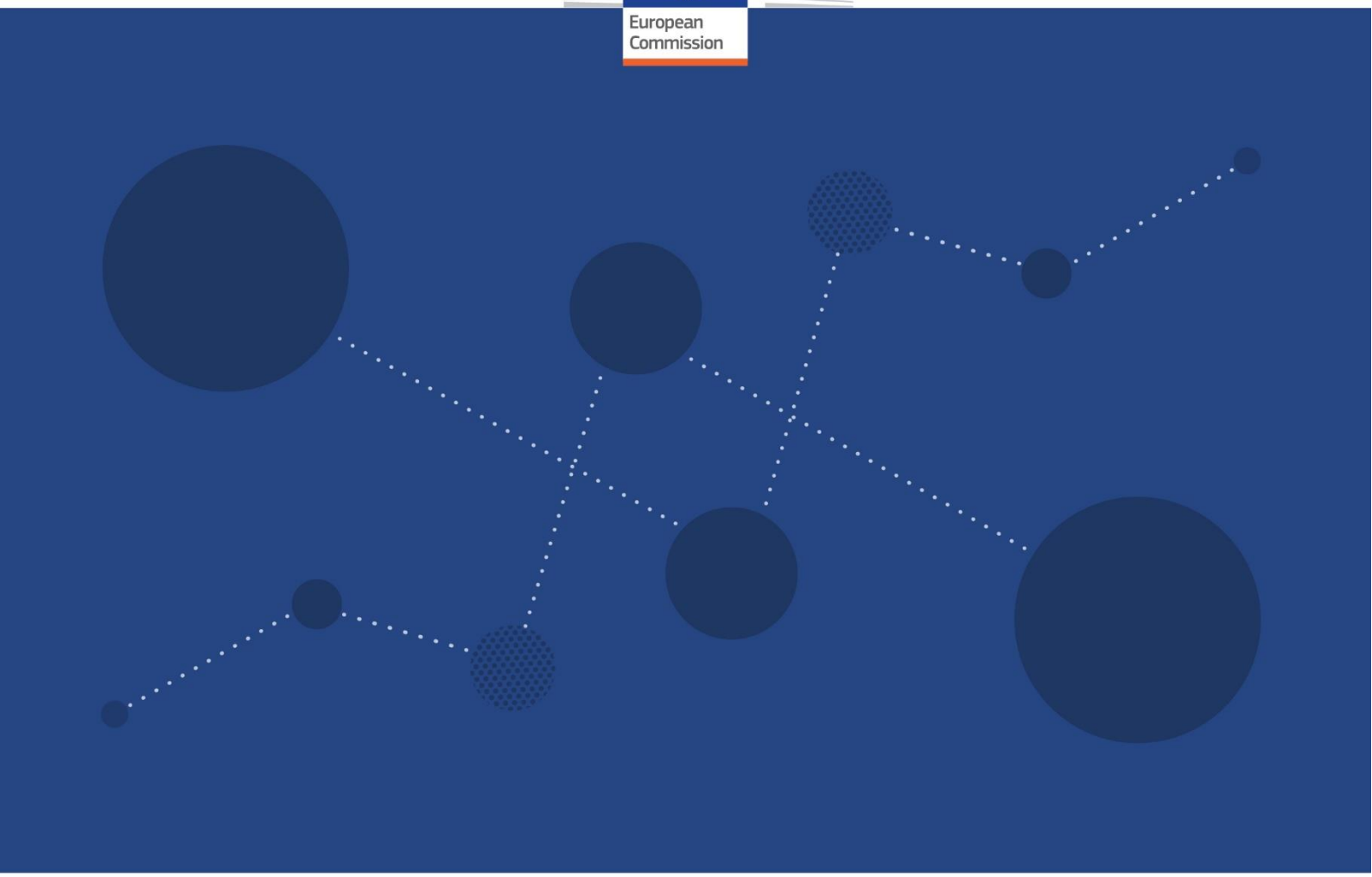


Digital Innovation Hubs

Draft, DG CONNECT

December 2018

Digital Single Market

Digital Innovation Hubs in Digital Europe Programme

Digital Innovation Hubs will play an important role in Digital Europe Programme to stimulate the uptake of Artificial Intelligence, HPC and Cybersecurity by all industry and public sector organisations in Europe. Digital Innovation Hubs will have both a local and European functioning. Member States will be expected to co-invest in the hub through funding the facilities and services with a local impact in their regions/country, whereas the European dimension (opening up the facilities to all of Europe and importing missing expertise) will be funded through a grant of Digital Europe. Member States will be essential in the selection process of Digital Europe, since they will be responsible for designating potential Digital Innovation Hubs. It is proposed to use the European Platform of National Initiatives on Digitising Industry for governance of this joint investment plan, until other mechanisms (such as e.g. a programme committee will be established).

This brochure provides background information and initial ideas on how to implement the Digital Europe Programme, how it complements the support to hubs under Horizon Europe, and contribute to a successful network of Digital Innovation Hubs covering all regions of Europe.

Digital Europe for Digital Innovation Hubs at a glance

EU support for one DIH per region

Co-investment with Member States

Focus on industry and public services administrations

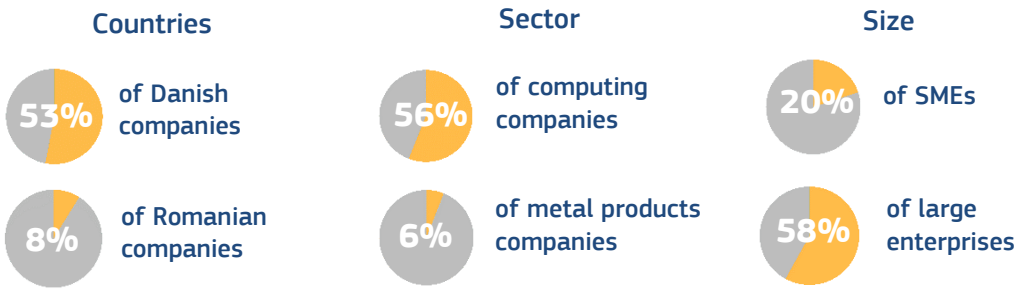
Focused on HPC, AI, Cybersecurity and Digital Skills

A strong European network of DIH

Further need for digitalisation

More than two years after the launch of the Digitising European Industry Strategy, European industry has made significant progress. The level of digitalisation of industry however remains uneven, depending on the sector, country and size of company. Many organisations still struggle to make the most of digital opportunities due to lack of knowledge or difficulties to find finance. This is the case particularly for SMEs**: only 20% of SMEs in the EU are highly digitised.** Slow diffusion of digital technologies poses a risk to the EU's ability to compete in the global economy. To address this challenge, Digital Innovation Hubs have a key role to play.

Highly digitised companies across Europe



What is a Digital Innovation Hub?

Digital Innovation Hubs (DIHs) are not-for-profit one-stop-shops that support companies, notably SMEs, and the public sector in their digital transformation. At the core of the DIH there is normally a research & technology organisation (RTO) or university lab offering in collaboration with partners, services such as:

- **Test before invest**: Experimentation with new digital technologies – software and hardware (e.g. artificial intelligence, High Performance Computing, Cybersecurity, Blockchain…) – to understand new opportunities and return on investments
- **Skills and training** to make the most of digital innovations: boot-camps, traineeships, exchange of curricula and training material
- **Support to find investments**
- An **innovation ecosystem and networking** opportunities

See examples in Annex 3.

Digital Innovation Hubs Today

NETWORK OF DIHs AND INNOVATION EXPERIMENTS IN HORIZON 2020

Digital Innovation Hubs are a key priority in the Digitising European Industry Initiative adopted by the European Union in April 2016. From 2016 to 2020 the EU is investing €100 million per year to support networking between different DIHs across Europe to help SMEs and mid-caps go digital.

Networking and collaboration between DIHs is crucial. Hubs are usually specialised on certain technologies and applications, no one hub has all necessary competences, so they need to work together to give SMEs the access to the solutions they need.

EU actions on DIHs have been carried out through EU-wide initiatives such as Smart Anything Everywhere (SAE) and ICT Innovation for Manufacturing SMES (I4MS). More than 150 Digital Innovation Hubs and 500 Start-ups, SMEs and mid-caps have taken part so far in 370 different innovation experiments where companies tested digital innovations in collaboration with DIHs (see Annex 2 for examples).

By 2020, approximately 2000 innovative SMEs across Europe would have received this kind of support from the EU through the DIHs to accomplish their digital transformation.

DIGITAL INNOVATION HUBS ACROSS THE EU

As part of their digitisation strategies, more than 10 Member States are implementing national DIH strategies, e.g. Mittelstand 4.0 in Germany, Smart Industry Field Labs in the Netherlands, or the DIH of the Italian Piano Nazionale Industria 4.0. Often these national or regional DIH infrastructures are linked to their Smart Specialisation Strategies.

A "yellow pages" of Digital Innovation Hubs of the European Commission monitors the development of DIHs across Europe. Being a bottom-up approach, this catalogue is not complete. Member States are encouraged to stimulate their missing DIHs to register in the catalogue (see Annex 1 for coverage of Member States).

COVERING WHITE SPOTS AND EXPANDING THE NETWORK

The EU aims to have at least one DIH per region by 2020, in order to ensure all companies would have a DIH at working distance. However, there are still many white spots across Europe, especially in Central and Eastern Europe. To bridge this gap, the EU is supporting the creation of new DIHs in those regions through several actions. The project "Smart Factories in new EU Member States" is currently providing training to 34 potential DIHs in the EU13. Another action of €1.5 million helps DIHs in regions across the whole EU that do not have a digitalisation programme yet and where industry capacity needs to be improved. In addition, at the end of 2018, a new call of €8 million of the Horizon 2020 programme will open to support DIHs and SMEs in regions so far underrepresented, and this will be repeated at the end of 2019.

The role of Digital Innovation Hubs in the Digital Europe Programme

WHY SUPPORTING DIHs IN THE DIGITAL EUROPE PROGRAMME?

The European Union is currently supporting SMEs and Digital Innovation Hubs through Horizon 2020 and European Regional Development Funds (ERDF). However, these actions cannot currently reach out to all the European companies in need of support for their digital transformation, due to several limitations:

- Through its R&D programme (Horizon 2020) the EU only supports highly innovative companies in a cross-border setting, but this is just the tip of the iceberg, as the vast majority of European SMEs are not yet that advanced in technology adoption.
- Through regional or national support (including ERDF), DIHs are often only supporting local SMEs. They lack incentives to open up their facilities to companies outside their territory and to collaborate with Digital Innovation Hubs outside their region when needed. There is no business model for such collaboration.

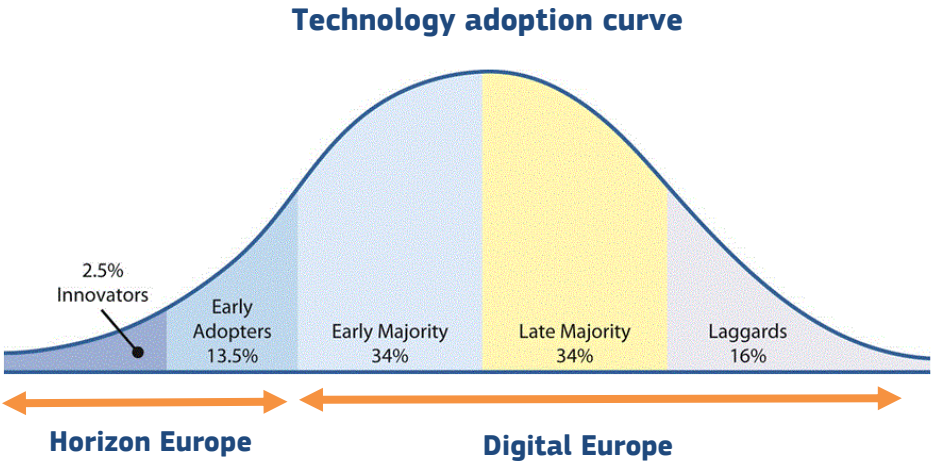
The Digital Europe programme is designed to close these gaps. Digital Innovation Hubs will be networked in an effective manner and the broad roll-out of digital technologies to the whole economy is foreseen.

REINFORCING DIGITAL INNOVATION HUBS

Building on the positive impact that DIHs already have on the digital transformation of European companies, the European Commission wants to further support their actions within the next long-term EU budget for 2021-2027. For the first time, the European Commission has proposed a Digital Europe programme to respond to the increasing digital challenges that we face. This is currently under negotiation with the European Parliament and Council as part of the EU Multiannual Financial Framework for 2021-2027.

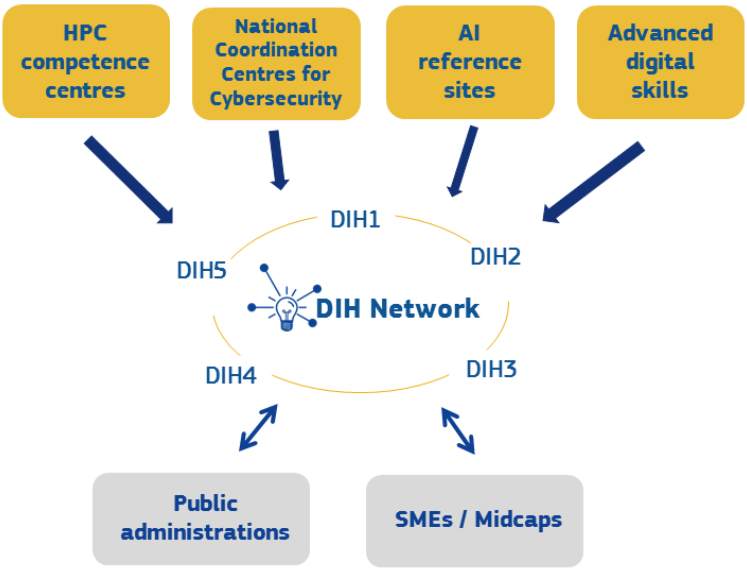
One of the key objectives of Digital Europe will be to ensure a wide use of digital technologies across the economy and society. Digital Innovation Hubs would be the means for implementation to ensure the digital transformation of all businesses and also public administrations. The Digital Europe Programme would thus fill the gap that currently exists in the market, as many companies still lag behind in the adoption of technology. Therefore, Digital Europe would be focussed on the broad roll-out of digital technologies (especially AI, HPC and cybersecurity) and digital skills to the entire economy, not only to companies considered innovators and early-adopters, and to public administrations.

Under Horizon Europe, the support for highly innovative digital transformation experiments and thus to frontrunners is planned to be maintained at similar level as in Horizon 2020. For the reinforcement of the DIH under Digital Europe, amounts at least at similar level are foreseen. With co-financing by Member States and regions including through the European Regional Development Fund (ERDF), the objective is to achieve full coverage of the European Union by Digital Innovation Hubs.



DIGITAL INNOVATION HUBS TO ROLL-OUT DIGITAL TECHNOLOGIES

The Digital Europe programme will focus its support on capacity building in high performance computing, cybersecurity and artificial intelligence, as well as related digital skills. Through the other pillars of Digital Europe, these key technologies and infrastructures will be made available by HPC Competence Centres, Cybersecurity National Coordination Centres, and AI Reference sites.



However, in order to make sure that those technologies are actually used by companies and public administrations, Digital Innovation Hubs will work closely with the relevant specialised centres and make sure that companies and public administrations can experiment with those technologies (test before invest) and develop skills to meet their needs.

A Digital Innovation Hub should be able to speak the language of the SMEs and public administrations, and should have the competences to diffuse further the capacities made available by the specialised centres. These can be acquired through regular "train-the-trainer" programmes organised between the specialised centres and DIHs. It is expected that in a number of cases, organisations will fulfil both functions, that of the specialised centre for one or several of the technologies targeted by Digital Europe, and that of a DIH.

To distinguish the Digital Innovation Hubs in Digital Europe from others, they are planned to be labelled "European Digital Innovation Hubs".

Practical questions and answers on the functioning of European Digital Innovation Hubs in Digital Europe

1 What will be the role of Member States and how is the governance foreseen?

- In the Digital Europe Programme, grants will be given to European Digital Innovation Hubs. Member States will be expected to **co-invest** in the hub through funding the facilities and services with a local impact in their regions/country.
- Member States will be essential in the selection process of Digital Europe.

Member States will also be part of the Digital Europe Programme Committee, who will play a role in the development of the work programme and final selection of hubs to be funded. While the Programme Committee is not in place yet, it is proposed to prepare the European Digital Innovation Hub topic through the European Platform of National Initiatives on Digitising Industry governance. This consists of a meeting twice a year between the responsible Commissioner and Director Generals implementing national digitalisation strategies.

2 What does co-investment mean? Who funds what?

European Digital Innovation Hubs will cover two types of services, funded either by the Member States or the European Commission. The two sorts of funding will happen in a loosely coupled way:

Local services for their region – funded by the relevant Member State or region (for example through European Research and Development Funds- ERDF)	Services opening up facilities and competences for pan-European use: - funded by the Digital Europe grant
– Initial screening and feasibility assessments, brokering – Digital transformation projects with SMEs of their region	– **"Import"-services**: Digital transformation projects where a local SME receives help from the local DIH but also from other Digital Europe DIHs that work together to fit the needs of the local company. – **"Export"-services**: Digital transformation projects where a local DIH works with other DIHs serving SMEs in other regions.

Specific cost items that could be funded through the Digital Europe grants

- Equipment, software and tools
- Human resources of the DIH for delivering digital transformation services to SMEs
- Matchmaking tools and events to connect ecosystems and create a marketplace for DIH services
- Travel grants for local SMEs to work with other hubs

A flexible scheme is envisaged for the co-funding, by separating the two sources of funding. The local activities of a Digital Innovation Hub will be covered by funding of the Member States, possibly through European Regional Development Funds. The pan-European services will be financed through a grant of Digital Europe. At proposal stage it must only be proven that MSs/regional co-investment is requested. Upon selection, the beneficiaries would have to prove within one year after the start that the envisaged co-financing is approved. In case of failure, the Digital Europe contract would be cancelled and funding would flow back to the Digital Europe programme to be used in the next call.

How will Member States be involved in the definition and preparation of Digital Europe?

Currently the Proposal for a Regulation establishing the Digital Europe programme is being discussed in the Telecom Council, and negotiations are on-going. However, it is necessary at the same time to start a dialogue with Member States to ensure that all pre-conditions for a successful implementation of European Digital Innovation Hubs are met. In particular, it will be important to co-create with Member States:

- a solid selection and monitoring process of European Digital Innovation Hubs, ensuring relevance and quality of their services for businesses and public administrations;
- a way to ensure geographical and technological coverage of European Digital Innovation Hubs;
- an effective manner for networking European Digital Innovation Hubs through e.g. creating a pan-European marketplace for Digital Innovation Hubs services;
- if desirable, a way how other Digital Innovation Hubs than the ones funded under Digital Europe Programme may participate to the network.

Furthermore, the levels and way of co-investment in European Digital Innovation Hubs needs to be clarified.

For that purpose, Director Generals from the Member States were invited to a **Digitising European Industry Roundtable on 27 November 2018 in Warsaw** to reflect on these strategic options.

On 12 October, the **DIH Working group meeting** had prepared this roundtable, by introducing the topics above. Part of the meeting consisted of a bilateral meeting with each Member State, where the situation per country was discussed in detail.

For the moment, the two processes (negotiation in Council, and co-creation with Member States on strategic implementation options) will take place in parallel. Naturally, decisions taken in the Council will prevail and will immediately be taken into account for the discussion on implementation.

4 What will be the selection process for DIHs in Digital Europe and how will their performance be monitored?

Building on the Partial General Agreement on the draft Regulation, the following is proposed:

- The European Commission launches an Expression of Interest to Member States to designate a list of candidate Digital Innovation Hubs in their territories. These are entities (or consortia of entities), that have been selected in accordance with national procedures and that possess the necessary competences to fulfil the functions of a hub. Member States at the same time declare that they are supporting these hubs financially to offer digital transformation services to local industry and/or public sector.

- Subsequently, the European Commission launches a restricted call for proposals to all those candidate entities designated by the Member States. All candidate hubs have to submit a proposal before a certain deadline.

- All proposals will be evaluated by independent experts, and a quality-based ranked list will be created.

- The European Commission in consultation with the Programme Committee will then make the final selection, starting with the DIHs with the highest quality, with the aim to build a balanced network of DIHs in terms of geographical and technological coverage.

- After the first year, additional DIHs will be selected through open and competitive calls. The objective is to further close gaps in terms of geographical and technological coverage.

- All Digital Innovation Hubs that receive a grant will be reviewed on a regular basis by the Commission with the help of external experts. In case of unsatisfactory performance, a grant may be stopped. Remaining funding shall be used for next calls.

What services should European Digital Innovation Hubs provide and who can apply? What if there are no DIHs in my country or region?

European Digital Innovation Hubs should ensure that all businesses and public administrations can benefit from the capacities built up under Digital Europe, i.e. HPC, AI, Cybersecurity and Advanced Digital Skills. For their local functioning, the hubs are usually focussing on their smart specialisation, covering a combination of sectors and technologies. For example, hubs may be focused on digitalisation of the maritime sector, precision farming, advanced manufacturing, photonics….. Combining the local and the Digital Europe focus will lead a European Digital Innovation Hub to enhance its service offering with relevant capabilities in artificial intelligence, high performance computing, and cyber-security.

The policy goal is that there is always a European Digital Innovation Hub within working distance from a company, and that every hub will support their local companies in a practical manner, avoiding administrative burden. However, if companies need support which cannot be delivered by the local DIH because they do not have those competences, other DIHs in the network that do have this expertise or equipment should help. Exporting and importing expertise between regions through the DIHs will lead to real European added value made possible through Digital Europe.

The Work Programmes of Digital Europe will describe these services in detail. Any DIH or consortium, which can deliver the services, may be designated by the Member States during the expression of interest phase. DIH consortia may include co-location nodes of the European Institute of Technology, organisations that are in the catalogue of Digital Innovation Hubs, organisations involved in national or regional digitalisation initiatives, Research and Technology Organisations involved in ICT Innovation for Manufacturing SMEs (I4MS) or other Horizon 2020 initiatives, or any other organisation that would have the competence and capacity to deliver the services.

In order to facilitate that in all regions there will be organisations that are able to apply, there are specific outreach actions, such as the ones described in p.3.

6 What particular use cases could DIHs enable within Digital Europe?

- **Build local capacity serving more than one country:** A new DIH in one of the Black Sea Member States supports the digital transformation of the maritime sector in the Black Sea coastal regions of Bulgaria, Romania and beyond.
- **Export excellence:** A DIH specialised in Smart Dairy Farming in one Member State helps farming SMEs from another Member State by collaborating with the local DIH, transferring their best practices.
- **Connect ecosystems:** A Baltic robotics company works together with a new Baltic DIH and an existing DIH specialised on robotics to customise their products/services.
- **Collaborate with Excellence centres supported by Digital Europe:** DIHs across Europe support security audits for their local SMEs in close collaboration with the cybersecurity competence centres established with the help of Digital Europe.
- **Skills development:** DIHs offer short-term training courses for SMEs from their region and across Europe to help them improve their skills and engage with local industrial actors in their region.

7 How many European Digital Innovation Hubs will be funded and how will they be labelled?

The aim of Digital Europe is to reinforce one European Digital Innovation Hub per NUTS2 region. Depending on the size of the country this means 1 or more per country. The NUTS 2 classification is related to size of the population and is also used for ERDF investments. Therefore it seems a useful structuring mechanism. However, if in some countries the division is merely statistical and not related to the needs of industry and public organisations, other structuring mechanisms may be considered. If some countries already have several DIHs present in the same NUTS 2 region, and these DIHs are willing to collaborate, they may present themselves as one consortium in a bid for the Digital Europe grant once the call is open.

Our current estimate is that such reinforcement of European Digital Innovation Hub facilities would cost between € 5 – 10 million over the period of 7 years on average per hub. This includes both Digital Europe support and co-financing by Member States and regions. Member States may use ERDF funding for their co-financing, however this will require mentioning Digital Innovation Hubs in the Partnership Agreements that are used for planning of the shared management funds such as ERDF.

The DIH funded under Digital Europe will be labelled as “European Digital Innovation Hubs”, which are supported through a particular business model for collaboration and a

market place for DIH services. It is an open question for discussion, to what extent other DIHs can receive the same label and participate with own funds.

8 How will different European programmes contribute to the implementation of DIHs?

9 What is the difference between a European Digital Innovation Hub and other specialised centres that will be funded under Digital Europe Programme?

- **A Digital Innovation Hub** is a one-stop-shop that supports companies and the public sector in their digital transformation. Apart from technological expertise, they have to be excellent in talking the language of their clients, understanding their needs, translating them to practical solutions and creating ecosystems. They also provide training courses and are intermediaries for access to finance. The policy goal is to have one European Digital Innovation Hub per NUTS 2 region.
- **A specialised centre, such as HPC Competence Centres, Cybersecurity National Coordination Centres, or AI Reference sites** builds digital capacity in a particular domain such as high performance computing, cybersecurity, artificial intelligence, etc. They are advancing the frontiers of the domain, developing technology and specific infrastructure and are specialist in their domain. They make

available services and products that European Digital Innovation Hubs can help diffuse across the whole EU economy. It is foreseen to have one HPC competence centre and one Cybersecurity National Coordination Centre per Member State and 4-8 AI reference sites in the whole EU.

Note that organisations like **Research and Technology Organisations (RTOs),** can in some cases provide both the function of a Digital Innovation Hub and of a specialised centre. RTOs are public or private organisations that provide a range of research, development and technology services, principally to business and governments.

How should the current Digital Innovation Hubs be prepared for the new requirements coming with Digital Europe Programme?

European Digital Innovation Hubs funded under Digital Europe Programme are filling a gap regarding the functioning of the current Digital Innovation Hubs funded with ERDF and Horizon 2020. Furthermore, they should be able to diffuse HPC, AI and Cybersecurity and advanced digital skills. They should intermediate in finding access to finance and they should help both industry and public sector organisations. Although not every European Digital Innovation Hub should be able to deliver the full breadth of services, there will be a shift of activity and there is a need to prepare organisations to be interested in becoming a European Digital Innovation Hub.

Therefore, already in the coming years, through activities organised by support actions funded under H2020, DIHs may participate on a voluntary basis in working group meetings where they will be trained on how to carry out these activities.

Annex 1: European Catalogue of Digital Innovation Hubs

Operational Hubs + Hubs in Preparation
October 2018

Annex 2: Examples of innovation experiments

Success Story

A 3D Scanner to design made-to-measure shoe insoles using HPC

Podoactiva, a Spanish traditional podiatrist company, saw the potential of digitalisation to create a unique method to scan feet through laser and AI technologies in order to produce made-to- measure medical insoles. Through their participation in the European initiative I4MS, they partnered with the Spanish IT company Inycom, which provided them with the necessary specific software. The Spanish Institute for Biocomputation and Physics of Complex Systems (BIFI), acting as a DIH, provided them with the necessary High Performance Computing (HPC) infrastructure and know-how. to run this software on the cloud on a pay-per-use basis, helping them to develop a fully working 3D Scan Insole Designer.

This methodology also opens the door for 3D printing of insoles that could improve production and timely delivery of the product.

Impact

- Thanks to this innovative solution, Podoactiva and Inycon have now private clinics that use this technology in Spain, Portugal, Italy and Mexico, selling made-to measure products to customers worldwide. Apart from Podoactiva, the Italian SME Base Production also benefited from this cloud-based solution.

- Thanks to it, they expect in the next 3 years to multiply their turnover by 3 up to €750.000, gain an additional 3% in their market share and and reduce their time-to-market by 40%.

The EU made this innovation possible with an initial €321.000 investment

Success Story

Sustainable agriculture powered by smart technologies

Agriculture accounts for around 70% of water consumption in the world, while up to 58% of pesticides used are unnecessary. The Spanish SME Encore Lab wanted to address this challenge by making agriculture smarter.

Thanks to their participation in the EU-funded project EuroCPS, they got the opportunity to work with the Digital Innovation Hub CEA Leti (FR) to make their vision a reality. At the experimentation facilities of the hub and with the support of its experts, Encore Lab could test and apply leading edge IoT technologies to develop a low cost device that monitors the crops directly on the field through sensors. Information on air temperature and humidity, soil moisture, and other parameters is collected and sent automatically to a cloud platform where the farmer can access it to make the best decisions.

Impact

- This solution can reduce the use of pesticide by 35% and water consumption by 50%, enabling more sustainable agriculture.
- The technology has been integrated in Cesens, Encore Lab's flagship product. As a result, they expect to increase sales in 10,000 units within five years and double their staff to 20 people.

The EU made this innovation possible with an initial €52K investment.

Success Story

3D printing and HPC to improve gearbox production

Cycloidal gearboxes are able to reduce the high-speed ratios reached by motors while multiplying their power (torque). This type of mechanism is crucial for instance in very demanding systems like planes, satellites, rockets and other space applications.

STAM, a small engineering company in Italy, wanted to manufacture such a gearbox to improve the products offered to their clients. However, they needed a cost-efficient way to produce it.

The EU project CLOUDFLOW allowed them to work with the DIH CSUC in Spain. Thanks to their help, they found the solution to their problem: producing the parts of the gearbox through 3D printing. For that, the DIH offered their expertise and HPC facilities. They could simulate the model and the thermal process for printing metal, leading to a highly sophisticated solution for manufacturing leading edge gearbox technology.

Impact

- Through this solution, the SME STAM saves 30% product costs and can react 30% faster to market needs.
- With this competitive advantage, STAM expects to triple its market share and open new markets. It is estimated that their revenues will increase by €320K and their staff by three employees within the next three years.

Annex 3: Digital Innovation Hubs in practice

DIGIHALL

Paris, France

DIGIHALL is a DIH specialised in artificial intelligence, cybersecurity and cyber-physical systems.
It was launched in March 2017 with strong support of the region Île-de-France, which will invest €300 million over 5 years within their smart regional strategy.

Who forms DIGIHALL?

DIGIHALL is led by a Research and Technology Organisation (CEA LIST) and an industry cluster (SYSTEMATIC), who federate different actors spanning from academia and education providers, to venture capital, incubators and testbeds.

What it offers?

The DIH offers services such as testing facilities, digital maturity assessment, training on digital skills, and access to customers and finance. The aim is to accelerate technology adoption and knowledge transfer to industrial actors.

What EU support it received?

Many of DIGIHALL's networking activities and technology experiments with SMEs are financed through EU projects such as ECHORD++, I4MS and other programmes. DIGIHALL is involved in the diffusion of digital platforms to industry through projects such as HORSE, BEINCPPS and ROBMOSYS. Different members of the hub will also participate in several new EU initiatives, currently under preparation.

How it helps companies?

Through its different partners, DIGIHALL supports over 400 companies per year (40% of them SMEs).

One example is the French SME Georges Pernoud, which needed a smart solution for real-time monitoring of their production process. Through the EU project BEINCPPS, the company had access to CPS technologies and experimentation facilities of the DIH, and deployed embedded sensing and data intelligence in its existing processes. As a result, the improved process will enable an additional 1,1m€ in revenue and create 2 direct jobs, also saving 20% of the energy previously required for the process and reducing the company's carbon footprint.

Digital.Hub Logistics

Dortmund, Germany

The Digital.Hub Logistics in Dortmund helps industries in the areas of goods, data, transport, company or finance logistics to develop new digital business and accomplish their digital transformation.

Who forms Digital.Hub?

The Digital Hub Logistics is facilitated by the Fraunhofer Institutes for Material Flow and Logistics IML and for Software and System Technology ISST, Duisburger Hafen AG and the Technical University of Dortmund (TU Dortmund) and is managed by the EffizienzCluster Management GmbH (ECM). The hub is part of the German national initiative of DIHs.

What it offers?

The DIH brings companies into contact with relevant players from its wide ecosystem and lets them experiment and test together in a dedicated co-working space. Services range from applied and contract research to ideation and agile product development methodologies.

What EU support it received?

Digital.Hub members have participated in several EU-supported projects such as MIDIH L4MS, AMable, ConnectedFactories and BOOST 4.0. These are all projects tightly linked to the development of DIHs across Europe, helping companies to access knowledge and technology transfer for the development of new products and innovative solutions.

How it helps companies?

The Digital.Hub Logistics has helped more than 300 SMEs since 2017 through its SME Enabling Center “Mittelstand 4.0”. In addition, through the two Fraunhofer Institutes and TU Dortmund, the hub helped 230 SMEs, mid-caps and corporations with contract research, funded research-projects and enterprise labs. Since November 2017, 65 start-ups cooperated with Digital.Hub Logistics via the Digital Logistics Award.

An example is Würth Industrie Service. This producer of C-parts (such as screws, nuts and washers) developed, in cooperation with the hub, IML and Deutsche Telekom, the prototype of an IoT service button. With this system, customers can order spare parts when they need them with a simple push. The button triggers automatically the process and all the logistics. Such a solution provides the company a remarkable competitive advantage.

Basque Digital Innovation Hub

Bilbao, Spain

BDIH is a hub in the north of Spain that offers a network of R&D infrastructures, pilot plants and specialised expertise in different areas of advanced manufacturing, namely on flexible robotics, 3D printing and cybersecurity.

Who forms BDIH?

The BDIH is owned by R&D organisations, vocational training centres and universities and is supported by regional public institutions as a key pillar of their smart specialisation strategy.

What it offers?

The hub offers companies services such as technological assessment, testing and validation infrastructure, scaling of industrial projects, training and acceleration of start-ups.

What EU support it received?

BDIH has acquired and developed knowledge in its core technologies largely thanks to the participation of the hub's partners in more than 50 EU funded projects.

In addition, they have helped companies to experiment with those technologies in EU projects such as Robottnet, where they offered hands-on consulting, business plan development and communication with investors to support companies in bringing their ideas to market and optimising production.

BDIH has also received regional funding for R+D+i from the Basque Government for scientific and technological capability building.

How it helps companies?

More than 20 SMEs have already received support from BDIH.

For instance, the hub has helped a local high-precision manufacturing company, EGILE GROUP, to develop a high-precision computer assisted surgery (CAS) system. This was integrated with a collaborative robotic assistance, designed for execution of surgical tasks in trauma surgery. Thanks to the support of the hub, the company was able to validate the concept and build a fully functional prototype. The good results made it possible to apply for two international patents. The industrial group has also set up a new company named CYBER-SURGERY for industrialisation and commercialisation of the system.

Lithuanian Robotics Digital Innovation Hub

Vilnius, Lithuania

This small DIH helps companies digitalise their business through robots and internationalisation. It is also actively contributing to the Lithuanian platforms for industry 4.0.

Who forms Lithuanian Robotics DIH?

The DIH is run by the Lithuanian Robotics Association and Startup Division.

What it offers?

The DIH provides valuable services such as technological audits, identification of funding opportunities for SMEs, access to a network of technology providers and robotic related researchers, and support in internationalisation. The ambition of the hub is to become a "one-stop shop" for everything related to robotics in Lithuania.

What EU support it received?

The DIH has supported 3 members in receiving EU funding through the EU project BeinCPPS, 2 members in receiving funding from the SME instrument, and 2 companies in attracting R&D funding from ERDF. Through these funds, the DIH has been able to help 2 SMEs in the furniture-manufacturing sector and 1 SME in the textile manufacturing sector in their digitalisation process. In general, the DIH supports around 10 clients per year; a small number yet, since the DIH is relatively small and also the robotic industry in Lithuania is young, but they are growing fast.

The DIH has also received financial and mentoring support from the EU project I4MS, which helped to establish the vision, strategy and business plan for the hub and supported it in the development of concrete services such as internationalisation and access to finance that they provide now to companies.

How it helps companies?

The DIH is a good example of the importance of cross-border collaboration.

For instance, they have helped the Lithuanian SME Robobend to connect to the Danish Robotics hub in Odense. As a result, the SME has attracted private angel investment, public funding from Innobooster under the Danish Innovation Fund and even created a spin-off company located in Denmark. There, the startup helped a Danish industrial furniture manufacturing company with the development and instalment of a machine-operating robot.

IT4Innovations

Ostrava, Czech Republic

IT4Innovations National Supercomputing Center, established in 2011, provides state-of-the-art technologies and services in the field of High-Performance Computing (HPC).

IT4Innovations is part of the National Roadmap for Large Infrastructures for Research, Experimental Development and Innovations of the Czech Republic. The DIH also represents the Czech Republic in the European research infrastructure PRACE (Partnership for Research and Advanced Computing in Europe), and is a member of ETP4HPC (European Technology Platform in the area of High-Performance Computing).

Who forms IT4Innovations?

IT4Innovations was co-implemented by the universities of Ostrava, Ostraba VSB, Silesian Opava, Brno, and the Institute of Geonics of the Czech Academy of Sciences.

What it offers?

IT4Innovations provides access to leading national supercomputing infrastructure, mediating its effective use in order to increase the competitiveness and innovation of Czech science and industry. As a R&D centre, they also offer research and training activities.

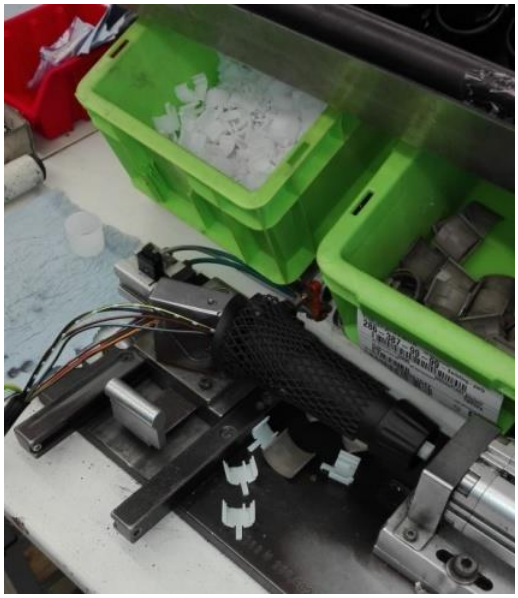
What EU support it received?

The foundation of IT4Innovation was mainly made possible thanks to European Regional Development Funds. In addition, IT4Innovation participated in many EU funded projects, in particular in SESAME Net, TETRAMAX and CloudiFacturing where they offered SMEs their HPC infrastructure and expertise to develop new solutions for their businesses.

How it helps companies?

Since its launch in 2011, IT4Innovations collaborated with more than 50 companies, mainly SMEs.

For example, within the CloudiFacturing project, IT4Innovations helped FERRAM STROJÍRNA s.r.o. (HU) to solve the heat treatment process of aluminium profiles through HPC simulations. The adopted solution will allow the company to perform virtual prototyping of their new product and optimise its manufacturing process.



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