



Horizon 2020 calls in ICT: opportunities for Universities, Research Institutions and SMEs

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<http://lp.edu.ua/ncpict>

ICT Work Programme 2018-20

Technologies for Digitising European Industry

- ICT-01-2019: Computing technologies and engineering methods for cyber-physical systems of systems
- ICT-02-2018: Flexible and Wearable Electronics
- ICT-03-2018-2019: Photonics Manufacturing Pilot Lines for Photonic Components and Devices
- ICT-04-2018: Photonics based manufacturing, access to photonics, datacom photonics and connected lighting
- ICT-05-2019: Application driven Photonics components
- ICT-08-2019: Unconventional Nanoelectronics
- ICT-09-2018: Electronic Smart Systems (ESS)
- ICT-10-2019: Security and resilience for collaborative manufacturing environments
- ICT-13-2019-2020: Robotics in Application Areas
- ICT-16-2019-2020: Robotics Core Technology

ICT Work Programme 2018-20

European Data Infrastructure: HPC, Big Data and Cloud technologies

- ICT-17-2018-19: HPC and Big Data enabled Large-scale Test-beds and Applications
- ICT-18-2018-2020: Big Data technologies and extreme-scale analytics
- ICT-19-2018-19: Supporting the emergence of data markets and the data economy
- ICT-20-2019: Co-designing Extreme Scale Demonstrators (EsD)
- ICT-21-2019-2020: Cloud Computing
- ICT-42-2018: Software Technologies

5G

- ICT-23-2018: 5G End to End Facility
- ICT-24-2018: 5G for cooperative, connected and automated driving
- ICT-25-2019: Advanced 5G validation trials across multiple vertical industries
- ICT-26-2019-2020: 5G Long Term Evolution
- ICT-44-2018: EU-US Collaboration for advanced wireless platforms
- ICT-45-2018: EU-China 5G Collaboration
- ICT-46-2019: EU-Taiwan 5G collaboration

ICT Work Programme 2018-20

Next Generation Internet (NGI)

- ICT-29-2018-2019: Next Generation Internet - An Open Internet Initiative
- ICT-30-2018-2020: Interactive Technologies
- ICT-31-2018-2020: Artificial Intelligence
- ICT-32-2018-2020: Internet of Things
- ICT-33-2018: Future Hyper-connected Sociality
- ICT-35-2018: A multilingual Next Generation Internet
- ICT-36-2019-2020: An empowering, inclusive Next Generation Internet
- ICT-43-2018-2019: EU-US collaboration on NGI

Cross-cutting activities

- ICT-37-2018: STARTS – The Arts stimulating innovation
- ICT-38-2019: Startup Europe for Growth and Innovation Radar
- ICT-39-2018-2019: Pre-Commercial Procurement open
- ICT-40-2018: Fintech: Support to experimentation frameworks and regulatory compliance

ICT Work Programme 2018-20

Support to Hubs

- DT-ICT-01-2020: I4MS (phase 4) - uptake of digital game changers and digital manufacturing platforms
- DT-ICT-02-2019: Smart Anything Everywhere
- DT-ICT-03-2020: Photonics Innovation Hubs
- DT-ICT-04-2018: Robotics - Digital Innovation Hubs (DIH)
- DT-ICT-05-2020: Big Data Innovation Hubs
- DT-ICT-06-2018: Coordination and Support Activities for Digital Innovation Hub network

ICT Work Programme 2018-20

Platforms and Pilots

- DT-ICT-07-2018-2019: Digital Manufacturing Platforms for Connected Smart Factories
- DT-ICT-08-2019: Agricultural digital integration platforms
- DT-ICT-09-2020: Digital service platforms for rural economies
- DT-ICT-10-2018-19: Interoperable and smart homes and grids
- DT-ICT-11-2019: Big data solutions for energy
- DT-ICT-13-2020: The smart hospital of the future
- DT-ICT-14-2019: Digital Platforms/Pilots Horizontal Activities

Call – Cybersecurity

- SU-ICT-01-2018: Dynamic countering of cyber-attacks
- SU-ICT-02-2020: Building blocks for resilience in evolving ICT systems
- SU-ICT-03-2020: Advanced cybersecurity and digital privacy technologies

Тематика конкурсів

Sort by Call title Call identifier Publication date

Industrial Leadership EIC Horizon Prize for 'Blockchains for Social Good' H2020-Blockchain-EICPrize-2019 Publication date:16 May 2018	Industrial Leadership Information and Communication Technologies H2020-ICT-2018-2020 Publication date:27 October 2017	Industrial Leadership Digitising and transforming European industry and services: digit ... H2020-DT-2018-2020 Publication date:27 October 2017
Societal Challenges Trusted digital solutions and Cybersecurity in Health and Care H2020-SC1-FA-DTS-2018-2020 Publication date:27 October 2017	Industrial Leadership Cybersecurity H2020-SU-ICT-2018-2020 Publication date:27 October 2017	Industrial Leadership Inducement prize: Online security - Seamless personal authentication H2020-OnlineSecurityPrize-2017 Publication date:27 September 2017
Industrial Leadership Inducement prize: Tactile Displays for the Visually Impaired H2020-TactilePrize-2017 Publication date:23 May 2017	Industrial Leadership Inducement prize: Zero Power Water Infrastructure Monitoring H2020-PowerWaterPrize-2018 Publication date:19 April 2017	

In addition to the search facilities, the full list of H2020 Calls can be found [here](#).

Тематика конкурсів(2)

Topic: **ICT-34-2018-2019: Pre-Commercial Procurement open** Forthcoming

Publication date: 27 October 2017

Types of action: PCP Pre-Commercial Procurement

DeadlineModel: single-stage

Deadline: 28 March 2019
17:00:00

Opening date: 16 October 2018

Time Zone : (Brussels time)

Topic: **ICT-33-2019: Startup Europe for Growth and Innovation Radar** Forthcoming

Publication date: 27 October 2017

Types of action: IA Innovation action
CSA Coordination and support action

DeadlineModel: single-stage

Deadline: 28 March 2019
17:00:00

Opening date: 16 October 2018

Time Zone : (Brussels time)

Topic: **ICT-31-2018-2019: EU-US collaboration on NGI** Forthcoming

Publication date: 27 October 2017

Types of action: RIA Research and Innovation action

DeadlineModel: single-stage

Deadline: 28 March 2019
17:00:00

Opening date: 16 October 2018

Time Zone : (Brussels time)

Тематика конкурсів(3)

Topic: **DT-ICT-11-2019: Big data solutions for energy**

Forthcoming

Publication date: 27 October 2017

Focus area: Digitising and transforming European industry and services (DT)

Types of action: IA Innovation action

DeadlineModel: single-stage

Deadline: 02 April 2019

Opening date: 16 October 2018

17:00:00

Time Zone : (Brussels time)

Topic: **DT-ICT-01-2019: Smart Anything Everywhere**

Forthcoming

Publication date: 27 October 2017

Focus area: Digitising and transforming European industry and services (DT)

Types of action: IA Innovation action

CSA Coordination and support action

DeadlineModel: single-stage

Deadline: 02 April 2019

Opening date: 16 October 2018

17:00:00

Time Zone : (Brussels time)

Тематика конкурсів(4)

Topic: **DT-ICT-10-2018-19: Interoperable and smart homes and grids** **Forthcoming**

Publication date: 27 October 2017

Focus area: Digitising and transforming European industry and services (DT)

Types of action: IA Innovation action

DeadlineModel: single-stage

Opening date: 26 July 2018

Deadline: 14 November 2018
17:00:00

Time Zone : (Brussels time)

Topic: **DT-ICT-08-2019: Agricultural digital integration platforms** **Forthcoming**

Publication date: 27 October 2017

Focus area: Digitising and transforming European industry and services (DT)

Types of action: IA Innovation action

DeadlineModel: single-stage

Opening date: 26 July 2018

Deadline: 14 November 2018
17:00:00

Time Zone : (Brussels time)

Тематика конкурсів(5)

Topic: [SU-ICT-01-2018: Dynamic countering of cyber-attacks](#) Open

Publication date: 27 October 2017

Focus area: Boosting the effectiveness of the Security Union (SU)

Types of action: IA Innovation action

DeadlineModel: single-stage

Deadline: 28 August 2018
17:00:00

Opening date: 15 March 2018

Time Zone : (Brussels time)

Topic: [SU-ICT-02-2020: Building blocks for resilience in evolving ICT systems](#) Forthcoming

Publication date: 27 October 2017

Focus area: Boosting the effectiveness of the Security Union (SU)

Types of action: RIA Research and Innovation action

DeadlineModel: single-stage

Deadline: 19 November 2019
17:00:00

Opening date: 25 July 2019

Time Zone : (Brussels time)

Topic: [SU-ICT-04-2019: Quantum Key Distribution testbed](#) Forthcoming

Publication date: 27 October 2017

Focus area: Boosting the effectiveness of the Security Union (SU)

Types of action: IA Innovation action

DeadlineModel: single-stage

Deadline: 14 November 2018
17:00:00

Opening date: 26 July 2018

Time Zone : (Brussels time)



Digital Platforms for 'Interoperable and Smart Homes and Grids'

Rolf Riemenschneider

Programme Officer – E4 Internet of Things

DG CNECT - European Commission

**Focus Area
DIGITISATION**

Leadership in Digital Platforms



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

LEIT-ICT

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

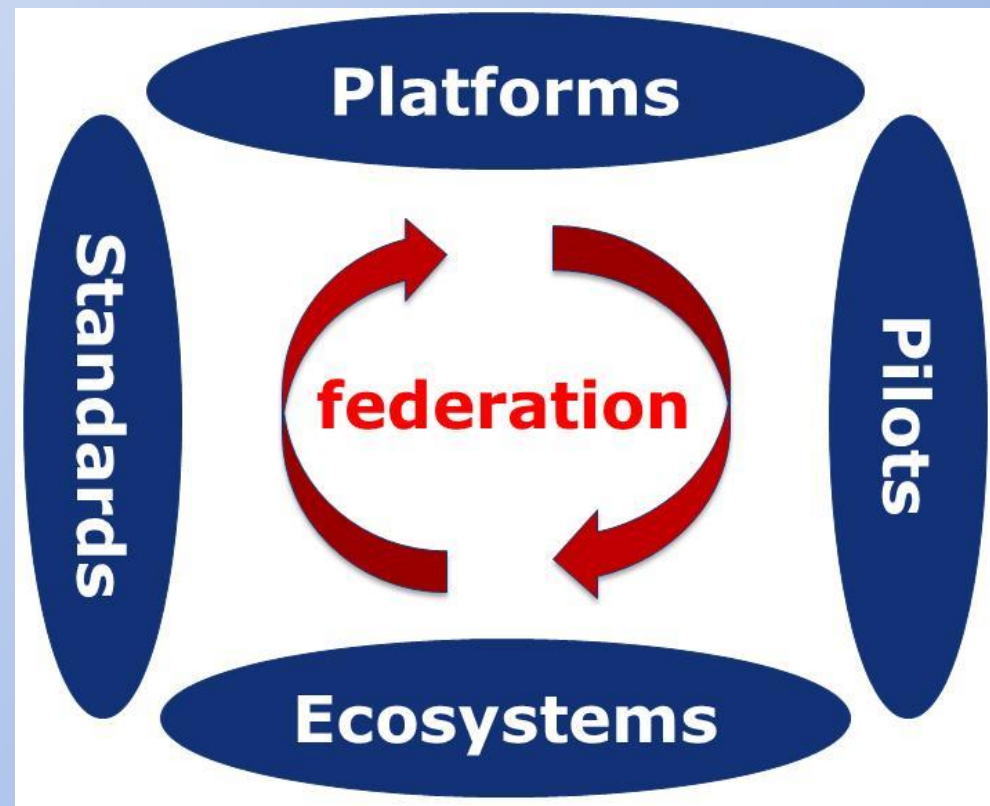
SC1:

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

EU actors join forces along common interests
Future global standards & platforms driven by interests of EU actors

Focus investments on:

- **Integration** of key digital technologies
- Digital industrial platforms, reference architectures, ...
- Reference implementations, **large-scale piloting**, experimentation environments
- **Ecosystem building** and **standardisation**



Topic: DT-ICT-10-2018-2019

Timeline:

- Call opening: 26th July 2018
- Call deadline: 14th November 2018, 17.00h
- Budget: 30 Mio € - 1 Pilot only

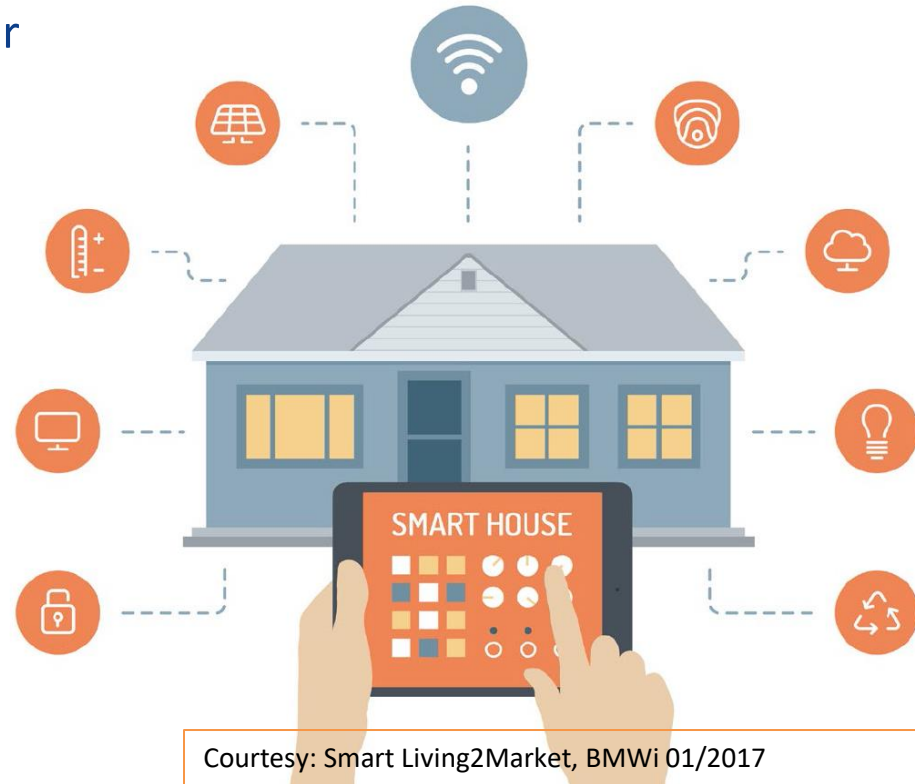
Specific Challenges:

- Novel services for more comfortable, convenient and healthier living environment at lower energy costs for consumers
- The integration of renewable energy sources (RES) and promotion of energy efficiency
- To match user needs with the management of distributed energy across the grid, and to gain access to benefits from Demand Response

Perspectives for Smart Home Comfort



- Understanding IoT for the Home Consumer
 - Awareness – Fun
 - Interaction – Satisfaction
 - Security – Ownership
- B2C Considerations
 - Cross-cutting managed services
 - Managed Security & Lifecycle
 - Provision as a Service



Make me feel safer at home (60%)



Help me deal with emergency situations (59%)



Help me stay healthy (59%)



Help me live a healthier lifestyle (44%)



Protects my privacy (41%)

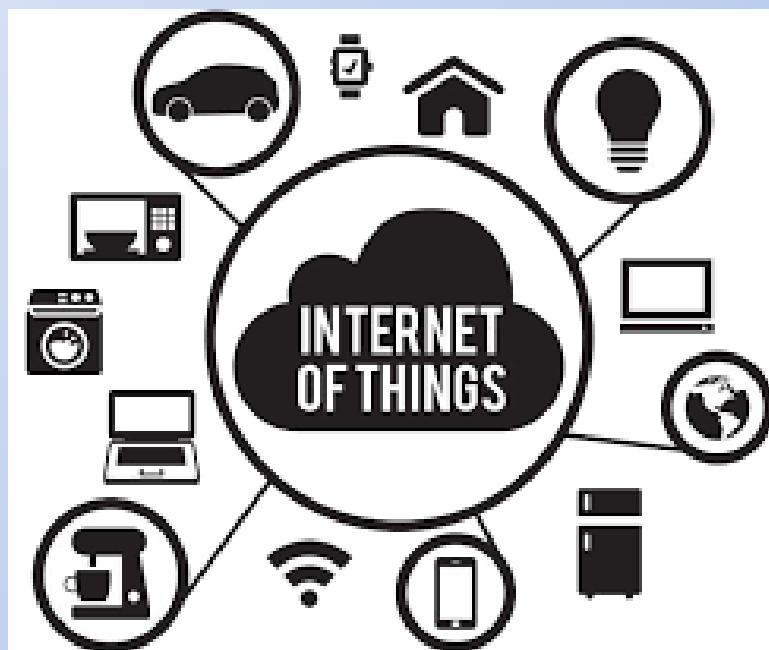


Is compatible with my smartphone (32%)

Thriving for Energy Efficiency

Key challenge: flexibility (demand-side)

Key enabler: interoperability



- **Goal: Delivering a fair deal for consumers**
 - efficient integration of renewables
 - integrated smart home services through IoT
 - interoperable smart grids (production capacity optimisation)

Success Factors of a large-scale pilots



Approach:

- Internet of Things (IoT) enables a seamless integration of home appliances with related home comfort and building automation services // IoT reference architectures models based on platforms that enable the integration of relevant digital technologies like IoT, AI, cloud and big data services and where applicable, combined with blockchain technologies.
- Developing interoperability and seamless data sharing across different application domains such as home comfort & well-being, smart appliances, building automation and energy management,
- aligning existing standards from the utility and ICT domains; and explore the need for further standardisation and legislation
- Active user engagement and a multi-disciplinary approach to ensure the understanding of user needs
- The envisaged architecture should allow for third party contributions that may lead to new value added services both in energy and the home/building domain.

Scale:

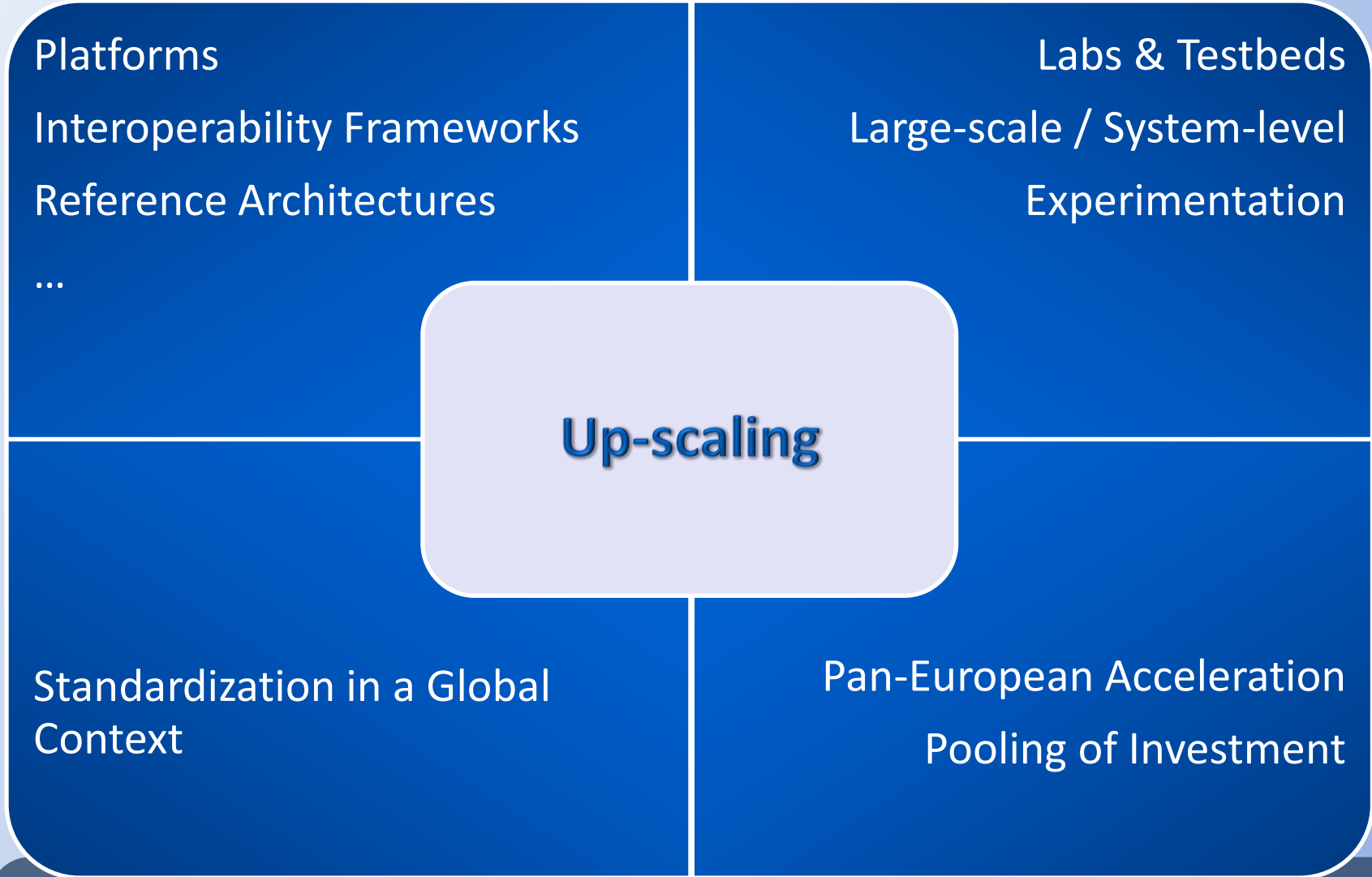
- promote the use of these interoperable solutions as widely as possible involving many different types of appliances
- Clear evidence of demonstrating the benefits of energy management through IoT application and services for the users
- demonstrate that such platforms lead to a marketplace for new services in EU homes and buildings

- Increasing number of **energy apps/services and home devices and appliances** allowing to shift consumption according to wholesale market or grid-constraints-related price signals.
- Validation of **user acceptance**, as well as demonstration of viable concepts that ensure privacy, liability, security and trust in connected data spaces.
- Accelerated wider deployment and adoption of **IoT standards and platforms** in smart homes and buildings in Europe.
- Platforms lead to a **marketplace for new services in EU homes and buildings** *[built on a sustainable European IoT ecosystems and related business models with opportunities also for SMEs and start-ups]*
- Increasing the **use of renewable energy and increased energy efficiency**, offering access to cheaper and sustainable energy for consumers and maximising social welfare.

- **Interoperability** – essential for a Digital Single Market, with seamless flow of data across sectors and value chains.
- Hot interest: **Semantic Interoperability** standards like SAREF defined and after the EC study aligned. Scaling up needed.
- **End-2-End services** and Underlying IoT standards - Chicken and egg – supply- and demand-side are both struggling to define standards at appropriate level and scale-up.
- **Standardisation – Fast Track**, e.g. SAREF as an ontology for energy data and services to be extended across sectors energy, home, city, health..
- Innovation – **open innovation systems** move fast, and the standards processes struggle to keep up.



.... Guiding Principles



Focus Area DT – Topic Coordinator(s):

- Arian.Zwegers@ec.europa.eu, Rolf.Riemenschneider@ec.europa.eu

Pilot-specific:

Pilot DT-ICT-07: Arian.Zwegers@ec.europa.eu

Pilot DT-ICT-08: Joel.Bacquet@ec.europa.eu; Louis.Mahy@ec.europa.eu DG AGRI

Pilot DT-ICT-10: Svetoslav.MIHAYLOV@ec.europa.eu; Rolf Riemenschneider;
Mark.VAN-STIPHOUT@ec.europa.eu; Margot.Pinault@ec.europa.eu DG ENER

Pilot DT-ICT-11: Kimmo.Rossi@ec.europa.eu ; Mark.VAN-STIPHOUT@ec.europa.eu DG ENER

Pilot DT-TDS-01: Monika Lanzenberger, Peter Wintlev-Jensen → CNECT-ICT4ageing@ec.europa.eu

CSA all Pilots:

CSA DT-ICT-13: Olavi.Luotonen@ec.europa.eu; Cristina.SANDOVAL@ec.europa.eu;
Arian Zwegers, Rolf Riemenschneider

Events:

- <http://ec.europa.eu/digital-agenda/en/internet-things>

- Digitising European Industry Strategy (DEI):
<https://ec.europa.eu/digital-single-market/en/digitising-european-industry> → FUTURIUM
- The Alliance of Internet of Things Innovation
<http://www.AIOTI.eu>
- ICT Event 2018 : 4-6/12/2018 in Vienna
<https://ec.europa.eu/digital-single-market/en/events/ict-2018-imagine-digital-connect-europe>



Cascade funding – third parties

Додаткові можливості для бізнесу та спільних
консорціумів наука-бізнес

Ініціатива I4MS: ІКТ інновації для виробничих МСП

Інновації у інформаційно-комунікаційних технологіях для виробничих малих та середніх підприємств (ICT Innovation for manufacturing SMEs (I4MS)) – одна із ініціатив Європейської Комісії в рамках PPP “Factories of the Future”, що уможлиблює **цифрову трансформацію виробничого сектору**.

Головна ідея полягає у розвитку можливостей для співпраці малих та середніх підприємств виробничого сектору в усьому ланцюжку доданої вартості через допомогу **європейських центрів компетенцій та інноваційних хабів**.



I4MS фокусується на таких 4 ключових елементах цифрової трансформації:



Комп'ютерні обчислення високої потужності (High-power computing)

Складне лазерне обладнання (Advanced laser-based equipment)

Виробнича робототехніка (Industrial robotics systems)

Розумні кіберфізичні системи або Інтернет Речей (IoT) (Smart Cyber Physical Systems (IoT))

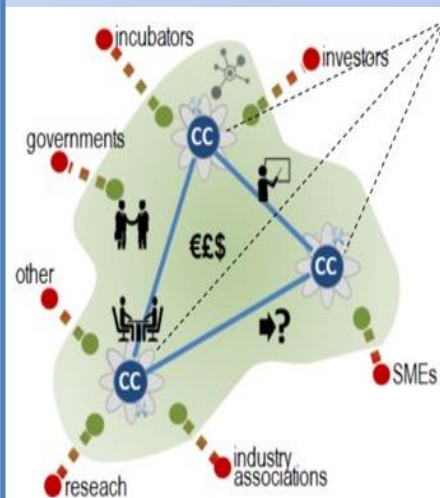
Центри компетенцій та інноваційні хаби – різні форми організації інноваційних екосистем, що спрямовані на підвищення конкурентності МСП виробничого сектору

Головна ідея полягає у **підвищенні конкурентності** малих та середніх підприємств виробничого сектору шляхом **впровадження цифрових інноваційних технологій** за допомогою **європейських центрів компетенцій та інноваційних хабів**.

Хаб цифрових інновацій

Створені для надання послуг індустрії

- Доступ до центрів компетенцій
- Розвиток інноваційної екосистеми
- Брокерство
- Доступ до фінансів
- Ринкова експертиза
- Навчання та освіта
- Інкубація та менторство

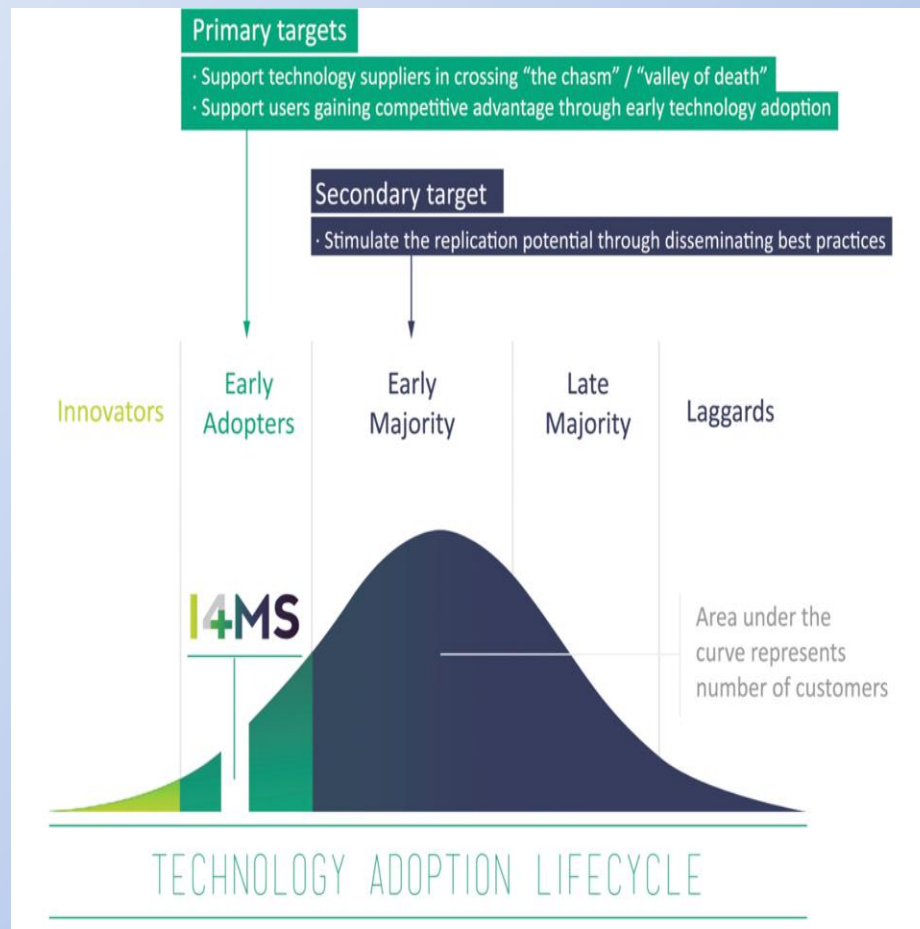


Центр компетенцій

Компетенції у цифрових технологіях

- Доступ до інфраструктури
- Експертиза у цифрових технологіях та застосуванні
- Підтримка експериментів у реальних умовах
- Підтримка виготовлення нових продуктів
- Демонстрація кращих зразків
- Презентація технологій на пілотних виробництвах

I4MS допомагає закрити прогалину на шляху від досліджень до ринкової комерціалізації



Відкриті та майбутні конкурси i4MS



MIDIH
Open call for Data driven applications and experiments in CPS/IoT

Cloudi Facturing
Open call for application experiments of CloudiFacturing



Загальний бюджет	€ 960,000	€ 700,000 (приблизно)
Максимальний розмір гранту	€ 60,000	€ 100,000 (максимум € 60,000 для третіх сторін)
Очікувана тривалість експериментів	6 місяців	12 місяців (з 1 січня 2019. до 31 грудня 2019)
Публікація конкурсу	29 березня 2018	1 липня 2018
Дедлайн	29 липня 2018	30 вересня 2018

Таблиця конкурсів

Smart Anything Everywhere (SAE)

ICT Innovation for Manufacturing SMEs (I4MS)

Дати відкриття конкурсів [SAE](#) та [I4MS](#):

Project	Technology Area	Call 1	Call 2	Call 3	Call 4
I4MS (Innovation for Manufacturing SMEs) Initiative					
L4MS	Logistics for Manufacturing (Robotics)	Sep.18	Sep.19	-	-
CloudiFacturing	HPC cloud-based simulation services	Jul.18	Jul.19	-	-
MIDIH	CPS/IoT for Manufacturing	Mar.18	Mar.19	-	-
AMABLE	Additive Manufacturing	Mar.18	Mar.19	Mar.20	-
SAE (Smart Anything Everywhere) Initiative					
FED4SAE	Cyber-Physical and Embedded Systems	Nov.17	May18	Nov.18	-
TETRAMAX - Bilateral	Low energy computing powering CPS and IoT	Nov.17	Oct.18	Sep.19	Apr.20
- Value chain/ interdisciplinary		Feb.18	Dec.18	Oct.19	Apr.20
- Entrepreneurial		Aug.18	Aug.19	Aug.20	-
DIATOMIC	Advanced micro-electronic components and Smart System Integration	Mar.18	Sep.18		
SmarTEES	Organic and large area electronics	Dec.17-Sep.19	-	-	-
Other projects					
Data Pitch	Data brokerage between public sector organisations and SMEs	Jul.17- Sep.17	Autumn 18	-	-

Ideal ist project

<https://ideal-ist.eu/about>

- Long-standing experience in EU Framework Programmes (Ideal-ist was established in 1996)
- Expertise in proposal writing and project management: A network of over 65 National Contact Points (NCPs) in the ICT theme support proposers.
- An international quality team to support proposers, e.g. to better focus proposals
- Ideal-ist information services: Newsletter, Work Programme information
- Brokerage events with pre-scheduled meetings
- Full proposal check events with experienced evaluators
- Pre-Proposal Check: A new tool to check proposal outlines
- Toolbox. A tool to support proposers during the whole application process from project idea to project completion and future planning
- Topic Tree. A tool that helps you to identify historical and future links to call topics and offers you background information provided by Ideal-ist and EC Participant Portal

ICT event 2018

"Imagine Digital - Connect Europe"

- **Date:** 04/12/2018 - 06/12/2018
- **Location:** [Austria Centre Vienna, Vienna , Austria](#)

The event will have the following main components:

- a conference on digital research and innovation policies and topics,
- an exhibition of EU-funded research and innovation projects in the field of ICT,
- a series of networking activities and
- an Innovation and Startups forum.



Для контактів

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<http://www.lp.edu.ua/ncpict>

Агенція Європейських Інновацій

<http://www.facebook.com/InnoEU.UA>

www.aei.org.ua

Портал Інновацій

www.inno.lviv.ua