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Directorate-General for Communications Networks, Content and Technology

Digital Industry

Technologies and Systems for Digitising Industry

National Initiatives for Digitising Industry across the EU

Analysis

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Disclaimer:

The European Commission, Directorate-General for Communication Networks, Content and Technology, Unit Technologies and Systems for Digitising Industry has compiled this document on the basis of the country reports presented in Annex 1.

The views expressed in the country reports are those of the authors and do not necessarily reflect the official European Commission's position. Neither the European Commission nor any person acting on its behalf is responsible for the use which might be made of this information contained in the present document.

EXECUTIVE SUMMARY

In the context of its Communication: Digitising European Industry Reaping the full benefits of a Digital Single Market (COM(2016) 180 final) the European Commission monitors the state of digitisation across the EU through different indexes and indicators.

The Digital Economy and Society Index (DESI) shows that the EU is making progress in digital transformation. However, more efforts and investments are needed to close the gap between top digital players and lower-performing countries and to make the most of the digital opportunities.

The Digital Transformation Monitor takes stock of Industry 4.0 initiatives across several EU Member States. The results identified the need for systematic cooperation and exchange of good practices at EU level.

More detailed analysis of the existing 15 national initiatives for digitising industry and relevant national measures along the action lines of the DEI strategy concluded that:

- Digitisation is a key element of national industrial policies. Some Member States are among the 'trend-setters' and many are 'fast-followers' in absorbing the emerging trends.
- EU-collaboration brings added value, prepares for legal certainties and encourages essential co-investments to successfully reach leadership positions in critical business areas.
- Specific measures employed by Member States to encourage investments in research, development and innovation (R&D&I) related to digitization include incentives and access to finance.
- The Digitising European Industry strategy makes significant progress towards the mobilisation of close to €50 billion of public and private investment until 2020.
- Member States recognise the need for digital skills and have set up actions related to education and training.
- Addressing the needs of national industrial fabrics has led to a variety of measures which are anchored to the Member States' priorities and are often in line with European goals as well.

In summary, 18 months after the launch of the initiative, clear alignment of national and European initiatives has gradually taken place. This is a good basis for defining together the longer term visions and actions for the digital transformation of Europe.

Contents

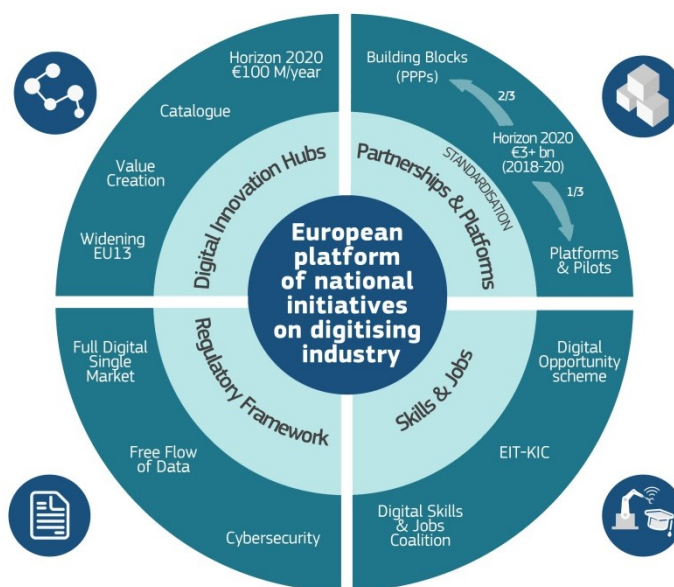
EXECUTIVE SUMMARY	2
I. Introduction	4
1. DEI overview	4
2. Monitoring of national initiatives for digitisation	4
3. Methodology of the analysis.....	5
II. Main Findings.....	7
Alignment of national initiatives.....	7
Accelerated national strategies	7
Digital transformation at the heart.....	7
Mobilisation of public and private investment:.....	7
Variety of measures anchored to MSs' priorities	7
Role of the state and the national platform	7
III. Some examples of good practices along DEI initiative	8
1. Upgrading EU digital innovation capacity	8
1.1 Boosting digital innovations in all sectors.....	9
1.2 Partnerships for leadership in digital technologies value chains and platforms	10
Standardisation.....	11
2. Adapting the regulatory framework	12
3. Re-skilling and preparing the workforce.....	13
IV. National financial instruments to support digitisation of industry	14
1. Access to finance.....	14
2. Incentives to invest in R&D&I, Patents and IPRs.....	16
V. Conclusions and Next Steps.....	17
Annex 1: Links to Country Reports.....	17

I. Introduction

1. DEI overview

Digitisation of industry needs to be comprehensive across Europe. Several EU Member States have already started working on national initiatives that collectively help Europe increase its global competitiveness. However, not all Member States in Europe are covered by local initiatives and therefore there is a risk of creating a new "digital divide".

To reinforce the EU's competitiveness in digital technologies and to ensure that every industry in Europe, in whichever sector, wherever situated, and no matter of what size can fully benefit from digital innovations, the European Commission launched Digitising European Industry (DEI) initiative in April 2016. It is the first industry-focused initiative of the Digital Single Market and it is a unique opportunity for companies to modernise, integrate digital cross-sectorial innovations and become leaders in the next generation of products, services, processes and business models.



The initiative is framed into the following lines of actions with a clear European added-value.

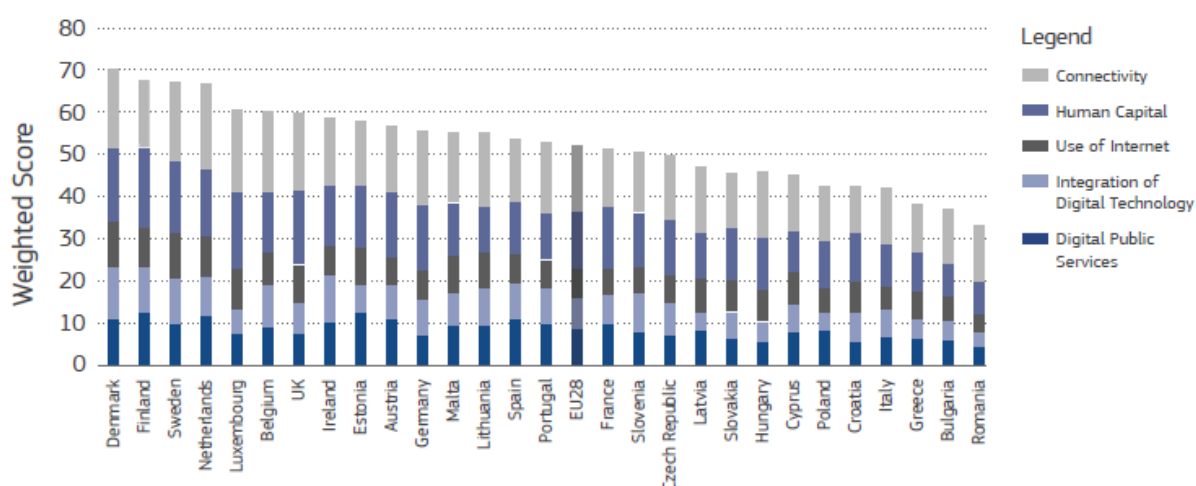
1. **Upgrading EU digital innovation capacity** in all sectors of the economy:
 - (a) Boosting digital innovations in all sectors: Digital Innovation Hubs across Europe
 - (b) Partnerships for leadership in digital technologies value chains and platforms
2. **Adapting the regulatory framework** notably on data, liability and security in line with the Digital Single Market goals.
3. **Re-skilling and preparing the workforce** to benefit from the digital transformation of industry.

2. Monitoring of national initiatives for digitisation

Monitoring and reporting back on the development of the existing national initiatives is an important element of the Digitising European Industry initiative. It is done in the context of the European Platform of National Initiatives. The European Commission monitors the state of digitisation across the EU through different indexes and indicators.

The Digital Economy and Society Index (DESI) shows that the EU is making progress in digital transformation. However, more efforts and investments are needed to close the gap between top digital players and lower-performing countries and to make the most of the digital opportunities.

Digital Economy and Society Index, by Main Dimensions of the DESI



European Commission, Digital Scoreboard 2017

The Digital Transformation Monitor (DTM) takes stock of Industry 4.0 policy initiatives across several EU Member States. The results identified the need for systematic cooperation and exchange of good practices at EU level.

3. Methodology of the analysis

Within this framework, the European Commission built on the above mentioned indexes and conducted a more detailed analysis of the existing 15 national initiatives for digitising industry that were active in November 2017 (AT, BE, CZ, DE, DK, ES, FR, HU, IT, LT, LU, NL, PL, PT, SE)¹.

This report updates recent information on policy actions and policy results in Member-States in the domain of digitising industry.

The analysis includes the development of national initiatives in the broader framework of emerging digital growth strategies that are linked to national innovation and industrial policies. It provides a background on how these strategies and measures have emerged in order to help understanding the policy dynamics and identify practices of interest for the whole EU. It also focuses on the governance and on the leverage effect of the policies on investments.

To facilitate comparability and to structure the analysis specific plans and actions designed by the National Initiatives have been grouped along the Digitising European Industry (DEI) action lines. More specifically, the monitoring framework is built around the main 3 action lines: boosting innovation capacity; regulatory framework; and skill development.

¹ In addition to this information, a country overview with relevant information for digitising industry for all 28 Member States is available on <https://ec.europa.eu/futurium/en/content/digitising-european-industry-catalogue-initiatives>

A number of performance indicators have been used to monitor how Member States support the R&D&I of digital technologies and the take-up of these technologies by industry (industry in a broad sense, meaning all businesses: tourism industry, creative industry, etc.). These indicators include:

- Basic prerequisites; e.g. R&D&I infrastructure; DESI ranking; business-research ecosystems (clusters); involvement of industry, society and politics;
- Targeted research strategies; positioning in specific technology areas; participation in standardisation activities; alignment with the European DEI initiatives;
- SME transfer: competence centres, regional development activities, testing facilities;
- Strategic development: internationalisation; strategies for regional specialisations; foreign investment

The analysis provides a first overview of the status and content of the National Initiatives. However, it is not exhaustive and needs further inputs. The contributions, correction and updates from all Member States are most welcome to make the report more comprehensive.

II. Main Findings

Alignment of national initiatives: The analysis shows that clear alignment of national initiatives with the DEI strategy is gradually taking place, notably on investments that boost digital innovation and support digitisation of SMEs. Ongoing work on open industrial data platforms and reference architectures for standardisation is also taking off as a common priority. Key pillars of the DEI strategy in relation to digital skills, mostly a national prerogative, and modernisation of regulatory framework show converging priorities.

Accelerated national strategies: Member States have responded positively to the European initiative on digitising industry. They have implemented specific measures and have accelerated the national strategies to that aim. Many Member States have also established Working Groups that bring the business, research and public actors together under the DEI themes.

Digital transformation at the heart: Digitisation is a key element of national industrial policies. Digital transformation is at the heart of all important innovation initiatives and digitisation of industry involves integrated actions at many levels (companies, value chains, infrastructures, legal frameworks) and subsequently cooperation among many stakeholders and policy domains.

Mobilisation of public and private investment: EU-collaboration is considered necessary to face worldwide competition. With an EU investment of €5 billion the Digitising European Industry Strategy expected to mobilise close to €50 billion of public and private investment until 2020. The analysis of national initiatives shows good advances in this respect.

Variety of measures anchored to MSs' priorities: In many cases the support for digitisation is divided in innovation programmes that are targeted to the needs of a specific business sector. Addressing the needs of national industrial fabrics has led to a variety of measures which are anchored to the Member States' priorities echoing the European objectives for increased competitiveness.

Role of the state and the national platform: The analysis also showed that there is a different approach towards the role of (national or regional) public intervention. Some initiatives tend to “manage” the developments, while others rely on industry or even industry-science-society based associations to be in the lead. Furthermore, Member States show varying degrees of conformity with emerging technology trends:

Some are among the '**trend-setters**'. They have put in place vigorous active discussion platforms, driven by industry and societal organisations. They allocate investments in basic infrastructures, skills development and other important prerequisites of a digital economy but also have a strategic agenda and come up with innovative ideas concerning DEI by addressing societal and economic topics and developing technologies that are not yet seen in other MS.

Many Member States are among the '**fast-followers**'. They follow on and adopt topics, identified by the trendsetters. However, the delay in adoption translates in less readiness of the prerequisites of the digital transformation of industry that would have catered for a broader business and research community or have not set up strong strategic priority areas in the global scale to be able to set the next trend.

III. Some examples of good practices along DEI initiative

The analysis has identified different actions and approaches taken by Member States for the digitisation of their industries. Many countries have made long-term strategies and investments under one coherent approach or through several more specific initiatives.

One of the most thorough approaches to digitisation is Industrie 4.0 in **GERMANY**. The country's specific strengths include a coherent strategy built by several ministries and an "Industrie 4.0" platform now led by industry. It has taken a broad view that includes manufacturing, services, business models, strategies working conditions and security aspects. The German cluster policy has led to strong ecosystems with a local smart specialisation. In addition, international cooperation between the companies and research organisations gives an extra boost to the digitisation of industries.

Another example of an approach that cuts throughout the society is **SWEDEN** which has also reached leading positions in several digitisation comparisons and reviews. National measures are geared to the needs of the local companies and match well in line with the DEI priorities. The national platform strategy is bound to industry organisations and based on existing cooperation structures in technology transfer (e.g. 5 "innovation partnership programs").

Several other Member States have also well aligned strategies and considerable investment plans for the digital transformation of the society. There are **numerous examples of good practices employed by the Member States** and some of them will be presented below. The full country reports can be accessed via the links given in Annex 1.
















1. Upgrading EU digital innovation capacity

To address the challenges faced by industry to benefit from digital innovations, national initiatives adopt various measures to support SMEs in their digital transformation and to build and federate digital platforms in areas of national and European importance.

In this analysis the efforts to upgrade digital innovation capacity consist of:

- (a) **Boosting digital innovations in all sectors:** Digital Innovation Hubs across Europe. This requires critical mass investments in digital innovation hubs and competence centres to support SMEs and low-tech industries to adapt to new technologies and
- (b) **Partnerships for leadership in digital technologies value chains and platforms** thorough focussed support for R&D&I programmes to develop essential digital technologies.

The table below divides these into further elements and illustrates how they can be tracked in the national initiatives. The following sections will high-light concrete examples from Member States. This is not an exhaustive list and there will remain many good examples to be elaborated in the future.

																
		AT	BE	CZ	DE	DK	ES	FR	HU	IT	LT	LU	NL	PL	PT	SE
DIGITAL INNOVATIONS FOR ALL	Test-beds				●			●	●		●		●	●	●	●
	R&I infrastructure	●	●		●		●	●	●	●		●		●	●	●
	DIH	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Clusters		●		●	●	●	●		●	●	●	●		●	
R&D&I PROGRAMMES	Basic technology research	●	●			●		●	●	●			●	●	●	
	Industrial/ Applied research	●	●	●	●	●	●	●				●	●	●		●
	Pilot & Demonstrators	●	●		●	●			●			●		●	●	●
	Standardisation	●			●		●	●		●	●	●	●	●	●	
	International cooperation	●	●	●	●			●	●	●	●					●
	R&I PPPs					●				●		●	●			●
	Regional level		●		●	●	●	●					●			●

1.1 Boosting digital innovations in all sectors

Digital transformation is not only important for large enterprises, but equally important to small and medium-sized enterprises (SMEs) which operate in the same complex business environment. However, small companies and low-tech sectors have serious difficulties in choosing which digital innovations would be most beneficial for them².

The Member States assist SMEs in adopting the newest and the most suitable digital technologies by supporting the development of networks of Digital Innovation Hubs (DIHs)³. The Digital Innovation Hubs pillar is also connected to initiatives aiming at supporting startups development.

GERMANY. Under the initiative “Mittelstand 4.0 – Digital Production and Work Processes”, Mittelstand 4.0 Competence Centres raise awareness, provide information and training for business leaders and staff members across the country and offer a hands-on approach for testing out the digital transformation in allocated demonstration factories. Furthermore, the program “InnoKom” aims at compensating the lack of industrial research in structural weak regions.

NETHERLANDS. Fieldlabs are open environments for testing and demonstrating in specific areas of industrial transformation and take an important part of the national programme. In 2017 there are 30 operational fieldlabs and they are actively expanding their service offering to provide training as

² DEI(2016)180 final, and Digital Scoreboard 2016, digital intensity by companies

³ A catalogue with Digital Innovation Hubs all over Europe is available on <http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool>

well. In addition, a Fieldlab for Social Innovation has been created to broaden the scope beyond technologies.

LUXEMBOURG. The development of a powerful High-Performance Computer (HPC) facility at the University of Luxembourg (combining huge computing resources with extensive data storage facilities) is a strategic asset of the university and an important comparative advantage for the scientific and economic competitiveness of Luxembourg.

DENMARK. A network of 'Approved Technological Institutes' (GTS) consists of eight institutes that develop and sell technological services to Danish companies. Although the institutions are active in industry 4.0, digitisation and advanced production, the performance-contracted activities are very broad and include, for example, digitisation of processes within as diverse areas as fire protection, veterinary diagnostics and offshore operations.

CZECH REPUBLIC. *Průmysl 4.0* addresses a revision of organisational structure of National Application Oriented Research Centres for Industry 4.0. Such innovation infrastructure plays a role in lowering the acceptance barriers of Industry 4.0 by businesses through specific awareness campaigns and innovation support services.

AUSTRIA. In September 2017, a new initiative “KMU DIGITAL” (“Digital SME”) to provide direct business support on several levels and with a multitude of instruments has been announced.

ITALY. The national initiative *Piano Nazionale “Industria 4.0”* has committed investments of €200 million for the establishment of selected I4.0 competence centers and €240 million for the strengthening of technological clusters "Fabbrica Intelligente" and "Agrifood”.

LITHUANIA has also created important prerequisites for digitisation of industry through its cluster and "valleys" policy. They have led to good relations for technology transfer to the local industry. There are selected pilot factories and several innovation hubs based on the clusters.

SPAIN. The digital innovation hub strategic action line of *Industria Conectada 4.0* is framed in the context of the Clustering national strategy that has supported the development of up to 98 (Innovation Enterprise Association) with annual investments in the order of €11 million.

1.2 Partnerships for leadership in digital technologies value chains and platforms

Digitisation of industry is not limited only to the transformation of the “old production sector” and the adoption of technologies by SMEs. Member States are investing heavily in the development of the next generation technologies and developing the building blocks of the digital economy and society. Often these activities combine three elements: (a) a strong industry expertise and commitment, (b) publicly funded top research and (c) profound analysis of the future trends in society and technology. Examples of Member States' activities in developing research infrastructures responding to these needs are:

AUSTRIA. A pilot factory for science and industry at the technical university (TU) of Vienna has been installed as a key component of the strategic focus on Industrie 4.0. The pilot factory combines basic research, application-oriented research in cooperation with industry, research-oriented teaching and continuing education. The pilot factory is a new instrument for strengthening Austria as a location

for innovation. It has high relevance for SMEs that lack an own R&D&I infrastructure. It is also an experimental field at the interface between research and business with realistic hardware and software that can be used for cooperative development projects.

DENMARK. *Pilot production as a high-tech innovation engine* for Danish industry (*PP-TECH*) develops high-tech manufacturing and innovation processes for pilot production under industrial conditions (granting DKK 14.80 million - €1.99 million).

BELGIUM hosts the largest independent research organisation for nano-electronics in the world - IMEC. It develops a multi-layer approach that combines world-class infrastructure, training facilities, PhD programmes and platforms for research on targeted domains in energy, health, mobility and manufacturing. It acts as an innovation chain and value chain integrator with services starting from core technology development and system integration to prototyping and validation.

SWEDEN's ambitions to “continue to be a globally attractive place for prominent research and innovation” (Government’s research policy bill) are supported with the launch of Testbed Sweden (Testbädd Sverige) in January 2016. The goal is to encourage new ideas and solutions to be tested in Sweden. This also aims at attracting international investors in the Swedish research and innovation environments.

FRANCE. The ‘Factory Lab’ provides facilities for science-industry partnership at high-TRL (Technology Readiness Level).

Standardisation

Standardisation and the related technical regulations for Industry 4.0 focus on interoperability of the various elements. In the digital world, billions of connected devices should communicate safely and seamlessly, regardless of their manufacturer, technical details or country of origin. For this they need a common language: standards.

GERMANY. In 2016 industrial associations and standardization organizations set up the "Standardization Council Industrie 4.0" (SCI4.0) with the aim to initiate standards of digital production and to coordinate these nationally and internationally.

FRANCE. *Alliance Industrie du Futur* has developed a strategy on normalisation to support the valorisation of the national technology supply and influence international norm setting.

HUNGARY. The National Technology Platform (IPAR 4.0) explicitly encourages the further deepening of the established partnership relations, as well as the creation of an intensive and action-oriented system of cooperation compliant with the best practices in Europe.

Whereas standardisation primarily is industry business, Member States strategies and actions related to standardisation help to coordinate and strengthen EU positions.

FRANCE, GERMANY and ITALY. As part of the international cooperation effort to accelerate standardization of key parts of Industry 4.0 platforms, France, Germany and Italy have announced⁴ in June 2017 a trilateral cooperation to support and strengthen the digitisation processes of their manufacturing sectors as well as to promote European efforts.

Standards can facilitate the implementation of legislation but are not intended to substitute or modify legislation. The main benefits from standardisation are: a) technical solutions based on consensus and wide experience; b) reduce legal compliance, integration and verifications costs; c) increase transparency in the market; d) open up markets; and e) ease market access for innovative products.

2. Adapting the regulatory framework

Actions on boosting the innovation capacity are complemented by legal and regulatory aspects. A key accelerator of digitalisation is legal certainty and a regulatory framework that encourages both supply and adoption of technology. This requires legal and normative adaptability to address the challenges of the new industrial revolution.

Better Regulation and legal certainty are key prerequisites for investments from private and public sources home and abroad. Some Member States are very active in building the framework conditions for digital innovations.

FRANCE. The '*Loi pour une République Numérique*' (Oct 2016) is a regulatory framework on a wide range of topics to advance digitisation. The key points of this law deal with open data (access by default), issues of education and research (free access to scientific publications of public research and secured access to public statistics), platforms (portability and transparency of data), as well as protection of the internet users and accessibility of the different networks.

LUXEMBOURG. Similarly, one of the axes of the Digital Luxembourg is data regulation. It aims to ensure free flow of data, as well as privacy and protection; using RegTech (application of technology to solve regulation challenges).

POLAND's intensive framework policy is strongly focused on the tax system, on safeguarding intellectual properties and on tackling bureaucracy issues.

Other Member States have started the process of evaluating their legislation in order to identify the stumbling blocks that may hinder industry in their innovation capacity.

CZECH REPUBLIC. In September 2017, the Government released the 'Principles for Creating Digitized Legislation', in connection with their Digital Agenda. The basis of the document is ten principles that are helpful to all who are involved in making or evaluating legislation.

GERMANY. Field test labs are to be used as regulatory experimentation spaces. These "laboratories" allow the testing of innovations under real conditions, by adapting the existing requirements in time and space. The goal is to develop regulations that are innovation friendly while also socially acceptable.

⁴ G20 Digitising Manufacturing, June 2017

3. Re-skilling and preparing the workforce

Digitisation of industry must also benefit European citizens. Therefore, a better connection between strategies for digitising industry with strategies for digitising society is needed.

Digital skills are at the core of both. All Member States recognise the need for digital skills and have set up actions related to education and training, in line with their core national and regional competences. Usually these activities address the skills of those in the different levels of education and of those already at work.

FRANCE. The '*Grand Plan d'Investissement*' has confirmed the importance attributed to the human factor in the industrial transition with an investment of €15 billion over 2018-2020. Measures will in particular address the problem of less qualified people, becoming unemployed and leaving prematurely school, to leverage the human potential for the transformation.

GERMANY. The Federal Ministry of Education and Research (BMBF) announced in 2017, that they will provide over €14 million in funding digital learning opportunities and new didactic strategies in basic and advanced vocational training under the "Digital Media in Vocational Training" programme.

PORTUGAL. The vast majority of the measures that make up the Strategy for Industry 4.0 aim at the training of human resources with a strong focus on training from an early age and throughout life, with priority being given to the retraining of workers and the creation of new jobs.

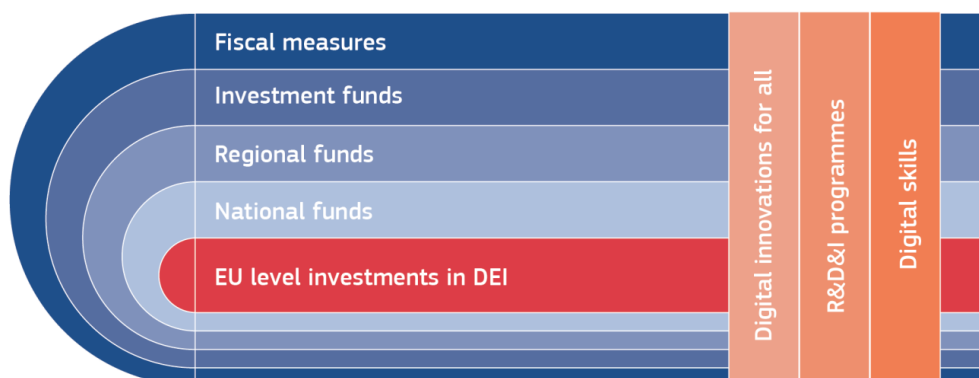
IV. National financial instruments to support digitisation of industry

The 15 Member States analysed in the study use different financial measures in their strategies for digitisation of industry, fitting the particular needs of their industries. These measures are directed to encourage investments in research, development and innovation (R&D&I) for digitisation of industry. They are served by different instruments, including improved **access to finance** and fiscal **incentives for R&D&I** investment, patents and IPR development. The table below lists in more detail the measures and instruments as they appear in national initiatives.

		AT	BE	CZ	DE	DK	ES	FR	HU	IT	LT	LU	NL	PL	PT	SE
INCENTIVES TO INVEST IN R&D&I	Innovation vouchers		●	●	●			●	●		●			●	●	
	Amortisation schemes					●		●		●						
	Foreign direct investments measures	●		●											●	●
	Tax relief	●	●			●	●	●		●	●		●	●		●
ACCESS TO FINANCE	Guarantee/ Loan fund						●	●	●	●			●	●	●	
	National innovation fund		●	●	●	●		●				●	●	●		●
	Venture capital Start-ups support	●			●	●	●	●		●			●	●		●
PATENTS & IPR INCENTIVES		●	●		●					●	●	●		●		

1. Access to finance

Often the role of the national initiatives is to provide an umbrella for coordinated actions, allocating new or existing investments for the digital transformation of industry. National measures act therefore as multipliers of EU investments on digitisation of industry. The picture below illustrates a framework for combining several financing instruments to digitalisation priorities.



The European Commission has encouraged Member States to use the European Fund for Strategic Investments (EFSI) and the European Structural and Investment Funds (ESIF) to meet the demands of their national initiatives for digitisation. Overall, the planned ICT investments under ESIF with relevance to smart manufacturing research and dissemination greatly exceeds 10 billion euro.

Some countries mobilise already existing financial tools and budgets, e.g. Operational Programmes. The national incentives are in the form of tax releases for innovation investments or of private investment funds.

LITHUANIA and the **CZECH REPUBLIC** also rely on European funding for their research activities combined with tax based incentives.

Other Member States opt for targeted low usage of structural funds. They rather aim to acquire industry and foreign investments, including venture capital investments.

SWEDEN invites foreign companies and investors to use their testing and demonstration facilities, which is a good way to bind foreign investments to their own strategic investment.

AUSTRIA's use of Structural Funds is also low and targeted. Directed research is complemented with a tax reduction to promote SME innovativeness.

On top, Member States have set up national innovation and growth funds.

DENMARK. The National Innovation Fund is the major public lever for new innovation driven investment with specific actions on digitising (MADE Digital, with DKK 79 million or €10.61 million).

FRANCE has announced a 'New Fund for Industry and Innovation' to fund public co-investment in setting-up capital intensive pilot and demonstrator projects for breakthrough innovations. Moreover, one of the 4 major investment priorities of the '*Grand Plan d'Investissement*' anchors competitiveness in innovation: €13 billion is budgeted for new initiatives such as consolidation of world-level integrated universities (€3.5 billion); supporting new research priorities such as artificial intelligence, exploitation of big data, nanotechnologies or cybersecurity and the accompaniment of sectors in transformation (€4.6 billion); modernisation of agriculture, fisheries and agri-food (€5 billion).

SPAIN's Industria Conectada 4.0, on the other hand, employs a program of preferential loans to finance, research, development and innovation related to industry digitisation (€100 million a year). Spain is not providing a dedicated or strong policy focus yet on tax incentives as part of the national strategy. However, there are already in place some dedicated resources in the form of soft loans (€15 million a year) in the ENISA (Empresa Nacional de Innovación, SME, SA) credit line for the development of new digital businesses in the context of the Spanish Digital Agenda.

As often used instrument to support the development of the tech market is equity investments in innovative companies at an early stage of their development.

POLAND. In 2016, the Government has setup a new investment fund "PFR Ventures" with over €630 million (2.8 billion PLN) to be invested into the startup industry in the next years. Additionally, "Business Angels" consultation process has also been launched through the Biznest program as part of "Startup Europe". In September 2017 the ministry for economic development announced a call

for Financial Intermediaries (“Biz Biz FIZ”). It is the first “fund of funds” in Poland, aimed at supporting the investment activity of business angels in innovative companies at an early stage of development.

2. Incentives to invest in R&D&I, Patents and IPRs

ITALY. Beyond the national funds made available as part of research programmes and smart specialisation strategies, one of the main incentives to invest consists of 50% tax credit on incremental R&D&I expenditure (up to an annual ceiling of €20 million a year per beneficiary). By doing so, the tax credit aims to boost R&D&I by more than €11 billion within the 2017-2020 timeframe. The combination of super- and hyper-depreciation aims to increase private investment in capital goods by €10 billion just in 2017.

FRANCE. The government has also put in place specific fiscal measures, such as accelerated depreciation of new investments related to digitisation of industry. In order to improve the cash-flow of the companies they offer depreciation at 140% of the value or reduced depreciation period of 2 instead of 5 years.

HUNGARY. SMEs could win vouchers by tendering procedure. The vouchers then would serve as a means of payment in order to obtain various R&D&I services from the “open laboratories”. Services include support for the development and market introduction of a new prototype, ensuring technical/engineering background and so on. The resources necessary for the expansion and maintenance of the “open lab” would be covered from the operating income from the voucher system.

In addition, financial support for the protection of industrial property rights that covers the patents of inventions and design at the European and international level is provided in some Member States.

LITHUANIA. To encourage companies to undertake R&D&I activities, while supporting patenting of inventions at international level, the Ministry of Economy has started a measure “Inopatentas” in 2017. The measure is targeted towards the business entities and it has an allocated budget of €3 million. For example, the national agency for science, innovation and technology MITA covers 80% of costs of patent attorneys’ services and official fees to eligible applicants (companies, research organisations).

V. Conclusions and Next Steps

The analysis provides a first picture of the status and content of the National Initiatives. The ambition is update the analysis regularly. The contributions, correction and updates from all Member States are most welcome to make the report more comprehensive.

The work has clearly showed the need of detailed analytical study of the qualitative and quantitative impacts of the various measures taken at national level, where they exist. Future work should also include all EU Member States, beyond the 15 analysed here.

Annex 1: Links to Country Reports

The full country reports can be found at a [Futurium page](#) or accessed via the links below:

[Austria](https://ec.europa.eu/futurium/en/system/files/ged/at_country_analysis.pdf) - https://ec.europa.eu/futurium/en/system/files/ged/at_country_analysis.pdf

[Belgium](https://ec.europa.eu/futurium/en/system/files/ged/be_country_analysis.pdf) - https://ec.europa.eu/futurium/en/system/files/ged/be_country_analysis.pdf

[Czech Republic](#) -

https://ec.europa.eu/futurium/en/system/files/ged/cz_country_analysis.pdf

[Germany](https://ec.europa.eu/futurium/en/system/files/ged/de_country_analysis.pdf) - https://ec.europa.eu/futurium/en/system/files/ged/de_country_analysis.pdf

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