



Photonics

DT-04-2020: Photonics Innovation Hubs

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Photonics calls in ICT Workprogramme 2020

DT-04-2020: Photonics Innovation Hubs **Innovation Actions**

The challenge is to provide a **sustainable ecosystem** of research and innovation support for the benefit of SMEs facilitating a broad uptake and integration of photonics technologies.

These Photonics Innovation Hubs will help speed up the uptake of photonics technologies in order to make European industry more competitive and foster new business and business models.

Business cases must be industrially relevant and should include **industrialisation steps** to **technology and market readiness levels of 7 - 8**



Photonics calls in ICT Workprogramme 2020

DT-04-2020: Photonics Innovation Hubs **Innovation Actions**

Open access to Photonics Innovation Hubs:

One-stop-shop access, supported through a **network of competence centres**, to services and capabilities such as

- expertise,
- training,
- prototyping,
- design,
- engineering,
- business support,
- financing advice
- pilot manufacturing for first users and early adopters enabling the wider up-take and deployment of photonic technologies in innovative products.



Photonics calls in ICT Workprogramme 2020

DT-04-2020: Photonics Innovation Hubs **Innovation Actions**

Actions must **build on relevant previous European initiatives** and **existing infrastructure at European and regional level**, demonstrate a record of accomplishment in supporting industry, in particular SMEs.

Actions should also address **skills development** as well as support to the development of **new innovation hubs**



Photonics calls in ICT Workprogramme 2020

DT-04-2020: Photonics Innovation Hubs **Innovation Actions**

Budget:

Two possibilities:

- a range of photonics technologies: contribution from the EU of up to EUR 9.5 million
- the greatest possible range of photonics technologies: contribution of the EU of up to EUR 19 million

Proposals **may** envisage to use EU funding for financial support to **third parties** with a maximum amount of EUR 150.00091 per third party



Photonics calls in ICT Workprogramme 2020

DT-04-2020: Photonics Innovation Hubs Innovation Actions

impact.

- Significantly improved **uptake of photonics** technology by end-user industry, in particular SMEs, enabling a demonstrably more competitive European industry.
- Creation of a **sustainable network** of Digital Innovation Hubs, providing European Added Value to investments done at national and regional level in Digital Innovation Hubs and reaching a high **leveraging effect** on other sources of funding, in particular Regional and National funding.

Further information on Digital Innovation Hubs

European
Commission

European
Commission

Network of Digital Innovation Hubs:

<https://ec.europa.eu/digital-single-market/en/digital-innovation-hubs>

Catalogue of Digital Innovation Hubs

<https://ec.europa.eu/futurium/en/content/digital-innovation-hubs-catalogue-project-0>

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

Photonics example projects towards DIH:

APOLLO, LASHARE, ACTPHAST,..

Photonics



PILOT LINES



Pix4life

PICs for health & food
8.5 M€ funding
15 partners



MirPhab

Analytical MIR sensing
13 M€ funding
18 partners



PiScale

OLEDs on flexible substrates
14 M€ funding
14 partners



PixAPP

PICs assembling and packaging
15.5 M€ funding
18 partners



InPULSE

Indium-Phosphide PICs
15 M€ funding
16 partners



ActPhast

Access Center for Photonics
Innovation Solutions and
Technology Support
8 M€ funding
23partners



Boost rural economies through cross-sector digital service platforms DT-ICT-09-2019

Brussels 17/07/2019

Jan Komarek - Programme Officer – Internet of Things
DG CNECT - European Commission



Focus Area 'Digitising and transforming European industry and services', Platforms and Pilots

LEIT-ICT

<i>DT-ICT-07-2018-2019: Digital Manufacturing Platforms for Connected Smart Factories</i>	<i>95 M€</i>
<i>DT-ICT-08-2019: Agricultural digital integration platforms</i>	<i>30 M€</i>
<i>DT-ICT-09-2020: Digital service platforms for rural economies</i>	<i>30 M€</i>
<i>DT-ICT-10-2018-2019: Interoperable and smart homes and grids</i>	<i>30 M€</i>
<i>DT-ICT-11-2019: Big data solutions for energy</i>	<i>30 M€</i>
<i>DT-ICT-12-2020: The smart hospital of the future</i>	<i>25 M€</i>
<i>DT-ICT-13-2019: Digital Platforms/Pilots Horizontal Activities</i>	<i>4 M€</i>

SC1:

- DT-TDS-01-2019: Smart and healthy living at home* *60 M€*





DT-ICT-09-2020 Specific Challenges:

- Attractiveness of rural areas via jobs and services.
- Increase connectivity and digitization of rural areas.
- Limited interoperability between object/service platforms supporting applications and sharing data.
- Create a marketplace for service/applications providers and platform operators supporting an ecosystem

Nota bene

Part of Focus Area, so Introductory texts "Platforms and Pilots" are applicable, in addition to specific topic texts

Timeline

Open: 19 nov 2019

*Close: 22 Apr
2020*

Budget- IA: 30 M€, up to 15 M€ would be appropriate





Scope: Proposals are expected to develop and demonstrate cost-efficient and flexible cross-domain applications through large-scale pilots addressing all of the following aspects:

1. Integration of data across different platforms for efficient service provision (where appropriate based on AI).
2. Develop open marketplace for cross-cutting services.
3. Reference implementations (proof-of-concept, demonstrators).
4. Develop Pilots demonstrating benefits in rural areas
5. Create innovation ecosystems for novel applications





Pilots could be developed in the following application areas:

- Public services;
- Energy;
- Autonomous robotics transport;
- Logistics;
- Education,
- Tourism;
- Health and care.

The application should support the implementation of the smart village concept



Smart village: the concept



Smart Villages are communities in rural areas that develop smart solutions to deal with local challenges and opportunities for a sustainable development



- *Use existing strengths and opportunities*
- *Participatory approach to develop and implement strategic initiatives*
- *Social and/or digital innovation*
- *More on: https://enrd.ec.europa.eu/smart-and-competitive-rural-areas/smart-villages/smart-villages-portal_en*



Expected impacts (specific to DT-ICT-09):

- Validate the brokerage platforms illustrated by an increase of cross-cutting applications and services
- Demonstrate and show-case cross-sectorial platforms interoperability.
- Demonstrate the benefits of data sharing across platforms from different sectors.
- Exploration and validation of new industry and business processes and innovative business models validated in the context of the pilots.
- Overcome the digital divide between rural and urban areas, and to develop the potential offered by connectivity and digitisation of rural areas.
- Improve quality of life in rural areas, higher standard of living and services for citizens.
- Creation of opportunities for entrepreneurs, notably SMEs, by promoting new market openings, providing access to valuable datasets and direct interactions with users, creating new businesses in rural areas.





Expected impacts (generic to platforms but still applicable):

- Increased prospects future digital industrial platforms
- Strengthened links with other programmes and initiatives
- Increased number of services/applications by European companies
- Significant, measureable contribution to standards
- Increased number of platforms, applications, business processes and innovative business models validated via large-scale piloting
- Emergence sustainable ecosystems around digital platforms





THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

Topic AI for the smart hospital of the future (DT-ICT-12-2020)

**Call Digitising and transforming European industry and services: digital innovation hubs and platforms
(H2020-DT-2018-2020)**

Work programme Information and Communication Technologies

Jointly funded topic with the Health, demographic change and wellbeing part of WP

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Directorate-General for Communications Networks, Content and Technology
(DG CONNECT) – EUROPEAN COMMISSION

Information and Communication Technologies

Artificial Intelligence and Technologies for Digitising European Industry and Economy		Open	Close
ICT-46-2020	Robotics in Application Areas and Coordination & Support	19-11-2019	22-04-2020
ICT-47-2020	Research and Innovation boosting promising robotics applications	19-11-2019	22-04-2020
ICT-48-2020	Towards a vibrant European network of AI excellence centres	09-07-2019	13-11-2019
ICT-49-2020	Artificial Intelligence on demand platform	19-11-2019	22-04-2020
ICT-38-2020	Artificial intelligence for manufacturing	09-07-2019	16-01-2020
European Data Infrastructure: Big Data and Cloud technologies			
ICT-51-2020	Big Data technologies and extreme-scale analytics	09-07-2019	16-01-2020
5G			
ICT-52-2020	5G PPP – Smart Connectivity beyond 5G	19-11-2019	22-04-2020
ICT-53-2020	5G PPP – 5G for Connected and Automated Mobility (CAM)	09-07-2019	13-11-2019
Next Generation Internet (NGI)			
ICT-56-2020	Next Generation Internet of Things	09-07-2019	16-01-2020
ICT-44-2020	Next Generation Media	09-07-2019	16-01-2020
Digitising and transforming European industry and services: digital innovation hubs and platforms			
DT-ICT-03-2020	I4MS (phase 4) - uptake of digital game changers	09-07-2019	13-11-2019
DT-ICT-05-2020	Big Data Innovation Hubs	09-07-2019	13-11-2019
DT-ICT-09-2020	Boost rural economies through cross-sector digital service platforms	19-11-2019	22-04-2020
DT-ICT-12-2020	AI for the smart hospital of the future	19-11-2019	22-04-2020



AI - in H2020 - ICT-2018-2020

IA Topic DT-ICT-12-2020: AI for smart Hospital of the future

Call H2020-DT-2018-2020: Digitising and transforming European industry and services: digital innovation hubs and platforms

Work programme H2020-2018-2020: Information and Communication Technologies

Submission deadline: 22 Apr 2020



DT-ICT-12-2020: AI for smart Hospital of the future

2. What do we NOT want?

- **Don't rebuild the wheel!** Pilots may adapt platforms to specific application needs and validate their relevance for such needs, in order to foster take-up and large scale deployment
- Focus on one area of medicine with narrow impact.
- Solutions that do not scale or are fundamentally incompatible with existing healthcare infrastructures
- Purely technology based proposals that do not consider the real deployment of systems
- Proposals that fail to understand the context and integration into a working healthcare environment.



DT-ICT-12-2020: AI for smart Hospital of the future

2. What do we NOT want?

- Purely academic consortium, disconnected from industrial needs
- Proposals not describing with clarity and substantiation what should be deployed, scaled-up or demonstrated, how (methodology and workplan), by whom (Consortium), etc.
- Not adequately aligned with the topic
- Closed proprietary systems
- Privacy concerns
- Security concerns

DT- ICT-12 Topic evolution

3. Is this new or has it been called before?

- This call builds on the DT-ICT-2 (Robotics-Digital Innovation Hubs)
- Proposals must seek to align with the European Digital Innovation Hub networks and platforms funded under DT-ICT-02-2018: Robotics - Digital Innovation Hubs (DIH).

DT-ICT-2 Robotics-Digital Innovation Hubs (Healthcare)



<https://dih-hero.eu/>



DT-ICT-12-2020: AI for smart Hospital of the future

4. Unique instructions for ~~evaluators~~ **PROPOSERS** on this WP topic? Excellence, Impact and more

- Credibility of the approach to maximize the impact (clear objectives (with KPIs), convincing approach)
- Maximise deployment of AI-based solutions & visibility of benefit AI can bring
- Good balance between technical and medical aspects
- Good understanding of the unique challenges that healthcare innovation presents
- Address multiple aspects of healthcare within the pilot
- Have clear outreach activities to both citizens and clinicians.

DT-ICT-12-2020 Topic evolution

5. Current project portfolio (1/2)

- Various platform development activities at EU or national level, e.g. the Reference Architectural Model Industrie 4.0 (RAMI 4.0) and the Industrial Data Space. To develop the next-generation digital platforms, proposals need to bring various initiatives together and act as linking pins



DT-ICT-12-2020 Topic evolution

5. Current project portfolio (2/2)

EU SC1 Projects (finished and ongoing) <https://ec.europa.eu/digital-single-market/en/content/benefiting-personalised-care>

Robotics & AI Projects

- MURAB - MRI and Ultrasound Robotic Assisted Biopsy
- EurEyeCase - Use Case for European Robotics in Ophthalmologic Micro–Surgery
- EDEN2020- Enhanced Delivery Ecosystem for Neurosurgery in 2020
- ENDOVESPA - Endoscopic Versatile robotic guidanceE, diagnoSis and theraPy of magnetic-driven soft-tethered endoluminal robots
- CyberLegPlusPlus - The CYBERnetic LowEr-Limb CoGnitive Orthoprosthesis Plus Plus
- An.Dy - Advancing Anticipatory Behaviors in Dyadic Human-Robot Collaboration
- MOVECARE – Multiple-actOrs Virtual Empathic CARgiver for the Elder
- DREAM - Development of Robot-Enhanced therapy for children with AutisM spectrum disorders
- <https://www.eu-robotics.net/sparc/projects/robotics-projects-funded-by-horizon2020.html?changelang=2>

DT-ICT-12-2020– Key actors

6. Who are the *leading players*?

Community



7. Is there a key group of actors (eg. cPPP or other) driving this?

DIH-HERO partners and key technical-medical groups.
euRobotics and BDVA.



DI-ICT-12-2020: AI for smart Hospital of the future

8. Are there any additional / background documents?

Policy documents:

- European AI Strategy: [EC Communication April 2018](#)
- Coordinated plan on AI between EC and the Member States: [EC Communication Dec. 2018](#)
- Transformation of Health and Care in the Digital Single Market: [EC Communication April 2018](#)

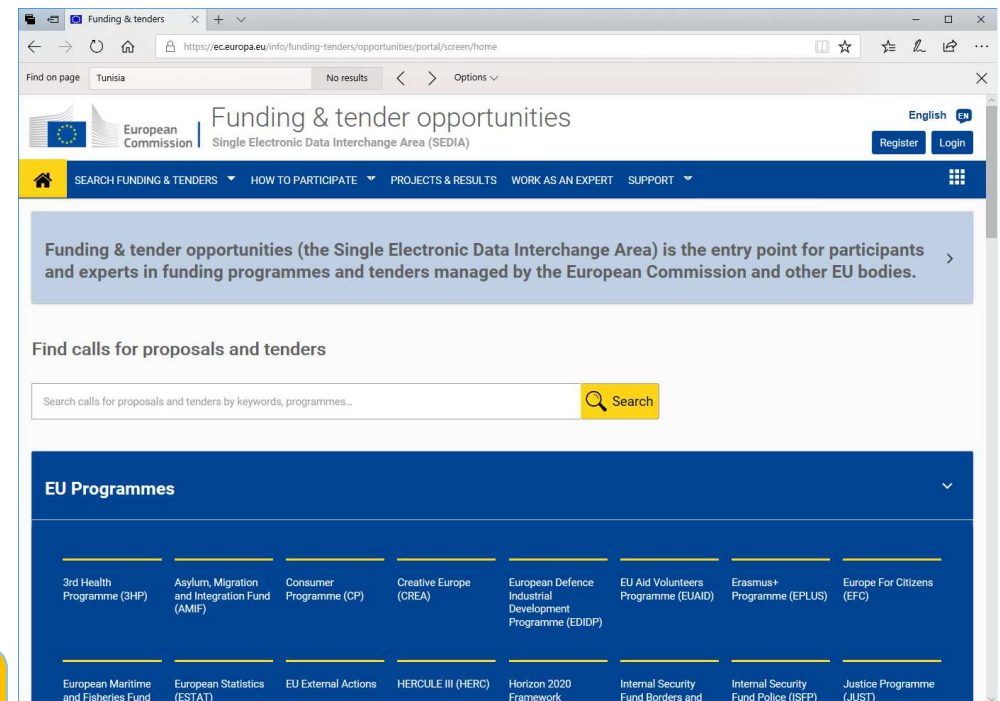
ICT48-49



DT-ICT-12-2020: AI for smart Hospital of the future

8. Are there any additional / background documents?

- Call topics
- NCPs
- Expert registration
- Documents
- FAQs
- Rules for participation
- Upload project reports



<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>



DT-ICT-12 Future Outlook

9. Do you have information about future trends, emerging initiatives, roadmaps, key players in this area? How are you bridging to Horizon Europe?

Investing in the future: **Digital Europe** Programme

**Digital transformation
& Interoperability**

1.3 € billion

**Advanced
digital skills**

0.7 € billion

**Cybersecurity
& trust**

2 € billion



**€ 9.2 billion
in total**

**High performance
computing**
2.7 € billion

**Artificial
intelligence**
2.5 € billion

DIGITAL IN THE NEXT MFF: OVERVIEW



Digital in Horizon Europe

1. Digital under "global challenges"

- Digital and industry cluster
- Digital in other clusters - health, mobility, energy, environment,...

2. FET Open under Open Innovation

3. Research Infra under Open Science

€100 Bn
with share
to digital
of 15Bn

Digital Europe Programme

1. High Performance Computing (HPC)

2. Artificial Intelligence (AI)

3. Cybersecurity

4. Advanced digital skills

5. Digital transformation and interoperability

€9.2 Bn

CEF - Digital

Connectivity

- Synergies with Transport /Energy
- WIFI/BB 4EU
- 5G roll out

€3 Bn

MEDIA under Creative Europe within Cohesion and Values

- Distribution of works
- Creation

€1.1 Bn

Horizon Europe – Pillar 2 Clusters on Global Challenges & European Industrial Competitiveness

- Boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals
Commission proposal for budget: € 52.7 billion





Upcoming events/info day

ICT proposers day - SEPTEMBER 20th
Session: Platforms for Digitising European Industry

QUESTIONS: CNECT-H3-H2020-TOPICS@EC.EUROPA.EU

FAQS: FUNDING & TENDER OPPORTUNITIES



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