.eu/commission/index_en)

### Time period

The funding programme "Digital Poland" started on 2014-12-05 and continues to 2023-12-31.

### Orientation of the funding programme

The following organisations can apply for grants from Operational Programme Digital Poland:

- telecommunication operators,
- government administration units, their subordinate units and the units they supervise,
- research units and state cultural institutions,
- NGOs.

"Digital Poland" is supporting development of fast Internet, digital competitions of society, technical help and should improve the skills in digitalisation, hardware (Central Processing Unit, Unified Communications, System-on-a-Chip, sensors, actuators, ...), robotics and communication (network, protocols, ...).

### Budget

The programme "Digital Poland" has funded up to 209 projects has a total budget of 2,566,900,000 €. So far, 15 publications have been published.

### Brief description

Operational Programme Digital Poland aims at increasing the availability of the high-speed Internet, establishing a citizen-friendly e-administration which will make it possible to resolve various issues via a computer and continuously rising the level of digital competences of the society. The main objective is to strengthen digital foundations for the national development.

Three priority areas were distinguished in the programme:

1. Common access to high-speed Internet,
2. E-government and open government,
3. Digital competences of the society.





## Factories of the Future (FoF)



### Funder

European Commission  
200 Rue de la Loi  
1049 Brussels  
Belgium  
<http://ec.europa.eu>

### Coordinator

European Factories of the Future Research Association  
(EFFRA)  
Boulevard Auguste Reyers 80  
1030 Schaerbeek  
Belgium

### Time period

The funding programme "Factories of the Future (FoF)" started on 2014-01-01 and continues to 2020-12-31.

### Orientation of the funding programme

"Factories of the Future" is industry-led with participation by small, medium and large enterprises, universities, research organisations and associations from across Europe who cooperate in pre-competitive, cross-border projects focusing on production technologies from multiple sectors.

Achieving the identified transformations requires a coordinated research and innovation effort, where manufacturing challenges and opportunities are addressed by deploying technologies and enablers identified as advanced manufacturing processes and technologies, mechatronics for advanced manufacturing systems, ICT, manufacturing strategies, knowledge-workers and modelling, simulation and forecasting methods and tools.

### Budget

The programme "Factories of the Future (FoF)" has funded up to now 150 projects with a total budget of 1,150,000,000€.

### Brief description

The Factories of the Future Public-Private Partnership (PPP) initiative aims at helping EU manufacturing enterprises, in particular SMEs, to adapt to global competitive pressures by developing the necessary key enabling technologies across a broad range of sectors. It will help European industry to meet increasing global consumer demand for greener, more customised and higher quality products in a demand-driven industry with less waste and a better use of resources. The PPP will concentrate on increasing the technological basis of EU manufacturing through the development and integration of enabling technologies, such as innovative technologies for adaptable machines, ICT for manufacturing, and novel industrial handling of materials.

[http://ec.europa.eu/research/press/2013/pdf/ppp/fof\\_factsheet.pdf](http://ec.europa.eu/research/press/2013/pdf/ppp/fof_factsheet.pdf)



## Horizon 2020



### Funder

European Union

[https://europa.eu/european-union/index\\_en](https://europa.eu/european-union/index_en)

### Coordinator

European Commission

200 Rue de la Loi

1049 Brussels

Belgium

<http://ec.europa.eu>

### Time period

The funding programme "Horizon 2020" started on 2014-01-01 and continues to 2020-12-31.

### Orientation of the funding programme

Horizon 2020 is the financial instrument for implementing the Innovation Union, a flagship initiative Europe 2020 to secure Europe's global competitiveness.

As a means of promoting economic growth and job creation, Horizon 2020 has the political support of European Heads of State and Government and Members of the European Parliament. They agreed that research is an investment in our future and, therefore, placed it at the heart of the EU's draft for smart, sustainable and inclusive growth and jobs.

### Budget

The programme "Horizon 2020" has funded up to now 13,444 projects with a total budget of 80,000,000,000 €.

### Brief description

Horizon 2020 is the biggest EU research and innovation programme ever. It will lead to more break-throughs, discoveries and world-firsts by taking great ideas from the lab to the market. The programme is divided in three different parts: excellent science, industrial leadership and societal challenges. Industrial leadership has the aim to encourage businesses to invest more in research, and target areas where they can work with the public sector to boost innovation. It includes the innovations in information and communication technology (ICT) and research in other Smart Engineering technologies.



## I4MS - ICT Innovation for Manufacturing SMEs



### Funder

European Commission  
200 Rue de la Loi  
1049 Brussels  
Belgium  
<http://ec.europa.eu>

### Coordinator

European Commission  
200 Rue de la Loi  
1049 Brussels  
Belgium  
<http://ec.europa.eu>

### Time period

The funding programme "I4MS - ICT Innovation for Manufacturing SMEs" started on 2013-07-01.

### Orientation of the funding programme

A new set of 60 experiments has been launched and 12 are still to come, involving 25 new digital innovation hubs and 120 SMEs. They all have a cross-border dimension to foster collaboration on European level. The focus on intelligent fixtures has now turned into the advent of Cyber Physical Systems (CPS) and Internet of Things in manufacturing processes. This is a new and highly relevant technical field that is gaining enormous importance for manufacturing. Furthermore, high performance computing cloud-based simulation services, which were also one of the technology areas in I4MS phase 1, have been extended to data analytics. Finally, the focus in Robotics has been put on robotic systems particularly affordable and useful for SMEs.

### Budget

The programme "I4MS - ICT Innovation for Manufacturing SMEs" has funded up to now 11 projects has a total budget of 110,000,000 €.

### Brief description

I4MS (ICT Innovation for Manufacturing SMEs) is the initiative promoted by the EC to support the European leadership in manufacturing through the adoption of ICT technologies. In fact, Europe's competitiveness in that sector depends on its capacity to deliver highly innovative products, where the innovation often originates from advances in ICT. Therefore, I4MS aims at promoting leading edge technologies, developed in FP7 large ICT projects, in the following areas: Robotics, HPC cloud based simulation services, Laser based applications and Intelligent sensor-based equipment. The initiative is dedicated to the whole European manufacturing industry with special focus on SMEs.



## Knowledge Education Development



### Funder

European Funds

Avenue de Beaulieu 5

1160 Brussels

Belgium

[https://ec.europa.eu/commission/index\\_en](https://ec.europa.eu/commission/index_en)

### Coordinator

European Funds

Avenue de Beaulieu 5

1160 Brussels

Belgium

[https://ec.europa.eu/commission/index\\_en](https://ec.europa.eu/commission/index_en)

### Time period

The funding programme "Knowledge Education Development" started on 2014-12-17.

### Orientation of the funding programme

Target groups or final beneficiaries of the support under the implemented projects include among others:

- young people, including disabled persons, up to 30 years of age who are not in employment, education or training,
- public administration employees,
- local government units (including social assistance organisational entities) and their employees,
- social assistance and inclusion institutions and their employees,
- graduates of schools and educational institutions providing vocational education,
- micro, small and medium-sized enterprises and their employees.

### Budget

The programme "Knowledge Education Development" has funded up to now 2,632 projects has a total budget of 5,429,614,480 €. So far, 15 publications have been published.

### Brief description

Operational Programme "Knowledge Education Development" provides support aimed at activating young unemployed people under 30, at supporting higher education, developing social innovations, mobility and transnational cooperation, as well as the reforms in the area of employment, social inclusion, education, health and good governance. Priority axes are:

1. Young people on labour market
2. Efficient public policies for labour market, economy and education
3. Higher education for economy and development
4. Social innovations and international cooperation
5. Support for healthcare
6. Technical assistance

[www.power.gov.pl/en/site/about-the-programme](http://www.power.gov.pl/en/site/about-the-programme)



Made Different



### Funder

Flanders Innovation & Entrepreneurship  
(Agentschap Innoveren en Ondernemen)  
Koning Albert II-laan, 35 bus 12  
1030 Brussels  
Belgium

### Coordinator

Flanders Innovation & Entrepreneurship  
(Agentschap Innoveren en Ondernemen)  
Koning Albert II-laan, 35 bus 12  
1030 Brussels  
Belgium

### Time period

The funding programme "Made Different" started on 2012-01-01.

### Orientation of the funding programme

"Made Different" is supporting product planning, product design, process and production planning, production control, manufacturing, assembly, quality control, logistics / supply chain, running / after sales and recycling and should improve the skills in hardware, operating systems for embedded platforms, real-time operating systems, robotics, communication (network, protocols, ...), mobile computing, distributed architecture, machine learning for IoT.

### Brief description

The aim of the Made Different action plan is for the Flemish government, the technology federation Agoria and its joint research centre Sirris to strengthen Flanders' manufacturing industry and make it a world leader. The Made Different action plan is designed to give the manufacturing industry in Flanders a future in the industrial landscape of the 21st century. The approach entails raising awareness, providing information and offering specific guidance. To ensure the latter, seven paths have been designed, each of which spotlights one of the seven necessary transformations the Flemish companies need to undergo to become real 'Factories of the Future'.



## Plan Marshall 4.0



### Funder

Walloon Government  
Rue Mazy, 25-27  
5100 Namur  
Belgium  
[gouvernement.wallonie.be](http://gouvernement.wallonie.be)

### Coordinator

Walloon Government  
Rue Mazy, 25-27  
5100 Namur  
Belgium  
[gouvernement.wallonie.be](http://gouvernement.wallonie.be)

### Time period

The funding programme "Plan Marshall 4.0" started on 2015-01-01 and continues to 2019-12-31.

### Orientation of the funding programme

In addition to the projects on the subject of smart engineering, the funding programme also includes projects with other topics. It is addressed to SMEs from all sectors.

"Plan Marshall 4.0" is supporting product planning, product design, process and production planning, production control, manufacturing, assembly, quality control, logistics / supply chain, running / after sales and recycling and should improve the skills in hardware, operating systems for embedded platforms, real-time operating systems, robotics, communication (network, protocols, ...), mobile computing, distributed architecture and machine learning for IoT.

### Budget

The programme "Plan Marshall 4.0" has a total budget of 2,900,000,000 €.

### Brief description

With the Plan Marshall 4.0, the Walloon government aims at presenting a detailed scheme for an effective industrial policy. Marshall 4.0 will support and reinforce actions to promote a context for greater job opportunities, trainings and research. With the ambition to place Wallonia at the forefront of the Fourth Industrial revolution, various actions will be undertaken under the framework of Plan Marshall 4.0. For example, the Walloon government is developing measures to strengthen the links and ease the transition between education and training. It will support the development of industry by involving SMEs in the digitalisation processes. In addition, there are plans to integrate digital innovation into social and industrial practices.



## Smart Growth 2014-2020



### Funder

European Regional Development Fund (ERDF)  
Rue de la Loi 170  
1040 Brussels  
Belgium  
[https://ec.europa.eu/info/index\\_en](https://ec.europa.eu/info/index_en)

### Coordinator

European Regional Development Fund (ERDF)  
Rue de la Loi 170  
1040 Brussels  
Belgium  
[https://ec.europa.eu/info/index\\_en](https://ec.europa.eu/info/index_en)

### Time period

The funding programme "Smart Growth 2014-2020" started on 2015-02-12 and continues to 2020-12-31.

### Orientation of the funding programme

The Smart Growth Programme 2014-2020 will support scientific research and development of new, innovative technologies and measures to enhance the competitiveness of small and medium-sized enterprises. Its main objective is to stimulate innovation in the Polish economy by increasing private investment in R&D and creating demand of enterprises for innovation, research and development. In particular, the following entities may apply for support under the Smart Growth Programme:

- enterprises (in particular SMEs),
- research units,
- consortia of enterprises and research units, business environment institutions.

### Budget

The programme "Smart Growth 2014-2020" has funded up to now 1,776 projects. So far, 14 publications have been published.

### Brief description

The second largest amount of EU funding for 2014-2020 in Poland was allocated to the Operational Programme Smart Growth. This programme is also the largest programme financing research, development and innovation in the European Union. Priority axes are:

1. Support for R&D activity of enterprises,
2. Support for the environment and capacity of enterprise for R&D&I activity,
3. Support for innovation in enterprises,
4. Increasing the research potential.

[www.poir.gov.pl/en/site/about-the-programme](http://www.poir.gov.pl/en/site/about-the-programme)



## Innovations and Competitiveness



### Funder

European Regional Development Fund  
(ERDF) European Commission  
DG Regional and Urban Policy  
1049 Brussels  
Belgium

### Coordinator

Ministry of Economy - European Funds for Competitiveness  
Directorate General  
"6th September" street, 21  
1000 Sofia  
Bulgaria

### Time period

The funding programme "Innovations and Competitiveness" started on 2014-01-01.

### Orientation of the funding programme

Small and medium enterprises (SMEs) are the main target group of the OPIC 2014-2020 (Operational programme "Innovations and Competitiveness"). The programme's strategy, as a part of the implementation of the EU structural and investment funds (ESIF) in Bulgaria, is closely related to the investment for growth and jobs goal and Bulgaria's contribution to "Europe 2020" targets.

### Budget

The programme "Innovations and Competitiveness" has funded up to now 5 projects and has a total budget of 1,079,615,516 €.

### Brief description

The ERDF support under OPIC 2014-2020 aims at addressing the needs, overcoming the challenges, and seizing the opportunities for development of Bulgarian economy. This will be done by engaging in smart growth (under priority axes 1, 2) and sustainable growth (under priority axes 3, 4). The Programme also aims at achieving a complementary effect in terms of inclusive growth. Only priority axes 1 and 3 are allowed for large enterprises, while most of the Programme's support targets SMEs.

The Programme is focused on five priority axes:

1. Technological development and innovation
2. Entrepreneurship and SME growth capacity
3. Energy and resource efficiency
4. Removing bottlenecks in security of gas supplies
5. Technical Assistance





## Establishment of Innovation Network for Industry and development of Thematic Innovation Platforms



### Funder

Ministry of the Economy  
Ul. gr. Vukovara 78  
10 000 Zagreb  
Croatia  
[www.mingo.hr/en](http://www.mingo.hr/en)

### Coordinator

Ministry of Economy  
Ul. gr. Vukovara 78  
10 000 Zagreb  
Croatia  
[www.mingo.hr/en](http://www.mingo.hr/en)

### Time period

The funding programme "Establishment of Innovation Network for Industry and development of Thematic Innovation Platforms" started on 2016-01-01.

### Orientation of the funding programme

The programme "Establishment of Innovation Network for Industry and development of Thematic Innovation Platforms" is supporting the improvement of existing RDI infrastructure.

### Budget

The programme "Establishment of Innovation Network for Industry and development of Thematic Innovation Platforms" has funded up to 6 projects with a total budget of 100,000,000 €



## Establishment of Innovation Network for Industry and development of Thematic Innovation Platforms



### Brief description

Aims, goals and target groups of the initiative:

- Development of RDI Infrastructure
  - Development of new and the improvement of existing RDI infrastructure in Croatia
  - Centres of Competence
- Enhancement of RDI Activities
  - Support to business investment in RDI
  - Support to SMEs capacities to innovate
  - Support to social innovation
  - Support to research organizations conducting R&D projects directed towards the needs of economy
  - Strengthening research excellence by supporting national Centres of Research Excellence and enabling synergies with ERC grants
  - Features specifically focussing on demands and needs of SMEs

The main purpose of Smart Specialization is to transform the Croatian economy and increase its competitiveness by concentrating knowledge resources and linking them to a limited number of priorities. The identification of the Smart Specialization priorities will allow concentration of research capacities and infrastructure. This will provide advantage to both public and private sector and will bring together the critical mass of researchers who will jointly work on strategic R&D topics with goal of research excellence and its commercialization.



## Cyprus Digital Innovation Hub



### Coordinator

CYRIC Cyprus Research and Innovation Center  
72, 28th Octovriou Avenue, Office 301, Engomi,  
2414 Nicosia  
Cyprus  
[www.cyric.eu](http://www.cyric.eu)

### Orientation of the funding programme

Cyprus Digital Innovation Hub (CyDi-Hub) has been launched to bring the fourth digital revolution in Cyprus by offering cutting-edge digital technology innovations and services to the manufacturing industry.

### Budget

there is no specific funds allocated to the CyDi-Hub. It is about a mixed funding from the consulting services of CyDi-Hub, sponsoring, national and European projects.

### Brief description

CyDi-Hub is a network hub of research, innovation, business and industry organisations, utilizing state of the art infrastructure to facilitate and accelerate the shift towards the fourth digital revolution by aligning the regional stakeholders, industry and innovators. Given that Cyprus as an EU country is a single NUTS3 region, the vision is to establish a Nationwide DIH that brings together the necessary critical mass for having a significant impact to S3CY priority sectors. CyDi-Hub is committed to make an impact towards accelerating and enhancing R&D&I investment towards the direction of industry digitization.

CyDi-Hub caters for the specific needs and gaps of enterprises in its region, particularly SMEs, manufacturing companies and stakeholders nationwide by offering following services:

- Business support services (i.e. financial and viability assessment, competition analysis and value proposition, access to funding, assessment of business ideas);
- Incubation services (i.e. coaching and mentoring, prototyping, proof of concept, product design, testing and certification);
- Technical support services (product 3D design and prototyping, Internet of Things & software solutions, Robotics, Mechatronics, Electronics and Communication).

Among the CyDi-Hub network members are Ministry of Energy, Commerce, Industry and Tourism of Cyprus (MECIT), R&D associations, start-ups, industries, chambers of commerce, universities etc.

[www.cyric.eu/cydi\\_hub](http://www.cyric.eu/cydi_hub)



## Aplikace



### Funder

Ministry for Industry and Trade  
Na Františku 32  
110 15 Prague  
Czech Republic  
[www.mpo.cz](http://www.mpo.cz)

### Coordinator

Agentura pro podnikání a inovace  
Žitná 18  
120 00 Prague  
Czech Republic  
[www.agentura-api.org](http://www.agentura-api.org)

### Time period

The funding programme "Aplikace" started on 2016-11-29 and continues to 2020-04-30.

### Orientation of the funding programme

The orientation of the funding programme "Aplikace" is to support SMEs from all sectors in the field of product planning, product design, process and production planning, manufacturing and assembly.

### Budget

The programme "Aplikace" has a total budget of 175,000,000 €. So far, 11 publications have been published.

### Brief description

The aim of the programme is retrieving knowledge that is needed for development of new products, materials, technologies and services via implementation of projects of industry research and experimental development. Results of this effort will lead to implementing new level innovations and producing world-wide competitive products. The main goal is to support all the activities leading to the creation of prototypes, industrial patterns, open technologies, certified methodologies or software.



## Inovacní vouchery



### Funder

Ministerstvo průmyslu a obchodu  
CR Na Františku 32  
110 15 Prague  
Czech Republic  
[www.mpo.cz](http://www.mpo.cz)

### Coordinator

Agentura pro podnikání a inovace  
Žitná 18  
120 00 Prague  
Czech Republic  
[www.agentura-api.org](http://www.agentura-api.org)

### Time period

The funding programme "Inovacní vouchery" started on 2016-05-31 and continues to 2018-12-31.

### Orientation of the funding programme

Increasing interactions between businesses and organizations for research and dissemination of knowledge will have a direct impact on enhancing the competitiveness of small and medium-sized enterprises.

"Inovační vouchery" is supporting product planning, product design, process and production planning, manufacturing and assembly and should improve the skills in hardware (CPU, uC, SoC, sensors, actuators, ...) operating systems for embedded platforms, distributed architecture.

### Budget

The programme "Inovacní vouchery" has a total budget of 7,890,000 €. So far, 15 publications have been published.

### Brief description

The aim of this programme is the development of communication and sharing of acquired knowledge and know-how between business and research sphere. This will be used by firms to streamline their production. Supported activities are expert services in the sphere of innovations, especially measuring, diagnostic, testing, development of new systems, unique construction solutions, modeling, hardware and software development, innovation in material, system elements. Prototypes which will be used in production, optimization of processes, methods, product designing and consultancy in the sphere of innovations and IP.



## Potenciál



### Funder

Ministerstvo průmyslu a obchodu  
CR Na Františku 32  
110 15 Prague  
Czech Republic  
[www.mpo.cz](http://www.mpo.cz)

### Coordinator

Agentura pro podporu podnikání a investic  
CZECHINVEST  
Štěpánská 15  
120 00 Prague  
Czech Republic

### Time period

The funding programme "Potenciál" started on 2015-05-29 and continues to 2018-12-31.

### Orientation of the funding programme

The "Potenciál" programme helps entrepreneurs to deploy and expand the capacities needed to carry out research, development and innovation activities, the results of which are subsequently used in production.

### Budget

The programme "Potenciál" has funded up to 138 projects with a total budget of 60,000,000 €. So far, 8 publications have been published.

### Brief description

Aim of the program is to increase R&D capacities, innovation activities and amount of firms, which makes their own innovation program. Further aims of the initiative are: deeper cooperation of companies with development organizations, creating high-skill jobs and thus better knowledge of economics, better conditions for joining national and European R&D programs and constant growth of competitiveness of the Czech economy.



## Proof of Concept



### Funder

Ministerstvo průmyslu a obchodu  
CR Na Františku 32  
110 15 Prague  
Czech Republic  
[www.mpo.cz](http://www.mpo.cz)

### Coordinator

Agentura pro podnikání a inovace  
Žitná 566  
120 00 Prague  
Czech Republic  
[www.agentura-api.org](http://www.agentura-api.org)

### Time period

The funding programme "Proof of Concept" started on 2017-01-25 and continues to 2020-12-31.

### Orientation of the funding programme

The programme is designed for a business entity or organization for research and dissemination of knowledge and activities aimed at verifying the application potential of new research and development outcomes before their possible application is tested in practice. Moreover, "Proof of Concept" is supporting, product planning, process and production planning, production control and quality control.

### Budget

The programme "Proof of Concept" has a total budget of 41,961,720 €. So far, 8 publications have been published.

### Brief description

Priority of this program is supporting research and development investments and creating cooperation between firms, R&D centers and universities. Mainly development of products and services, technology transfer, social innovations, ecological innovations, demand stimulation, clusters and open innovations creation through intelligent specialization, inventions leading to early verification of the products, smart production and spreading of technologies for broad use will be financed by this program.



## Služby infrastruktury



### Funder

Ministerstvo průmyslu a obchodu  
CR Na Františku 32  
110 15 Prague  
Czech Republic  
[www.mpo.cz](http://www.mpo.cz)

### Coordinator

Agentura pro podnikání a inovace  
Žitná 18  
120 00 Prague  
Czech Republic  
[www.agentura-api.org](http://www.agentura-api.org)

### Time period

The funding programme "Služby infrastruktury" started on 2016-11-28 and continues to 2021-12-31.

### Orientation of the funding programme

The programme mainly supports the provision of services to innovative enterprises and the operation of an existing science and technology park (VTP, a business incubator or an innovation center. In rare cases, it is also possible to support the expansion of VTP facilities and the acquisition of new equipment and the construction of a new shared infrastructure in the region.

### Budget

The programme "Služby infrastruktury" has a total budget of 69,00,000 €. So far, 20 publications have been published.

### Brief description

Main aim of the programme is to improve services of innovation infrastructure, which will lead to increase of common research, development and innovation activities between business subjects and public and private sector which specialize in implementation of new technologies and competitive products and services.





## AAU Smart Production



### Funder

MADE at IvInnovation Foundation Denmark  
Vesterbrogade 1E, Blok D, 2. sal  
1620 Copenhagen  
Denmark  
<http://made.dk/om-made/medlemsinfo/>

### Coordinator

Aalborg University, Department of Mechanical and  
Manufacturing Engineering  
Fibigerstræde 16  
9220 Aalborg East  
Denmark

### Time period

The funding programme "AAU Smart Production" started on 2015-01-01.

### Orientation of the funding programme

All degree programmes and research activities at Aalborg University are problem- and project-based and have an interdisciplinary focus. Through strong interplay between staff and students and intense collaboration with public and private sectors, they offer degree programmes with a real-world approach and provide world-class research. This results in new insights, new solutions to societal challenges and knowledge that changes the world.

### Budget

The programme "AAU Smart Production" has a total budget of 13,700,000 DKK.

### Brief description

The AAU Smart Production project is a research initiative at Aalborg University, Denmark running 2015-2019. The objective of this programme is to research and demonstrate emergent digital technologies and to adapt these to the needs and characteristics of Danish industries. A Smart Production Laboratory (Smart Lab) has been developed as part of the project. The Smart Lab is a small Industry 4.0 factory containing a number of digital technologies which are integrated into a physical Industry 4.0 demonstrator. Since its establishment in August 2016, a number of projects have been initiated involving more than 50 students and researchers from various departments at Aalborg University. Most of these projects have been made in collaboration with large end-user companies and a number of system integrators and technology providers (most of which are SMEs). There has been a great industrial interest in the Smart Lab. Over the last six months, more than 150 companies have visited the lab, and the interest in engaging in projects by far exceeds our capacity. In the future, they are going to focus on setting up collaboration with SME end-users. Furthermore, they will investigate more systematic approaches for improving the knowledge sharing between the on-going projects and enabling better knowledge co-creation.



## Danish Council for Strategic Research



### Funder

Ministry of higher education and science

Børsgade 4

1015 Copenhagen

Denmark

<http://ufm.dk/en/research-and-innovation/funding>

### Coordinator

Søren Pind

Børsgade 4

1215 Copenhagen

Denmark

<http://ufm.dk/en/the-minister-and-the-ministry>

### Time period

The funding programme "Danish Council for Strategic Research" started on 2017-01-01.

### Orientation of the funding programme

The "Danish Council for Strategic Research" seeks to ensure that strategic research in Denmark is organised to meet the challenges facing Danish society. The aim is to ensure Denmark's position as a global frontrunner regarding welfare, wealth and science in the short and long term.

### Brief description

The grants are awarded within the framework of the Danish Council for Independent Research's E2016 and F2017 call, with the aim of providing researchers in Denmark the best possible conditions for producing outstanding research results at a high international level based on their own initiative.



## NordVest Smart Production

**NORDVEST**  
Smart Production

### Funder

Vesthimmerland Kommune  
Vestre Boulevard 7  
9600 Aars  
Denmark  
[www.vesthimmerland.dk](http://www.vesthimmerland.dk)

### Coordinator

Henrik Scharfe  
Torvet 1  
9640 Farso  
Denmark  
<http://smart.autonomous.dk/about>

### Time period

The funding programme "NordVest Smart Production" started on 2017-01-01.

### Orientation of the funding programme

The funding programme "NordVest Smart Production" is supporting production planning, production control, manufacturing and assembly and should improve the skills in communication (network, protocols, ...), distributed architecture, machine learning for IoT. The target group are SMEs in Denmark.

### Brief description

For SMEs, there are two particular challenges associated with I4. It can be difficult to determine where and how to invest in new technologies and methods. It may also be difficult to find the right continuing education and new employees. NVSP focuses on exactly these two challenges. We do this through inspiration events, innovation partnerships and try-outs. NVSP is supported by EU regional funds and the Ministry of Industry's targeted business efforts. The 4th Industrial Revolution - I4 - is a collective term for a group of technologies that unite features from digital (cyber) and physical machines. Cyber-physical systems have far-reaching consequences for value and service chains, and are expected to change the manufacturing industries.



## Enterprise Development Programme



### Funder

European Union, European Regional Development Fund (ERDF)  
Directorate-General for Communication  
European Commission  
1049 Brussels

### Coordinator

Enterprise Estonia (EAS)  
Lasnamäe 2  
11412 Tallinn  
Estonia  
[www.eas.ee/eas/?lang=en](http://www.eas.ee/eas/?lang=en)

### Time period

The funding programme "Enterprise Development Programme" started on 2015-01-01 and continues to 2021-12-31.

### Orientation of the funding programme

The orientation of the funding programme Enterprise Development Programme is to help ambitious enterprises with the readiness to invest and desire to grow, develop and launch new products and services.

### Budget

The programme "Enterprise Development Programme" has funded up to now 70 projects with a total budget of 73,000,000 €.

### Brief description

The programme aims to support well-thought-out development, improved action planning, innovation implementation and product development. In the course of the programme, each participating SME will launch new products and services that are more profitable than their predecessors. Target group: ambitious SMEs with the readiness to invest and desire to grow, develop and launch new products and services. Program also focuses on determining the SMEs's strategic views and compiling a long-term plan. The EAS can help in the implementation stage of the development plan by providing following services:

1. Identifying the SME's ambition and readiness for change
2. Preparing the development plan
3. Implementing the development plan.



## Innovation and Development Vouchers



### Funder

European Union, European Regional Development Fund (ERDF)  
Directorate-General for Communication  
European Commission  
1049 Brussels

### Coordinator

Enterprise Estonia (EAS)  
Lasnamäe 2  
11412 Tallinn  
Estonia  
[www.eas.ee/eas/?lang=en](http://www.eas.ee/eas/?lang=en)

### Time period

The funding programme "Innovation and Development Vouchers" started on 2015-11-16.

### Orientation of the funding programme

The objective of granting support is to increase the competitiveness of Estonian SME's by creating prerequisites for developing innovative products, services and technologies with higher added value. This objective will be attained by knowledge and technology transfer, increasing the capabilities of intellectual property protection, and increasing cooperation with research and development institutions and enterprises that provide consultation and engineering services, including enterprises that provide preliminary studies and consultation regarding production and technology. It is addressed to SMEs from agriculture, forestry and fishing; intermediation of sales, wholesale and retail trade; manufacture of tobacco products; manufacture of beverages (excl. manufacturing of soft drinks); production of mineral waters and other bottled waters.

### Budget

The programme "Innovation and Development Vouchers" has funded up to 11 projects with a budget of 10,000,000 €.

### Brief description

Main goal is to increase cooperation between SMEs & external innovation partners. The innovation voucher (max. 4000€) enables SME who is cooperating with a HEI, test laboratory, or intellectual property experts, to develop innovative solutions for development obstacles, carry out tests with new materials, gather knowledge on technologies, conduct studies in intellectual property databases etc. The development voucher (max. 20 000€) is a supporting measure for preliminary research (i.e. receiving professional expertise for implementing changes). This should enable the entrepreneur to gain comprehensive knowledge on whether their development idea has the potential necessary for continuing the development process in other stages.

[www.eas.ee/wp-content/uploads/2016/07/Innovatsiooni-ja-arendusosaku-maarus\\_eng.pdf](http://www.eas.ee/wp-content/uploads/2016/07/Innovatsiooni-ja-arendusosaku-maarus_eng.pdf)



## Support for applied research in smart specialisation growth areas: NUTIKAS



### Funder

European Union, European Regional Development Funds  
Directorate-General for Communication  
European Commission  
1049 Brussels  
Belgium

### Coordinator

Archimedes Foundation  
L. Koidula 13a  
10125 Tallinn  
Estonia  
<http://archimedes.ee/en/archimedes-foundation>

### Time period

The funding programme "Support for applied research in smart specialisation growth areas: NUTIKAS" started on 2017-01-23 and ended on 2017-12-20.

### Orientation of the funding programme

The funding is intended for a company registered in the Estonian commercial register, for the benefit of which a study or product development project in the smart specialisation growth area will be carried out by a research institution. The company contributes to the study with its own financing depending on the size of the company, and whether product development or an applied study is involved.

"NUTIKAS" aims at improving skills that could be used for the development of new products, processes or services, designing of prototypes at a lab or in an environment simulating the existing systems, as well as pilot production.

### Budget

The programme "NUTIKAS" has a total budget of 9,000,000 €.

### Brief description

The programme aims to contribute to growth in the research-intensity of the Estonian economy, supporting collaboration between R&D institutions and companies. Furthermore, the support will help to raise the capabilities of R&D institutions to carry out applied research needed for business in smart specialisation growth areas. These areas were set under the current R&D&I strategy 'Knowledge-based Estonia' 2014-2020 as follows:

1. ICT
2. health technologies
3. effective use of resources.

The funding supports SMEs and large companies. The duration of support for activities is up to three years. Activities that are supported must be finished by 31 August 2022 at the latest.

[www.etag.ee/en/funding/applied-research-funding/23917-2/](http://www.etag.ee/en/funding/applied-research-funding/23917-2/)



## Technology Loan



### Funder

European Union, European Regional  
Development Fund  
Directorate-General for Communication  
European Commission  
1049 Brussels

### Coordinator

KredEx  
Hobujaama 4  
10151 Tallinn  
Estonia  
[www.kredex.ee/en/enterprise/laen-ja-kaendus](http://www.kredex.ee/en/enterprise/laen-ja-kaendus)

### Time period

The funding programme "Technology Loan" started on 2011-01-01.

### Orientation of the funding programme

Technology loan is designed for export-oriented enterprises in the areas of processing industry, mining industry, production, transfer and distribution of electrical energy and waste processing and disposal, investing into machines and devices.

### Brief description

The funding programme "Technology loan" helps if a bank loan or leasing is used for an investment, but the entrepreneur lacks the required capital for self-financing. KredEx gives capital as a subordinated debt to the disposal of an entrepreneur, which in the eyes of other financiers increases the self-financing of the enterprise. That makes it possible to receive additional leasing or bank loan and thus helps the company to grow quicker. KredEx does not interfere in the management of the enterprise having received a loan. Loan amount: up to 2,000,000 Euros, but not more than 40% of the project cost.



## Research, Development and Innovation Programme ICT 2023: Industrial Internet



### Funder

Academy of Finland  
Hakaniemenranta 6  
00531 Helsinki  
Finland  
[www.aka.fi/en](http://www.aka.fi/en)

### Coordinator

Juha Latikka  
Hakaniemenranta 6  
00531 Helsinki  
Finland  
[www.aka.fi/en/funding/apply-now/ict-2023](http://www.aka.fi/en/funding/apply-now/ict-2023)

### Time period

The funding programme "Research, Development and Innovation Programme ICT 2023: Industrial Internet" started on 2017-01-01 and continues to 2023-01-01.

### Orientation of the funding programme

The key thematic areas of the funding programme are architectures, concepts, methods and tools for planning and configuring open platforms and systems, data processing, analysis and storage (centralised, distributed, cloud, integration).

### Budget

The programme "Research, Development and Innovation Programme ICT 2023: Industrial Internet" has a total budget of 10,000,000 €.

### Brief description

Technologies related to smart production and the industrial internet have been the subject of research over a long period, and the technological readiness for solutions already exists. The first applications of the industrial internet are already in practical use in different branches of industry. Reference architecture models have been developed for manufacturing and industrial automation systems. The industrial internet is present at all stages of product and system life cycles from research, product development and manufacturing to user support, recycling and disposal.





## Team Finland Industrial Internet Program



### Funder

Tekes - the Finnish Funding Agency for Innovation  
Porkkalankatu 1  
Helsinki  
Finland  
[www.tekes.fi/en/funding](http://www.tekes.fi/en/funding)

### Coordinator

Tiina Nurmi  
Porkkalankatu 1  
Helsinki  
Finland  
[www.tekes.fi/en/programmes-and-services](http://www.tekes.fi/en/programmes-and-services)

### Time period

The funding programme "Team Finland Industrial Internet Program" started on 2017-01-01 and continues to 2027-01-01.

### Orientation of the funding programme

Industrial Internet program offers a comprehensive service portfolio for Finnish companies. The program offers innovation funding for developing and piloting products and services for global markets. In addition, the program offers an opportunity to be part of carefully selected company groups, whose products and services will be introduced to the markets e.g. in the US, the UK and Germany. Industrial Internet program funds research projects as well.

### Budget

The programme "Team Finland Industrial Internet Program" has funded up to 243 projects.

### Brief description

Team Finland Industrial Internet Growth Program aims at supporting Finnish companies in business development and innovation as well as in achieving a global forerunner status in developing and utilizing IoT solutions. This will be accomplished by building up new ecosystems and new ways of cooperation.



Industrie du Futur



## Funder

French Government

Paris

France

[www.gouvernement.fr](http://www.gouvernement.fr)

## Coordinator

French Government

Paris

France

[www.gouvernement.fr](http://www.gouvernement.fr)

## Time period

The funding programme "Industrie du Futur" started on 2015-04-14.

## Orientation of the funding programme

"Industrie du Futur" is supporting, product planning, product design, process and production planning, production control, manufacturing, assembly, quality control, logistics / supply chain, running / after sales and recycling and should improve the skills in hardware, operating systems for embedded platforms, real-time operating systems, robotics, communication (network, protocols, ...), mobile computing, distributed architecture and machine learning for IoT.

## Budget

The programme "Industrie du Futur" has a total budget of 10,000,000,000 €.

## Brief description

The Industrie Du Futur project, launched in April 2015, will play a central role in the 2nd phase of the Nouvelle France Industrielle with the aim of getting each company to take a step on the road of the modernization of its industrial tool and the transformation of its economic model by digital. The Industrie Du Futur is based on a broader ambition capitalizing on the achievements of the plan L'Usine du Futur

(<http://proxy-pubminefi.diffusion.finances.gouv.fr/pub/document/18/17721.pdf#page=47>).

In addition to the modernization of the production tool, it supports the transformation of the business models, organizations, methods of design and marketing, in a world where digital tools are breaking down the line between industry and services.



La French Tech



### Funder

Banque Publique d'Investissements (BPI France) / French  
Public Investment Bank  
Boulevard Haussmann, 6-8  
75009 Paris  
France

### Coordinator

Banque Publique d'Investissements (BPI France) / French  
Public Investment Bank  
Boulevard Haussmann, 6-8  
75009 Paris  
France

### Time period

The funding programme "La French Tech" started on 2013-11-27.

### Orientation of the funding programme

"La French Tech" is supporting product planning, product design, process and production planning, production control, manufacturing, assembly, quality control, logistics / supply chain, running / after sales and recycling and should improve the skills in hardware, operating systems for embedded platforms, real-time operating systems, robotics, communication (network, protocols, ...), mobile computing, distributed architecture and machine learning for IoT.

### Budget

The programme "La French Tech" has a total budget of 200,000,000 €.

### Brief description

La French Tech is a new generation of talented entrepreneurs who create their startups and aim at scaling internationally. It is a collective movement under a same brand that unite all the actors of the ecosystem who contribute to the dynamism and the growth of French Startups. It is an optimistic and ambitious set of mind facing the future to create the world and the economy of tomorrow. It is also an innovative public policy helping this collective movement and which goal is to place France as one of the main startup nation. The programme's philosophy: supporting and using entrepreneur to trigger change. The French Tech initiative can be summed up in three main actions :

- Unite the ecosystem under a same banner
- Accelerate the growth of startups, supporting the private accelerators and the Venture Capital (VC) investment scene
- Promoting France and the French Tech internationally.



## AUTONOMIK for Industry 4.0



### Funder

Federal Ministry for Economic Affairs and Energy  
Scharnhorststr. 34-37  
10115 Berlin  
Germany  
[www.bmwi.de](http://www.bmwi.de)

### Coordinator

DLR Project Management Agency  
Linder Höhe  
51147 Cologne  
Germany  
[www.dlr.de/pt](http://www.dlr.de/pt)

### Time period

The funding programme "AUTONOMIK for Industrie 4.0" started on 2012-10-02 and ended on 2017-03-31.

### Orientation of the funding programme

The "AUTONOMIK for Industrie 4.0" technology program of the Federal Ministry of Economics and Energy supports 15 practical technology projects of companies and research institutions, the "Industry 4.0" concept of a networked and digital production in practical demonstrators and paying special attention to the conception of the and implementation of autonomous technical systems.

### Budget

The programme "AUTONOMIK for Industrie 4.0" has funded up to now 15 projects with a total budget of 39,100,000 €. So far, 268 publications have been published.

### Brief description

The "AUTONOMIK for Industrie 4.0" technology programme is part of the "Hightech strategy 2020" from the German government. The programme is motivated by a rising amount of using IT technologies in the industry and new linking technologies. It is designed to merge state-of-the-art I&C technology with industrial production by exploiting the potential offered by innovation in order to accelerate the development of innovative products. The aim is to strengthen Germany's leading position as a world-class production site and as a supplier of state-of-the-art production technologies. The programme should find innovative techniques which make decisions easier, assist and cooperate with humans and offer new flexibility and quality.



eStandards



### Funder

Federal Ministry for Economic Affairs and Energy  
Scharnhorststr. 34-37  
10115 Berlin  
Germany  
[www.bmwi.de](http://www.bmwi.de)

### Coordinator

DLR Project Management Agency  
Linder Höhe  
51147 Cologne  
Germany  
[www.dlr.de/pt](http://www.dlr.de/pt)

### Time period

The funding programme "eStandards" started on 2012-04-01 and continues to 2018-08-31.

### Orientation of the funding programme

The eStandards competence center offers free and vendor-neutral support for digital transformation on the way to digital business processes and new, sustainable business models.

### Budget

The programme "eStandards" has funded up to now 20 projects with a total budget of 20,000,000 €. So far, 105 publications have been published.

### Brief description

Digital Standards (eStandards) are the indispensable basic for digital communication. Without such standards no efficient linking between enterprises is possible. For SMEs the usage of standards is often complicated and costly but in long-term they can make their business procedures more efficient and faster. It is important for the efficient use of these eStandards that many companies and different departments use them. This funding initiative should help to reduce the costs of implementing eStandards in SMEs, craft and the official administration. Simultaneously the amount of using IT-applications should be improved.



## Industrie 4.0 - Forschung auf den betrieblichen Hallenboden



### Funder

Federal Ministry of Education and Research  
Kapelle-Ufer 1  
10117 Berlin  
Germany  
[www.bmbf.de](http://www.bmbf.de)

### Coordinator

Project Management Agency Karlsruhe (PTKA)  
Hermann-von-Helmholtz-Platz 1  
76344 Eggenstein-Leopoldshafen  
Germany  
[www.ptka.de](http://www.ptka.de)

### Time period

The funding programme "Industrie 4.0 - Forschung auf den betrieblichen Hallenboden" started on 2014-06-27 and continues to 2018-12-31.

### Orientation of the funding programme

In the three-year research projects, partners from industry and science work together along the entire value chain. The "Industry 4.0 - Research on the industrial hall floor" initiative is part of the German government's new high-tech strategy.

### Budget

The programme "Industrie 4.0 - Forschung auf den betrieblichen Hallenboden" has funded up to 12 projects with a total budget of 25,000,000 €.

### Brief description

Industry 4.0, the merging of production and services with the Internet, confronts German medium-sized companies with major challenges: the digital networking of the machine park in the company, the integration of the employees up to the management in networked work processes or secure IT solutions for the protection of valuable company data. SMEs are changing and the Federal Government is helping to make the most of the opportunities offered by digitization. The Federal Ministry of Education and Research is now launching application-oriented research projects with the initiative "Industry 4.0 - Research on the Operational Hall Floor", which together with the medium-sized companies demonstrate how industrial 4.0 solutions can be implemented.



## Mittelstand 4.0 – Digital Production and Work Processes funding initiative



### Funder

Federal Ministry for Economic Affairs and Energy  
Scharnhorststr. 34-37  
10115 Berlin  
Germany  
[www.bmwi.de](http://www.bmwi.de)

### Coordinator

DLR Project Management Agency  
Linder Höhe  
51147 Cologne  
Germany  
[www.dlr.de/pt](http://www.dlr.de/pt)

### Time period

The funding programme “Mittelstand 4.0 – Digital Production and Work Processes funding initiative ” started on 2015-06-01.

### Orientation of the funding programme

The programme specifically informs and qualifies small and medium-sized enterprises and offers them practical, concrete teaching and learning opportunities as well as visualization and testing possibilities in their regions. They support the companies in networking and digitisation measures and thus promote their innovation and competitiveness. The Mittelstand 4.0 agencies process overarching questions of digitization and carry these in width mainly by means of multipliers.

### Budget

The programme “Mittelstand 4.0 – Digital Production and Work Processes funding initiative” has funded up to 17 projects. So far, 27 publications have been published.

### Brief description

Companies are currently undergoing fundamental transformation: custom-designed goods produced in small quantities that can be delivered fast are becoming the new standard. The Mittelstand 4.0 – Digital Production and Work Processes initiative supports SMEs to become digitised, to network, and to start using Industrie 4.0 applications. The Mittelstand 4.0 agencies work to develop solutions for overarching issues of digitalisation and eBusiness which they share with multipliers in order to make these known. The Mittelstand 4.0 Competence Centres raise awareness about digitalisation among companies and provide information, training, and the opportunity for companies to test new solutions out in practice across the various different regions.



## PAiCE (Platforms | Additive Manufacturing | Imaging | Communication | Engineering)



### Funder

Federal Ministry for Economic Affairs and Energy  
Scharnhorststr. 34-37  
10115 Berlin  
Germany  
[www.bmwi.de](http://www.bmwi.de)

### Coordinator

DLR Project Management Agency  
Linder Höhe  
51147 Cologne  
Germany  
[www.dlr.de/pt](http://www.dlr.de/pt)

### Time period

The funding programme "PAiCE (Platforms| Additive Manufacturing | Imaging | Communication | Engineering)" started on 2015-10-31 and continues to 2021-12-31.

### Orientation of the funding programme

PAiCE is a technology programme of the Federal Ministry of Economics and Energy (BMWi), for which a total of 16 associations from science and industry have qualified for funding. The aim of this program is to further strengthen Germany's leading position as a high-quality production location and provider of state-of-the-art production technologies.

### Budget

The programme "PAiCE (Platforms| Additive Manufacturing | Imaging | Communication | Engineering)" has funded up to now 16 projects with a total budget of 50,000,000 €. Ten publications were published. They can be downloaded from the project homepage.

### Brief description

In the program "PAiCE" new solutions will be developed to integrate companies across the value chain. Innovative technologies and methods for continuous product engineering should be explored. This includes e.g. innovative logistic solutions, 3D-technologies for process and quality control and service robotics. All developed systems must be flexible and the complexity must be reduced to a minimum. New parts must be easily added and the system must be very robust to errors. The programme should also help the companies to react on changing demands of the customer. They are asking for individual products in small quantities.





## Smart Data - Data Innovations



### Funder

Federal Ministry for Economic Affairs and Energy  
Scharnhorststr. 34-37  
10115 Berlin  
Germany  
[www.bmwi.de](http://www.bmwi.de)

### Coordinator

DLR Project Management Agency  
Rosa-Luxemburg-Str. 2  
10178 Berlin  
Germany  
[www.dlr.de/pt](http://www.dlr.de/pt)

### Time period

The funding programme "Smart Data - Data Innovations" started on 2013-11-12.

### Orientation of the funding programme

With the "Smart Data - Innovations in Data" technology programme, the Federal Ministry for Economic Affairs and Energy is making an important contribution to the broad development of this market in Germany. The technology programme follows the objectives of the Digital Germany 2015 ICT strategy, which was developed under the leadership of the Federal Ministry for Economic Affairs and Energy, and the forward-looking "Internet-based services for the economy" project within the framework of the federal government's High-Tech Strategy 2020.

### Budget

The programme "Smart Data - Data Innovations" has funded up to now 16 projects with a total budget of 30,000,000 €. So far, 30 publications have been published.

### Brief description

The usage of Big Data Analysis needs some framework conditions. A large acceptance of Big Data in the society and the industry is necessary to realize a trustful usage of the data. Big enterprises already started using Big Data. Also for SMEs there are large opportunities by using Big Data Analysis. But for these SMEs it is not easy to implement such systems because the software is mostly very expensive. With this funding programme the acceptance of Big Data should be improved and Big Data software should be developed which could be easily tailored for a special use case and payed on demand. Also the security of the systems should be improved.



## Smart Service World I



### Funder

Federal Ministry for Economic Affairs and Energy  
Scharnhorststr. 34-37  
10115 Berlin  
Germany  
[www.bmwi.de](http://www.bmwi.de)

### Coordinator

DLR Project Management Agency  
Linder Höhe  
51147 Cologne  
Germany  
[www.dlr.de/pt](http://www.dlr.de/pt)

### Time period

The funding programme "Smart Service World I" started on 2015-01-01 and continues to 2019-12-31.

### Orientation of the funding programme

The funding programme was launched on 1st November 2014 and includes joint projects in the following areas: production (e.g. services for plant optimization, visualization services), mobility (e.g. app integration in vehicles, data collection via vehicles), good living (e.g. services in water management, services for patient-doctor communication), and cross-cutting technologies (e.g. interoperability, security, trustworthiness of services).

### Budget

The programme "Smart Service World I" has funded up to now 20 projects with a total budget of 50,000,000 €. So far, 14 publications have been published.

### Brief description

In 2015, some 15 billion devices in the world were hooked up to the internet. By 2020, this number is likely to rise to 30 billion. Smart services form the basis for a new class of manufacturing and value networks that open up new possibilities in manufacturing, such as for use in the instant production of batchsize one and for the development and design of new products and services. The programme helps developers gain access to markets, build a customer base, and ultimately make German businesses more competitive. More specifically, each project is about building a prototype solution which allows for data to be gathered, analysed and used for new services that can be provided e.g. via services platforms and app stores.



## Regional Operational Program of Western Greece 2014-2020



### Funder

European Union  
European Regional Development Fund

### Coordinator

Managing Authority of Western Greece  
Regional Operational Program  
N.E.O. Patras-Athens 28 Patras 26441  
Greece  
[www.dytikiellada.gr](http://www.dytikiellada.gr)

### Time period

The funding programme "Regional Operational Program of Western Greece 2014-2020" started in 2014 and continues to 2020.

### Orientation of the funding programme

The programme supports strengthening competitiveness and enterprise extroversion, transition to qualitative entrepreneurship, spearheaded innovation and increasing domestic value added. In addition, it fosters environmental protection, development of transport infrastructure, and human resources development.

### Budget

The total budget is estimated with 490,985,734 €, of which 407,836,756 € are co-financed by the European Regional Development Fund (ERDF) and 83,148,978 € are co-financed by the European Social Fund (ESF).

### Brief description

Regarding the subject smart industry, the programme supports actions aiming at:

- Strengthening research, technological development and innovation (i.e. actions enhancing R&I infrastructure and promoting centers of competence, fostering business investment in R&I, developing links and synergies between businesses, technology transfer, networking in clusters and open innovation through smart specialization, advanced manufacturing capabilities);
- Improving access to, use and quality of information and communication technologies (i.e. actions developing ICT products and services),
- Improving the competitiveness of SMEs (i.e. facilitating the economic exploitation of new ideas and supporting the creation of new firms, fostering the creation and extension of advanced capacities for product and service development, supporting SMEs to grow in regional, national and international markets, and participating in innovation processes).



## National initiative IPAR4.0 Technology Platform



### Funder

Ministry of National Economy of Hungary  
József nádor tér 4  
1051 Budapest  
Hungary  
<http://2010-2014.kormany.hu/en>

### Coordinator

Institute for Computer Science and Control (SZTAKI)  
13 - 17, Kende utca  
1111 Budapest  
Hungary

### Time period

IPAR 4.0 is an ongoing initiative, which has been established by May 2016.

### Orientation of the funding programme

The Platform is supposed to be catalyser of performing high-added value research and development work in Hungary, an essential tool of preparing the industrial sector for and adapting it to the requirements of innovation and, the organisation assisting to re-focus the education system according to the new needs of the industry. Finally, the Platform is expected to become a key factor to contribute to the success of the national Ipar 4.0 programme.

### Brief description

The Industry 4.0 National Technology Platform was established under the leadership of the SZTAKI, Hungarian Academy of Sciences, with the participation of research institutions, companies, universities and professional organizations and with the full support and commitment of the Government of Hungary, and specifically that of the Ministry of National Economy. The primary focus is on the automotive sector. Additional objectives are to act as a lobbying forum and an advisory body to the Government in shaping the digitalisation policy.

By October 2017, the Plenary Meeting of the Members accepted a resolution to transform the organisation into the legal entity of an Association which was officially registered at the end of 2017.

The Platform has 7 strong working groups:

- Strategic planning;
- Employment, education and training;
- Manufacturing and logistics;
- ICT technologies (safety, reference architectures, standards);
- Industry 4.0 cyber - physical pilot systems;
- Innovation and business model;
- Legal framework.

[www.i40platform.hu/en/about\\_us](http://www.i40platform.hu/en/about_us)



## National Smart Specialisation Strategy



### Funder

European Union  
Directorate-General for Communication  
European Commission  
1049 Brussels  
Belgium

### Coordinator

The National Research, Development and  
Innovation Office  
Kéthly Anna tér 1  
1077 Budapest  
Hungary

### Time period

The funding programme “National Smart Specialisation Strategy” started on 2014-12-01.

### Orientation of the funding programme

Smart specialization is a new type of approach of the European Union, which facilitates the targeted support of the research, development and innovation processes, thereby promoting the knowledge-based economic development of the regions, while observing the local needs and opportunities. The process is designed to enable the individual Member States and regions to further stimulate their innovation systems by 2020, so that they significantly contribute to improving the competitiveness of their economies and of the Union and developing a sustainable knowledge-based economy.

### Budget

The programme “National Smart Specialisation Strategy” has a total budget of 322,600,000 €.

### Brief description

The strategies would outline, in the areas of research and innovation, who wants to be the best, setting out from the existing situation, and in which area. This will avoid the duplication of development, and facilitates EU level coordination and increasing the competitiveness of the Community. These documents are the smart specialisation strategies (also known as RIS3 or S3). Similar to innovation strategies have been prepared in the past as well, but the new types of strategies differ from their predecessors.



## Competitive Start Fund



### Funder

Enterprise Ireland  
East Point Business Park, The Plaza  
D03 E5R6, Dublin  
Ireland  
[www.enterprise-ireland.com](http://www.enterprise-ireland.com)

### Coordinator

Enterprise Ireland  
East Point Business Park, The Plaza  
D03 E5R6, Dublin  
Ireland  
[www.enterprise-ireland.com](http://www.enterprise-ireland.com)

### Time period

The funding programme "Competitive Start Fund" started on 2017-09-13 and ended on 2017-09-27.

### Orientation of the funding programme

In addition to the projects on the subject of smart engineering, the funding programme also includes projects with other topics. It is addressed to SMEs from automotive, electrical engineering, machine or plant manufacturing, pharma/healthcare, food industry.

"Competitive Start Fund" is supporting product planning, product design, process and production planning, production control, manufacturing, assembly, quality control and logistics /supply chain.

### Brief description

The Competitive Start Fund (CSF) aims to support early stage start-ups. This fund is open to early stage companies in manufacturing and internationally traded services, including the following subsectors: Agricultural, Manufacturing, Lifesciences, Renewables. The following are examples of some of the areas included within the scope of the fund: Agritech, Agribusiness, Agricultural Machinery, eHealth, Digital Health, Medical Devices Diagnostics, Cleantech.



## Strategy for Higher Education-Enterprise Engagement



### Funder

Higher Education Authority Buildings,  
Crampton Avenue,  
Shelbourne Road, Ballsbridge  
Dublin  
Ireland  
<http://hea.ie>

### Coordinator

Higher Education Authority 3 Shelbourne  
Buildings, Crampton Avenue,  
Shelbourne Road, Ballsbridge  
Dublin  
Ireland  
<http://hea.ie>

### Time period

The funding programme "Strategy for Higher Education-Enterprise Engagement" started on 2014-01-01 and continues to 2020-12-31.

### Orientation of the funding programme

The programme consists of a number of targeted initiatives in education, training and research in Ireland. The initiatives are managed by Enterprise Ireland, higher education Authority, Irish Research Council, Science Foundation Ireland, Skillnets.

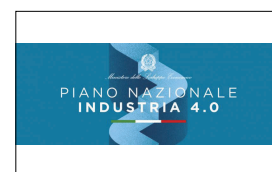
### Brief description

This strategy will support and accelerate the education and training reform currently underway, building on innovative partnerships already put in place and set out in the first report on the performance of the higher education system in 2014. Enterprise engagement is the primary focus of this strategy. Initiatives for the holistic areas of civic and community engagement are also underway. The strategy deals mainly with engagement between higher education and enterprise. It is intended, however, that implementation of the strategy will support rollout of the new National Skills Strategy (forthcoming); regional development initiatives underway, including regional skills fora; and a new enhanced partnership with further education and training.

<http://hea.ie/assets/uploads/2017/06/Enterprise-Engagement-Strategy.pdf>



## Piano nazionale Industria 4.0



### Funder

Stato italiano Piazza  
Colonna, 370 187  
Roma  
Italy  
[www.governo.it](http://www.governo.it)

### Coordinator

Stato italiano Piazza  
Colonna, 370 187  
Roma  
Italy  
[www.governo.it](http://www.governo.it)

### Time period

The funding programme "Piano nazionale Industria 4.0 " started on 2017-06-01.

### Orientation of the funding programme

The funding programme enables companies from a wide range of measures to help them win the challenge set by the digital revolution. The programme is an opportunity for a smart and innovative industry, for an even more competitive Made in Italy and to be future ready.

### Budget

The programme "Piano nazionale Industria 4.0" has funded up to now 150,000 projects with a total budget of 13,000,000,000 €. So far, 2,000 publications have been published and 1,000 patents or other industrial property rights have been required.

### Brief description

Industry Plan 4.0 is a great opportunity for all companies that want to seize opportunities for the fourth industrial revolution: the Plan provides a set of organic and complementary measures that can foster investment for innovation and competitiveness. All measures that have been found to be effective have been strengthened and addressed in logic and, to fully meet emerging needs, new ones have been envisaged. There are measures that every business can activate automatically without resorting to calls or branches and, above all, without dimensional, sectoral or territorial constraints.





## State Support Programmes for Innovation Development 2014 - 2020 (LATVIA)



### Funder

European Union  
(European Structural Funds and Cohesion Fund)  
European Commission DG Regional and Urban Policy  
1049 Brussels  
Belgium

### Coordinator

Investment and Development Agency of Latvia  
Perses iela 2  
1442 - Riga  
Latvia  
[www.liaa.gov.lv/en](http://www.liaa.gov.lv/en)

### Time period

The funding programme "State Support Programmes for Innovation Development 2014 - 2020 (LATVIA)" started on 2014-01-01 and continues to 2020-12-31.

### Orientation of the funding programme

The project priorities are: Development of human resources; support to innovative ideas; improvement of scientific infrastructure; cooperation between higher education, science and business sectors; technology transfer and commercialization; development of new products and technologies. In order to support SME's the programme will promote the creation of new, viable and competitive businesses in the Latvian regions by providing them with the necessary business environment, advisory services and access to finance.

### Budget

The programme "State Support Programmes for Innovation Development 2014 - 2020 (LATVIA)" has a total budget of 818,950,000 €.

### Brief description

The main task is to stimulate development of Latvia's national economy in line with priorities set in the Smart Specialisation Strategy RIS3. The programme covers the following actions:

- Competence Centers to support R&D&I activities (new product and technology development) in RIS3 areas;
- Technology Transfer to raise revenues of science institutions from commercializing results of research;
- Support for implementation of new products into production;
- Innovation Motivation programme to increase awareness and engage society in the innovation activity;
- Support for Training for Employees to provide entrepreneurs with qualified workforce thus promoting productivity, new product & technology development & their introduction in the production.



## The smart specialization strategy (RIS3) for Latvia



### Funder

European Union  
Directorate-General for Communication  
European Commission  
1049 Brussels  
Belgium

### Coordinator

Ministry of Education and Science of the Republic Latvia  
and Ministry of Economics  
Valnu 2  
1050 - Riga  
Latvia  
[www.izm.gov.lv/en/Science/smart-specialisation-strategy](http://www.izm.gov.lv/en/Science/smart-specialisation-strategy)

### Time period

The funding programme "The smart specialization strategy (RIS3) for Latvia" started on 2014-01-01 and continues to 2020-12-31.

### Orientation of the funding programme

There are seven investment priorities and five specialization areas defined.  
The investment priorities are:

- High added value products,
- Productive Innovation System,
- Energy Efficiency,
- Modern ICT,
- Modern education,
- The knowledge base,
- Polycentric development.

The knowledge specialization areas are:

- Knowledge-intensive bio-economics,
- Biomedicine and medical technologies,
- Bio-pharmacy and biotechnologies,
- Smart materials, technologies and engineering systems,
- Smart energetics information and communication technologies (ICT).

### Budget

The programme "The smart specialization strategy (RIS3) for Latvia" has a total budget of 1,000,000,000 €.



## The smart specialization strategy (RIS3) for Latvia



### Brief description

The smart specialization strategy (RIS3) for Latvia was developed in 2014 to concentrate public R&D investment in programs that create future domestic capability and interregional comparative advantage. This conceptually new and complex strategy provides a balanced and complementary support tool kit to strengthen innovation capacity of Latvian economy. By measures of the Innovation Union Scoreboard, Latvia currently is a modest innovator. Therefore, its RIS3 is a strategy of economic transformation towards higher added value and more efficient use of resources.

The strategy aims at restructuring of export by inducing change and growth in:

1. Production and export structure in traditional sectors of economy;
2. Future growth of sectors in which exist or may be products and services with high added value;
3. Sectors with significant horizontal impact and contribution in transformation of national economy.



## Pramonė 4.0



### Funder

Government of the Republic of Lithuania  
Gedimino pr. 11  
01103 Vilnius  
Lithuania

### Coordinator

Ministry of Economy of the Republic of Lithuania  
Gedimino Av. 38  
01104 Vilnius  
Lithuania

### Time period

The funding programme "Pramonė 4.0" started in 2017 and continues to 2020.

### Orientation of the funding programme

Pramonė 4.0 supports the digitisation of industry, new technologies and standardisation in key strategic sectors of the Lithuanian economy. Target groups are industrial companies, enterprises and universities interested in digital solutions and new technologies. Pramonė 4.0 focuses on the re-industrialisation of the economy, creation of public-private partnerships, and involvement of key stakeholders.

### Budget

Public investments of 79,800,000 € are foreseen in order to attract stakeholders from research and industry. Their involvement is an essential element to guarantee the development and success of the platform. The main idea behind the platform is to ensure that the necessary investments are made and strong public-private partnerships are built.

### Brief description

Pramonė 4.0 aims at strengthening the digitisation transformation pillar, in particular, manufacturing and industry transformation in Lithuania. The platform aims to become a main tool for future dialogues between industry as well as public and academic organisations. Together they will work on the common goal to find the most efficient means for digitising industry at national level. Furthermore, Pramonė 4.0 encourages all relevant industry stakeholders to play an active role in the implementation process.

In addition, thematic working groups – including stakeholders from the private and public sector – were set up to address current challenges of the Lithuanian industry and discuss future related issues in different areas, such as standardisation, the innovation ecosystem, digital manufacturing, services promoting digitisation pillars, cybersecurity, etc.



## Digital Tech Fund



### Funder

Luxembourg Government  
Rue de la Congrégation 4  
1352 Luxembourg  
Luxembourg  
[www.gouvernement.lu](http://www.gouvernement.lu)

### Coordinator

Expon Capital  
Boulevard Royal 59  
2449 Luxembourg  
Luxembourg  
[www.exponcapital.com](http://www.exponcapital.com)

### Time period

The funding programme "Digital Tech Fund" started on 2016-05-01.

### Orientation of the funding programme

The funding programme focuses on modernizing and future-proofing five key areas: government, skills, policy, infrastructure and ecosystem. The goal is: transformation via positive digitalization.

### Budget

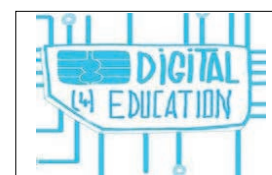
The programme "Digital Tech Fund" has a total budget of 20,000,000 €.

### Brief description

The Digital Tech Fund was launched on the initiative of the Ministry of Economy as part of Digital Lëtzebuerg. The fund will take equity stakes in promising innovative enterprises that are less than seven years old and which have ideally already developed functional prototypes of their products. The fund will focus primarily, but not exclusively, on making venture capital investments in the areas of cybersecurity, Fin-Tech, Big Data, Digital Health, and media, as well as Next Generation Communication Networks, digital learning, the Internet of Things and satellite telecommunications and services.



Digital4Education



### Funder

Luxembourg Government  
Rue de la Congrégation 4  
1352 Luxembourg  
Luxembourg  
[www.gouvernement.lu](http://www.gouvernement.lu)

### Coordinator

Centre de gestion informatique de l'éducation  
Route de Diekirch  
7201 Walferdange  
Luxembourg  
<http://portal.education.lu/cgie>

### Time period

The funding programme "Digital4Education" started on 2015-01-01.

### Orientation of the funding programme

The mission of the center is to promote the study, design, development and operation of computer applications for the needs of the administration of the national education and to encourage technical advice and assistance on acquisitions, installations, equipment and maintenance.

### Brief description

In 2015, the government of Luxembourg launched the Digital4Education strategy which aims to foster the development of IT skills among students and to ensure that they are well-equipped to take full advantage of the ongoing digital transformation of society in everyday life and at work. This comprehensive strategy sets out several key operational initiatives. For instance, the "Bee Creative" programme aims to improve students' digital skills by developing their digital literacy and promoting entrepreneurship. It consists in the creation of several FabLab in secondary schools where students are trained to use high-tech digital devices and able to develop their own digital tools in fields such as coding, 3D printing, robotics, etc.



## Digital Malta: National Digital Strategy 2014 - 2020



### Funder

Government of Malta  
3, Castille Place  
Valletta VLT 1062  
Malta  
[www.gov.mt](http://www.gov.mt)

### Coordinator

Ministry for the Economy, Investment and Small Businesses of Malta  
197 Palazzo Zondadari Triq il-Merkanti  
Valletta VLT 1172  
Malta  
<https://economy.gov.mt/en/Pages/Home.aspx>

### Time period

The funding programme "Digital Malta: National Digital Strategy 2014 - 2020" started in 2014 and continues to 2020.

### Orientation of the funding programme

Digital Malta Strategy has been set up to transform the country into one which will prosper as a digitally-enabled nation in all sectors of society. It outlines three strategic themes: Digital Citizen, Digital Business and Digital Government supported by three strategic enablers: Regulation and Legislation, Infrastructure and Human Capital.

### Brief description

Concerning the pillar Digital Business, Digital Malta will increase competitiveness and boost the attractiveness of local industry. It will promote more start-ups, attract foreign investment, enable strategic alliances, encourage angel investment and nurture niche service providers. Business will be encouraged and supported to exploit:

- the opportunities of the European Digital Single Market;
- Malta's strategic location in the Mediterranean, with ready access to the European and North African markets;
- Government's strategic alliances with foreign ICT organisations;
- opportunities to expand into new or bigger markets.

Exemplary actions put in place to attain the above-named goals are:

- Organizations of initiatives for manufacturing, construction and retail by Government and industry to help them benefit from ICT;
- Launching a forum to raise awareness about how ICT can help industries transform themselves and become more profitable;
- Developing a framework to enable local SMEs to assess their ICT capability, human capital and ICT-enabled processes and technology;
- Supporting enterprises by administering ICT training programmes for their employees.



## Smart Industry



### Funder

Ministerie van Economische Zaken en Klimaat  
Bezuidenhoutseweg 73  
2594 AC Den Haag  
Netherlands

### Coordinator

smart industry  
Postbus 190, 2700 AD Zilverstraat 69  
2718RP Zoetermeer  
Netherlands  
[www.smartindustry.nl](http://www.smartindustry.nl)

### Time period

The funding programme "Smart Industry" started on 2014-01-01.

### Orientation of the funding programme

The aim of the funding programme is to make the industry more competitive through faster and better utilisation of the opportunities ICT has to offer. Therefore, they are capitalising on existing knowledge, accelerating in field labs and strengthening the foundation.

### Budget

The programme "Smart Industry" has a total budget of 25,000,000 €.

### Brief description

The Netherlands Organisation for applied scientific research (TNO), the Ministry of Economic Affairs, the Confederation of Netherlands Industry and Employers (known as VNO-NCW) and the Chambers of Commerce and FME Association have taken the initiative to make a report on the meaning of Smart Industry for companies, knowledge institutions, and government in the Netherlands. The approach is in November 2014 formalised in an Action Agenda. The Action Agenda is an enhancement of the current top sector policy and the Technology Pact. 32 Smart Industry Fieldlabs are active, funded by private companies and government. Fieldlabs are practical environments in which companies and knowledge institutions develop, test and implement Smart Industry solutions and an environment in which people learn to apply these solutions. And that is not only done for the business community itself. A strong and innovative industry provides growth and jobs. That is the higher goal.





## Estratégia Nacional para a Digitalização da Economia - Indústria 4.0



### Funder

XXI Governo Constitucional  
Palazzo di São Bento  
1200-619 Lisboa  
Portugal  
[www.portugal.gov.pt](http://www.portugal.gov.pt)

### Coordinator

Cotec  
Rua Eng.º Ferreira Dias, n.º 728  
4100-246 Porto  
Portugal  
[www.cotecportugal.pt](http://www.cotecportugal.pt)

### Time period

The funding programme "Estratégia Nacional para a Digitalização da Economia - Indústria 4.0" started on 2017-01-30.

### Orientation of the funding programme

The funding programme sees out the following action areas: i4.0 - Industry 4.0; "Circular Pioneers", COTEC SME Innovation Network, Training for Innovation, Assessment of Public Policies, Dissemination of good practices, Enhancement of Knowledge and Technology, Transforming Portuguese Talent, and Commitment to Knowledge.

### Budget

The programme "Estratégia Nacional para a Digitalização da Economia - Indústria 4.0" has funded up to 50,000 projects with a total budget of 4,500,000,000 €. So far, 3,000 publications have been published and 2,500 patents or other industrial property rights have been required.

### Brief description

Indústria 4.0 is the Portuguese strategy to develop industry in the digital area. Launched in January 2017, the aim is to put Portugal at the forefront of the 4th Industrial Revolution by focusing on 3 axes: digitalisation, innovation and training. The measures are divided in 6 strategic pillars: human capital qualification; technological cooperation; start-up i4.0; financing and investment incentive; internationalisation; and standards and regulation. Needs-oriented and with a strong support and involvement of the private sector, in particular multinational groups, Indústria 4.0 expects to have an impact in over 50,000 companies and train over 20,000 workers.



## The National Strategy for RDI 2014-2020



### Funder

European Union  
Directorate-General for Communication  
European Commission  
1049 Brussels  
Belgium

### Coordinator

Ministry of National Education and Research,  
Technological Development and Innovation  
21-25, Mendeleev st.  
010362 Bucharest  
Romania

### Time period

The funding programme "The National Strategy for RDI 2014-2020" started on 2014-10-21 and continues to 2020.

### Orientation of the funding programme

The programme focused on several issues meant to contribute to the following aims: the increase of research capacity by investing in the development of R&D infrastructure and attracting young researchers and high-level specialists both in R&D institutions (universities and research institutes) and in companies with research departments; the strengthening of knowledge supply from universities and research institutes; the stimulation of the technology transfer based on the cooperation between R&D institutions and enterprises; the stimulation of innovation demand of enterprises; the creation and reinforcement of high-tech firms and the development of pools of excellence and competitiveness. The programme addressed a large group of target organisations, ranging from public and private universities, research entities, companies or innovation consultants.

### Budget

The programme "The National Strategy for RDI 2014-2020" has a total budget of 3,300,000 €.

### Brief description

The National RDI Strategy 2014-2020 sets targets in terms of activating the business sector and increasing the economic impact, with a focus on the smart specialisation domains. Measures implemented under NP3 (innovation vouchers, experimental projects - demonstration/proof of concept, technology validation and transfer to industry and OP Competitiveness/API (innovative technological projects, innovative spin-offs and start-ups, innovative newly created enterprises, investment for RD departments in enterprises provide direct support for R&I activities performed by innovative companies. OP Competitiveness 2014-2020 also provides specific financial instruments, e.g. credits, guarantees and risk capital measures. The National R&I Strategy 2014-2020 integrates smart specialisation priorities. The strategic orientation mechanism required by the ex ante conditionality, linked with the smart specialisation, aims at supporting the entrepreneurial discovery process.

<https://rio.jrc.ec.europa.eu/en/country-analysis/Romania/country-report>



## Operational Programme Research and Innovation (OPRI)



### Funder

Ministry of Education, Science, Research and Sports of the Slovak Republic (MoESRS SR) and the Ministry of Economy of the Slovak Republic (MoE SR)

Stromová 2665/1

831 01 Nové Mesto

Slovakia

[www.minedu.sk](http://www.minedu.sk)

### Coordinator

Ministry of Education, Science, Research and Sports of the Slovak Republic (MoESRS SR) and the Ministry of Economy of the Slovak Republic (MoE SR)

Stromová 2665/1

831 01 Nové Mesto

Slovakia

### Time period

The funding programme "Operational Programme Research and Innovation (OPRI)" started on 2016-03-15.

### Orientation of the funding programme

In addition to the projects on the subject of smart engineering, the funding programme also includes projects with other topics. It is addressed to SMEs from automotive, electrical engineering, plastics, ICT and services industry.

"Operational Programme Research and Innovation (OPRI)" is supporting product design, process and production planning, assembly, automotive and mechanical engineering and should improve the skills in production and processing of iron and steel, hardware (CPU, uC, SoC, sensors, actuators, ...), operating systems for embedded platforms, robotics, communication (network, protocols, ...).

### Budget

The programme "Operational Programme Research and Innovation (OPRI)" has funded up to now 1,773 projects with a total budget of 3,988,000 €.



## Operational Programme Research and Innovation (OPRI)



### Brief description

The total OPRI allocation of Union support is EUR 2,266,776,537 of which 79,22 % is allocated to thematic objective fostering research, technological development and innovation, and 17,69 % to thematic objective, increasing the competitiveness of SMEs. The latter will be ensured through actions under Priority Axis.

1. Enhancing the competitiveness and growth of SMEs and Priority Axis
2. Developing competitive SMEs in the Bratislava Region Regarding global excellence, while taking into consideration local relevance for the purposes of smart specialisation, following areas of specialisation have been identified: Economic specialization: Automotive and mechanical engineering industries; Consumer electronics and electrical equipment.



## Smart Industry

### Coordinator

Ministry of Economy of the Slovak Republic  
Mlynské nivy 44/A  
827 15 Bratislava 212  
Slovakia

### Time period

Smart Industry Slovakia is an ongoing initiative, which started by October 2016.

### Orientation of the funding programme

The Smart Industry Initiative aims to address the low levels of digital awareness amongst Slovak companies, and to bring the nation's business community - particularly industrial companies - closer to the principles of Industry 4.0. The focus is on collaborative R&D cooperation with industry, and eventually the deployment of more advanced technologies throughout the economy. Target groups are Industry, SMEs, R&D organisations, education providers and civil society.

### Budget

At this stage, the Smart Industry initiative is being financed by existing funding mechanisms. However, the initiative is exploring ways to streamline funds already provided by the European Structural and Investment Funds (ESIF) in line with the RIS3 strategy.

### Brief description

Smart Industry Slovakia aims to build on global trends and technologies currently driving intelligent industry, and to raise awareness of their many benefits. To do so, the six key focus areas within the Smart Industry Initiative were identified as follows:

1. Raising awareness and promoting cooperation amongst industry;
2. Promoting research orientated toward Smart Industry;
3. A focus on manufacturing and 'Factories of the Future';
4. Improving access to finance;
5. Identifying the future needs of the labour market and guiding education and skills development in that direction;
6. Enacting an innovation-focused legislative framework and eGovernment.

[https://ec.europa.eu/growth/tools-databases/dem/monitor/sites/default/files/DTM\\_Slovakia\\_FINAL.pdf](https://ec.europa.eu/growth/tools-databases/dem/monitor/sites/default/files/DTM_Slovakia_FINAL.pdf)



## Strategic development and innovation partnerships



### Funder

Ministry of Economy  
Kotnikova 5  
1000 Ljubljana  
Slovenia  
[www.mgrt.gov.si](http://www.mgrt.gov.si)

### Coordinator

Ministry of Economy  
Kotnikova 5  
1000 Ljubljana  
Slovenia  
[www.mgrt.gov.si](http://www.mgrt.gov.si)

### Time period

The funding programme "Strategic development and innovation partnerships" started on 2016-01-29.

### Orientation of the funding programme

In addition to the projects on the subject of smart engineering, the funding programme also includes projects with other topics. It is addressed to SMEs from raw materials, machine or plant manufacturing, pharma/ healthcare, food, smart cities, houses and mobility industry.

### Budget

The programme "Strategic development and innovation partnerships" has funded up to now 8 projects with a total budget of 10,490,783 €.

### Brief description

Slovenian Smart Specialisation Strategy was adopted in Slovenia on 20th September 2015 and approved by the European Commission in November 2015. RIS3 or in Slovenian S4 (Slovenian Smart Specialisation Strategy) presents three broad priority areas for the next financial period:

- healthy living and working environment,
- natural and traditional resources for the future
- Smart Industry 4.0.

As one of the most important of priority areas as a result of exceptional strong response received under entrepreneurial discovery process in the time of preparation. Leading initiatives within Smart Industry are factories of the future with two focus areas:

1. Production optimisation: (distributed) production management and control, quality assurance, regulation and data processing, intralogistics and automation;
2. Optimisation and automation of production processes: smart machines and equipment, mechatronic systems, actuators and smart sensors. Technologies to be used under the area of application Factories of the Future are cross-cutting and will - as a priority - be applied also in other areas of application. Identification of 6 areas of application derives from the entrepreneurial discovery process: Robotics, Nanotechnologies, Modern production Technologies for materials, Plasma technologies, Photonics and micro- and nano-electronics, and Control Technology.



## Slovenian Digital Coalition



### Coordinator

Ministry of Economy  
Kotnikova 5  
1000 Ljubljana  
Slovenia  
[www.mgrt.gov.si](http://www.mgrt.gov.si)

### Time period

The funding programme "Slovenian Digital Coalition" started in November 2016 and continues to 2020.

### Orientation of the funding programme

Slovenian Digital coalition has been set up as an open forum of stakeholders working in the field of digitalisation of trade and industry, smart cities, e-commerce, e-skills, e-inclusion, cyber security, internet and other areas related to developing the digital society. The Coalition intends to harmonize the digital transformation of Slovenia adopted in the Digital Slovenia 2020 strategic framework.

### Budget

No dedicated funding scheme; coalition members contribute on a voluntary basis.

### Brief description

The Digital Coalition was established to accelerate the digital transformation of Slovenia with the objective to:

- Coordinate economic/industrial development policies and measures for capacity building related to the digitalisation of Slovenia among stakeholders;
- Improve digital literacy and digital competence;
- Facilitate the greater uptake of ICT solutions, services and infrastructure.

Therefore, The Coalition serves as a coordinated forum fostering the development of the digital economy, the creation of digital jobs as well as the exploitation of opportunities closely linked to the development of ICT and the internet.



## Industria Conectada 4.0



### Funder

Gobierno de España  
Av. Puerta de Hierro  
28071 Madrid  
Spain

[www.lamoncloa.gob.es/Paginas/index.aspx](http://www.lamoncloa.gob.es/Paginas/index.aspx)

### Coordinator

Gobierno de España  
Av. Puerta de Hierro  
28071 Madrid  
Spain

[www.lamoncloa.gob.es/Paginas/index.aspx](http://www.lamoncloa.gob.es/Paginas/index.aspx)

### Time period

The funding programme "Industria Conectada 4.0" started on 2016-10-01.

### Orientation of the funding programme

The funding programme contains projects with the subject of Smart Engineering. It is addressed to SMEs from all sectors, with the focus on academic and employment training, collaborative platforms and support for the adoption of Smart Engineering by the SMEs.

### Budget

The programme "Industria Conectada 4.0" has funded up to now 1,000 projects with a total budget of 165,500,000 €. So far, 800 publications have been published.

### Brief description

At present, Spanish industry accounts for 13 % of the country's added value and employs 11 % of the employed population, being the main contributor to the positive trade balance. In recent years, the Government has defined its RIS3 Smart Specialisation Strategy. One of these areas is Advanced Manufacturing, and as a result the Government has developed a specific strategy, Industry 4.0. In effect, they allow hybridization between the physical and digital worlds, that is, linking the physical to the virtual world to make industry an intelligent industry.





## Research Project Grant



### Funder

Swedish Research Council

Västra Järnväggsgatan 3

101 38 Stockholm

Sweden

[www.vr.se/inenglish/researchfunding](http://www.vr.se/inenglish/researchfunding)

### Coordinator

Sven Stafström

Västra Järnväggsgatan 3

111 64 Stockholm

Sweden

[www.vr.se/inenglish/researchfunding](http://www.vr.se/inenglish/researchfunding)

### Time period

The funding programme "Research Project Grant" started on 2017-04-04 and continues to 2021-01-10.

### Orientation of the funding programme

In addition to the projects on the subject of smart engineering, the funding programme also includes projects with other topics. It is addressed to SMEs from all sectors.

The Swedish Research Council is Sweden's largest governmental research funding body, and supports research of the highest quality within all scientific fields.

### Budget

The programme "Research Project Grant" has funded up to now 6 projects with a total budget of 200,000 €.

### Brief description

The aim of this grant is to allow researchers the freedom to identify the research concept, methods and implementation steps, and to solve a specific research task within a limited period of time. The Research Project Grant in Development Research is financed through development aid funds provided by the government, and research receiving support must be of relevance to poverty reduction and sustainable development in low income countries. The Swedish Research Council supports basic research of the highest quality in national competition.



## Produktion2030



### Funder

Vinnova  
Mäster Samuelsgatan 56  
101 58 Stockholm  
Sweden  
[www2.vinnova.se/en](http://www2.vinnova.se/en)

### Coordinator

Cecilia Warrol  
Storgatan 5  
114 85 Stockholm  
Sweden  
<http://produktion2030.se/en>

### Time period

The funding programme "Produktion2030" started on 2017-01-01.

### Orientation of the funding programme

Produktion2030 focuses on six areas of strength in which Swedish industry, universities and research institutes are internationally competitive. The Areas of strength in Produktion2030 are Resource-efficient production, Flexible production, Virtual production development, Humans in the production system, Circular production systems and maintenance, and Integrated product and production development.

### Budget

The programme "Produktion2030" has a total budget of 4,800,000 €.

### Brief description

The Produktion2030 Strategic Innovation Programme is part of Vinnova's, the Swedish Energy Agency's and the Swedish Research Council Formas' joint efforts within strategic innovation areas. Strategic innovation programmes are to lay the foundation for international competitiveness and sustainable solutions to global societal challenges. The vision for Produktion2030 is that Sweden will be a world leader in sustainable production by 2030. The programme began in 2013 and aims to create competitive production, jobs and growth in Sweden. Detailed information on Produktion2030 is available at [www.produktion2030.se](http://www.produktion2030.se). This call will support a number of test and demonstration projects, with the main focus within one of the Produktion2030's six areas.



## Swiss-Swedish Innovation Initiative



### Funder

EUREKA  
Heinrich-Konen-Str. 1  
53227 Bonn  
Germany

### Coordinator

Business Sweden in Switzerland  
Splügenstrasse 12  
8002 Zurich  
Switzerland  
[www.swii.org/index.php/contact](http://www.swii.org/index.php/contact)

### Time period

The funding programme "Swiss-Swedish Innovation Initiative" started on 2017-01-01.

### Orientation of the funding programme

"Swiss-Swedish Innovation Initiative" (SWII) is an industrial R&D partnering program with the objective to increase market oriented high-technology R&D projects between Switzerland and Sweden. SWII gathers the most technology intensive Multinational enterprises (MNEs, SMEs and academia) two to three times a year and issues bilateral calls for R&D project proposals within Eureka & Eurostars.

### Budget

The programme "Swiss-Swedish Innovation Initiative" has funded up to now 30 projects with a total budget of 38,000,000 €.

### Brief description

Switzerland and Sweden face common challenges in both high-tech industries. Both countries need to be constantly innovative and improve their production systems to maintain a solid domestic industrial base. Being two of the world leaders in innovation, Switzerland and Sweden form natural partners in tackling these tasks. The eighth Swiss-Swedish Call for R&D Project Outlines will be launched on 1 September, 2018. The bilateral call is open to all topics of the Swiss-Swedish Innovation Initiative (SWII), but focuses on Additive Manufacturing, Lightweight Technology and Life Science.



## High Value Manufacturing Catapult



### Funder

United Kingdom Government  
Downing Street 10  
SW1A 2AA, London  
United Kingdom  
[www.gov.uk](http://www.gov.uk)

### Coordinator

Innovate UK  
North Star Avenue  
Swindon  
United Kingdom  
[www.gov.uk/government/organisations/innovate-uk](http://www.gov.uk/government/organisations/innovate-uk)

### Time period

The funding programme "High Value Manufacturing Catapult" started on 2012-01-01 and continues to 2018-12-31.

### Orientation of the funding programme

They are the catalyst for the growth and success of UK advanced manufacturing. With their 7 centres they offer access to equipment, expertise and collaborative opportunities. They work with manufacturing businesses of all sizes and from all sectors and help turn ideas into commercial applications by addressing the gap between technology concept and commercialisation.

### Budget

The programme "High Value Manufacturing Catapult" has a total budget of 164,000,000 €.

### Brief description

The High Value Manufacturing Catapult (HVMC) is the UK's national initiative to increase the competitiveness and value added of its manufacturing industry. As the first and largest of eleven national catapults under the programme, the HVMC is composed of seven technology centres. Through the centres UK businesses have access to industrial scale technology to accelerate and de-risk new concepts to commercial reality. It's part of the overall "UK Industrial Strategy".



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