

Information and Communication Technologies Horizon 2020

Information & Communication Technologies

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Horizon 2020 Programme Committee Member (PC)

National Contact Point (NCP)

Central European workshop

5 April 2018

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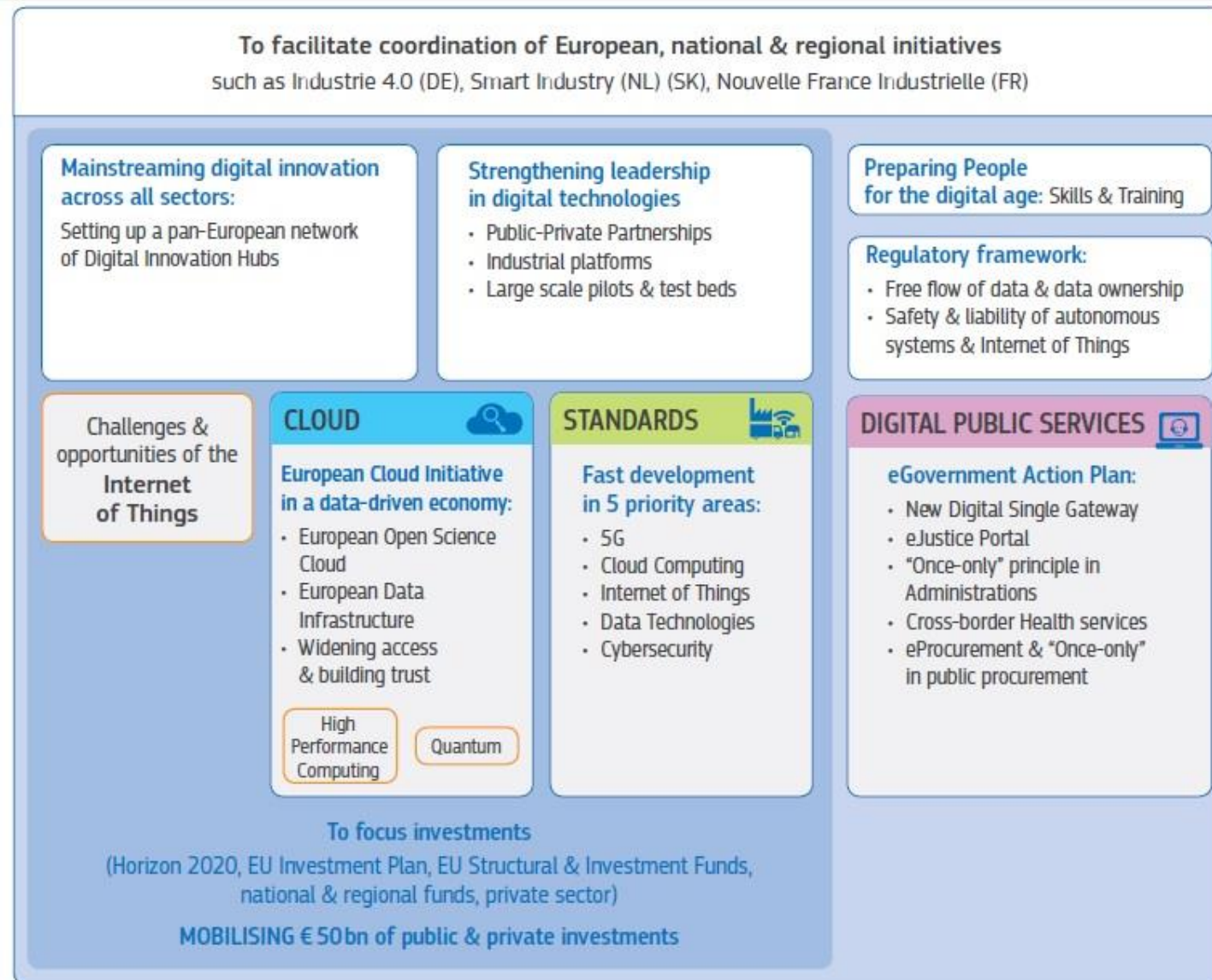
Content

- ICT in H2020 - context
- ICT Work Programme – what is new?
 - Partnerships
 - Digital Innovation Hubs
 - Platforms and Pilots
 - Channels for funding
- National Contact Points
- ICT Event 2018 – Vienna Austria

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Policy Context

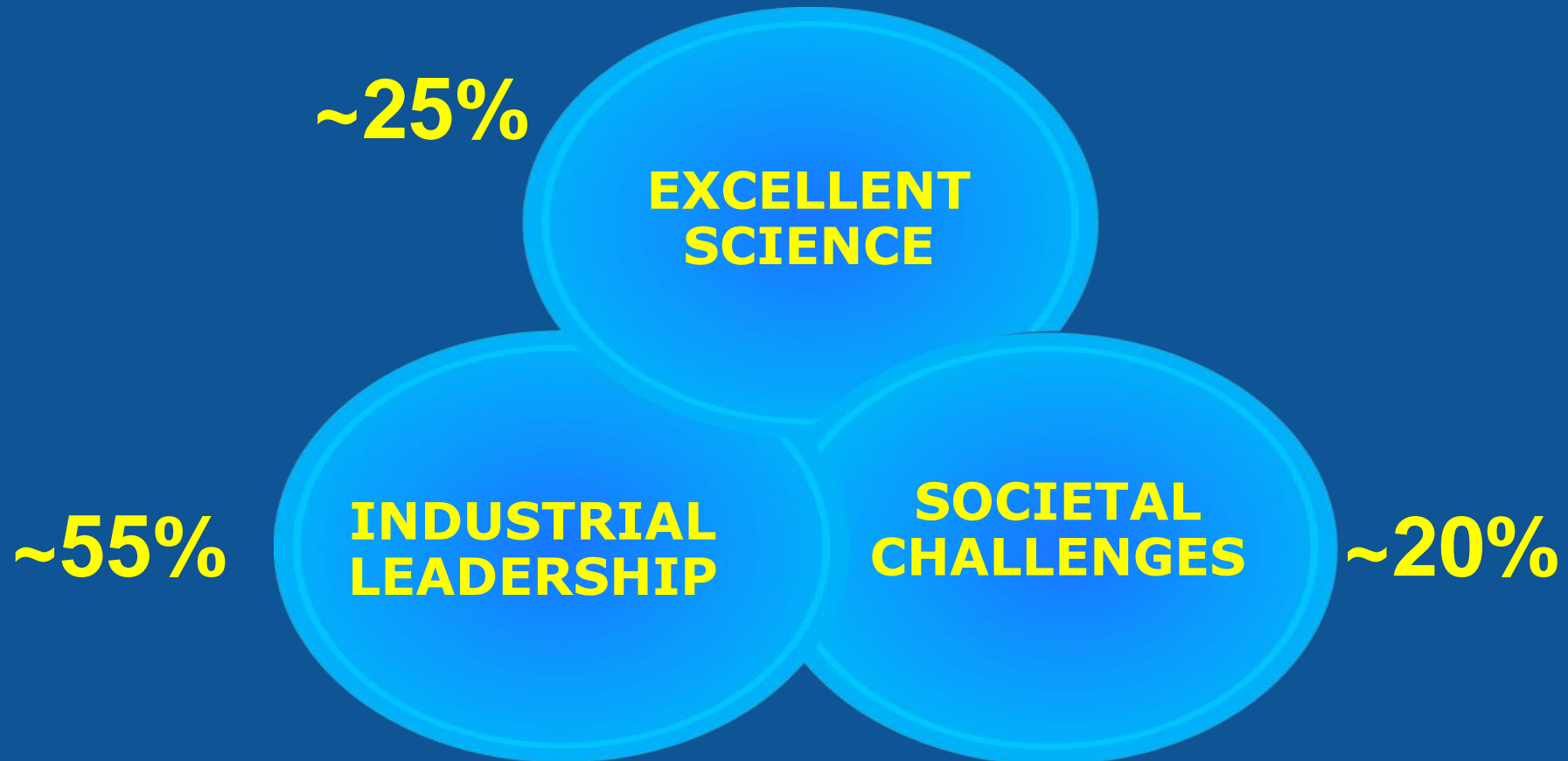


Digitising European Industry

Com (2016) 180



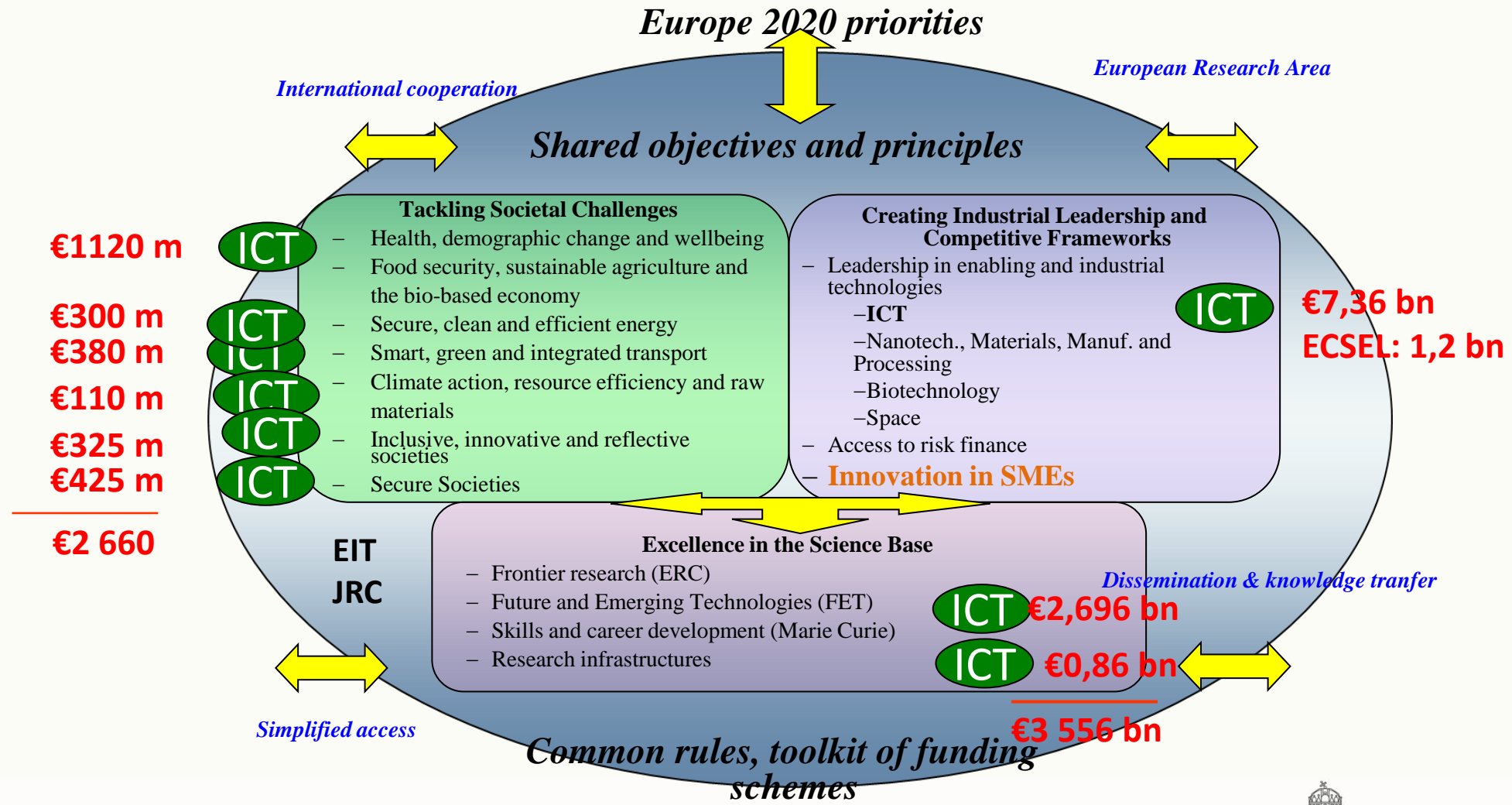
ICT in 3 Pillars of H2020



Simplification?



ICT in H2020 (€ 13 576)



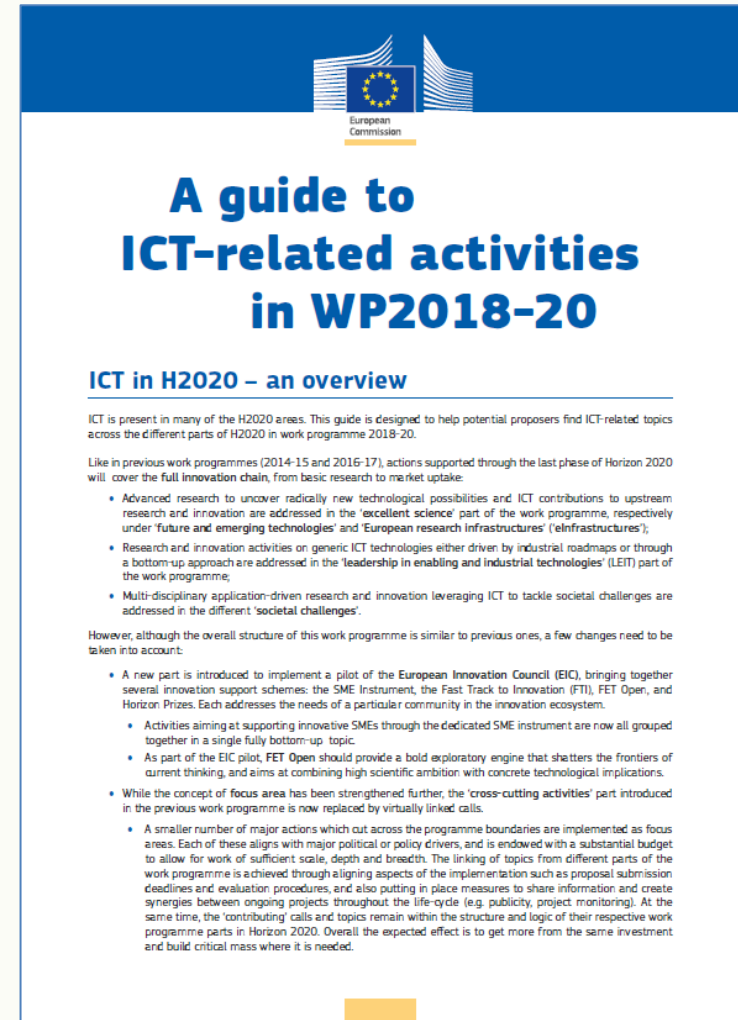
Where to find ICT R&D&I in H2020?

Everywhere!

change of mindset

Guide to ICT-related activities in WP

- Comprehensive coverage of the three H2020 pillars
- Detailed list of calls and topics
- Available on H2020 website



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Work Programme 2018-20

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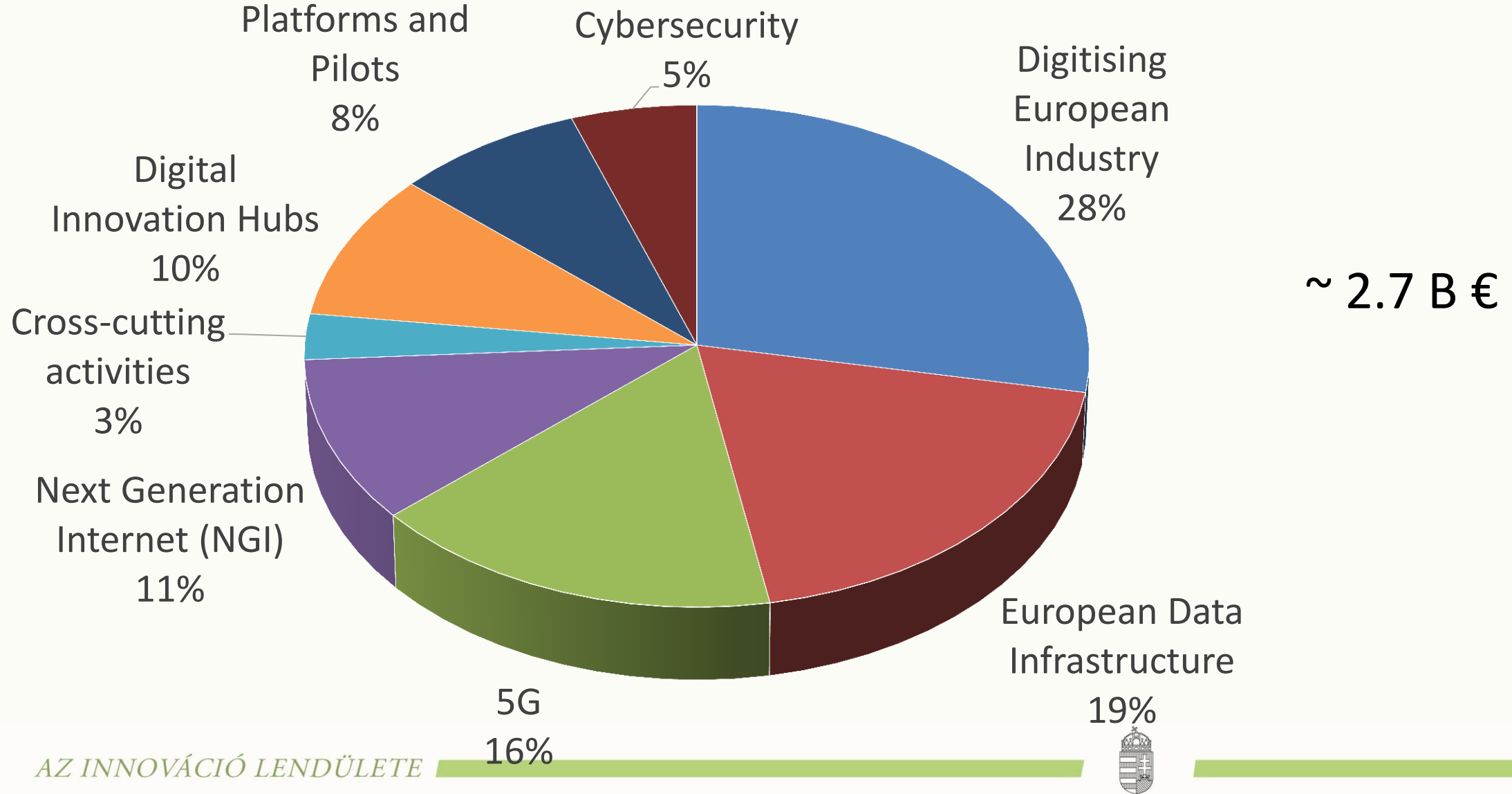


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Work Programme 2018 – 2020

- **Technologies for Digitising European Industry:**
LAE, photonics, nano-electronics, smart systems, manufacturing, robotics
- **European Data Infrastructure:**
HPC, Software, Big Data and Cloud technologies
- **5G**
- **Next Generation Internet (NGI):** Open Internet, AI, Interaction, IoT, language, inclusion, social connectivity
- **Cross-cutting activities:** STARTS, Start-up EU, PCP, fintech
- **Digitising and transforming European industry and services:**
 - Hubs
 - Platforms & Pilots
- **Cybersecurity:** cyber attacks, resilience, cybersecurity & privacy, quantum key

Work Programme 2018 – 2020



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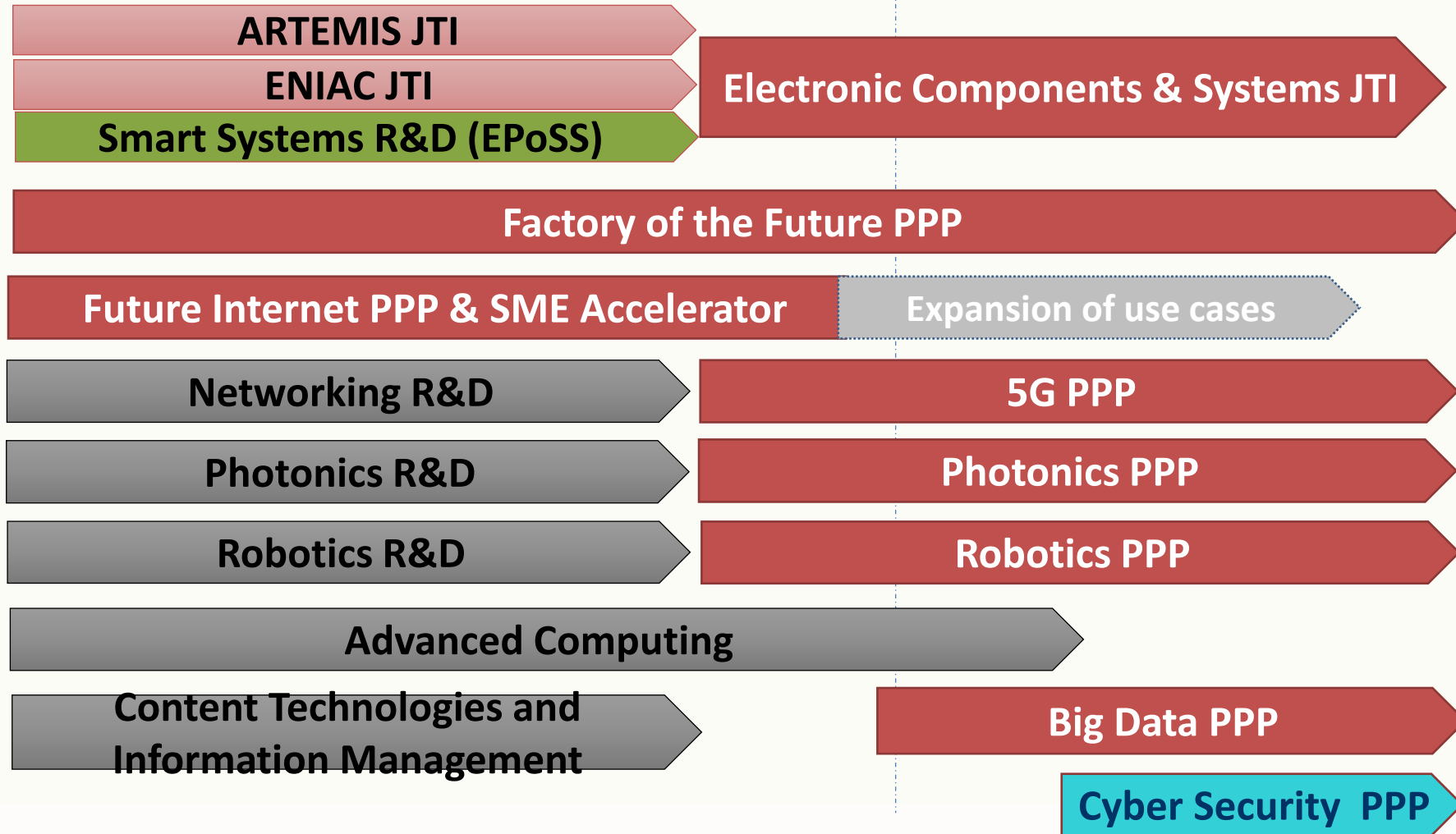
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Strategic Research Agendas

FP7

H2020



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10 Public-Private Partnerships

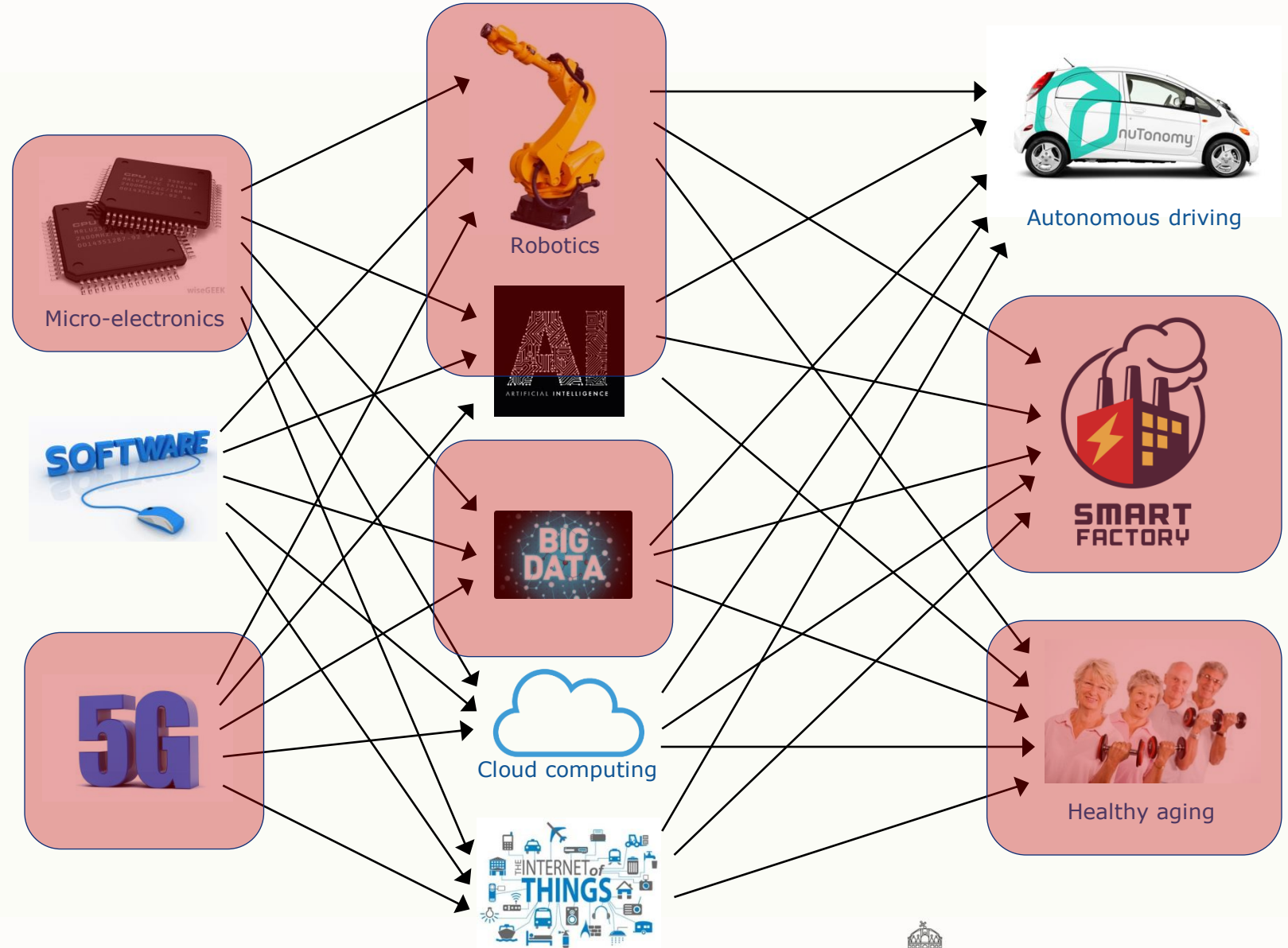
- **Factories of the Future (FoF)**, to support the manufacturing industry through the development of sustainable production technologies and systems (1150 M€)
- **Energy-efficient Buildings (EeB)**, to increase the competitiveness and energy efficiency of the construction industry (600 M€)
- **European Green Vehicles Initiative (EGVI)**, to develop a competitive and resource efficient transport system with significantly less CO2 emissions (750 M€)
- **Sustainable Process Industry (SPIRE)**, to make the process industry more resource- and energy-efficient (900 M€)
- **Photonics**, one of the key enabling technologies for our future prosperity and an essential element of many sectors, from energy and health, to everyday products like DVD players and mobile phones (700 M€)
- **Robotics**, a key driver of industrial competitiveness and essential to address key societal challenges in areas such as demographic change, health and well-being, food production, transport and security (700 M€)
- **High Performance Computing (HPC)**, which plays a pivotal role in stimulating Europe's economic growth and advancing European science (700 M€)
- **Advanced 5G networks for the Future Internet (5G)**, stimulate development of network internet infrastructure to ensure advanced ICT services for all sectors and users (700 M€)
- **Big Data Value PPP**, towards a data-driven economy in Europe (500 M€)
- **Cyber Security PPP** (450 M€)

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Partnerships

Digital Value Chain



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Focus Area: Digitising & transforming European industry and services

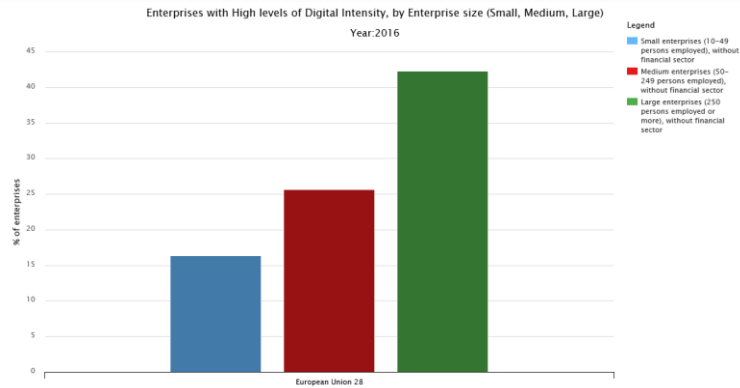
Mission

- ✓ Enabling all sectors and application areas to adapt, transform and benefit from digitisation, by allowing also smaller and newer players to capture value
- ✓ Develop industrial strategies, incl. new business models
- ✓ Connect to member states and regions, for synergies/align R&I agendas
- ✓ Removing barriers for innovation enabled by digitisation

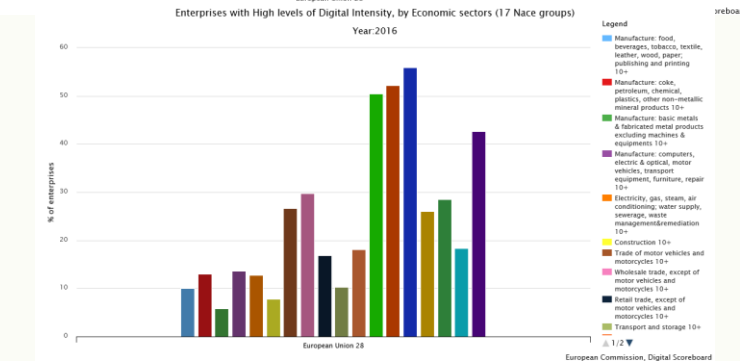
Component

- ✓ Innovation hubs
- ✓ Cross-sectorial and integrated **digital platforms** and **large-scale pilots** for experimentation and co-creation with users

Levels of digitisation differ – size of company, sector, region

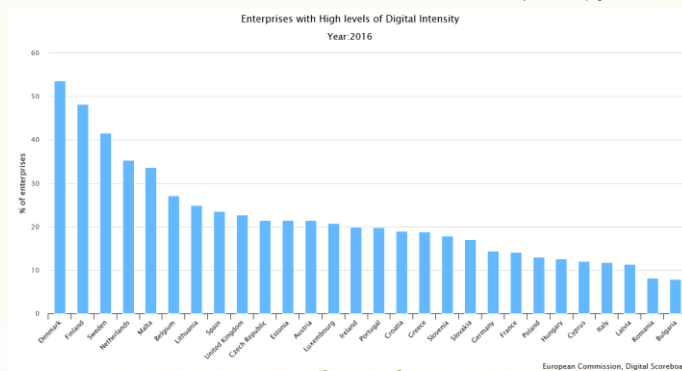


42% of large companies is highly digitised in the EU vs 16% of SMEs



56% of companies in computer programming, consultancy and information services are highly digitised.

Only around 6% of companies in basic metals & fabricated metal products excluding machines & equipments are highly digitised.



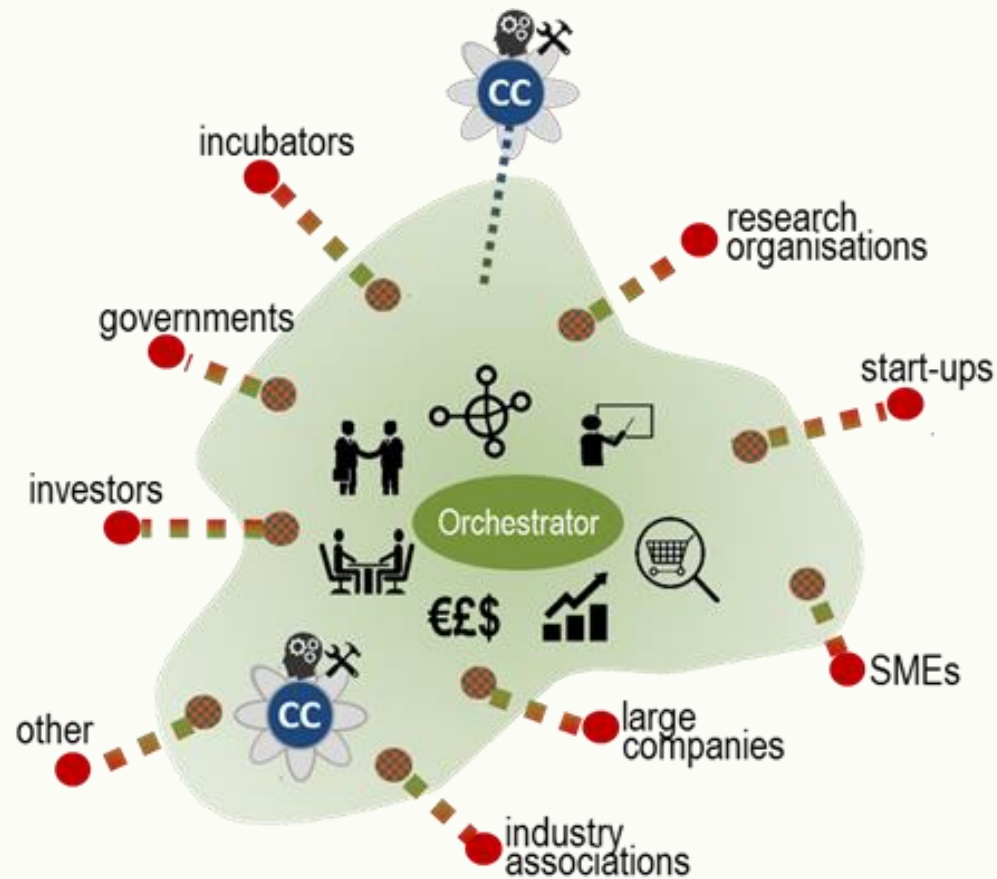
53% of Danish companies are highly digitised vs 8% in Bulgaria and Romania

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What is a Digital Innovation Hub?

A one-stop-shop providing services to companies in the region through a multi-partner cooperation:



- Access to Specialist Expertise and Infrastructure
- Brokering/matchmaking
- Awareness Creation around Digital Technologies
- Innovation Scouting
- Digital Maturity Assessment.
- Visioning and Strategy Development for Businesses
- Mentoring
- Training
- Access to Funding and Investor Readiness Services

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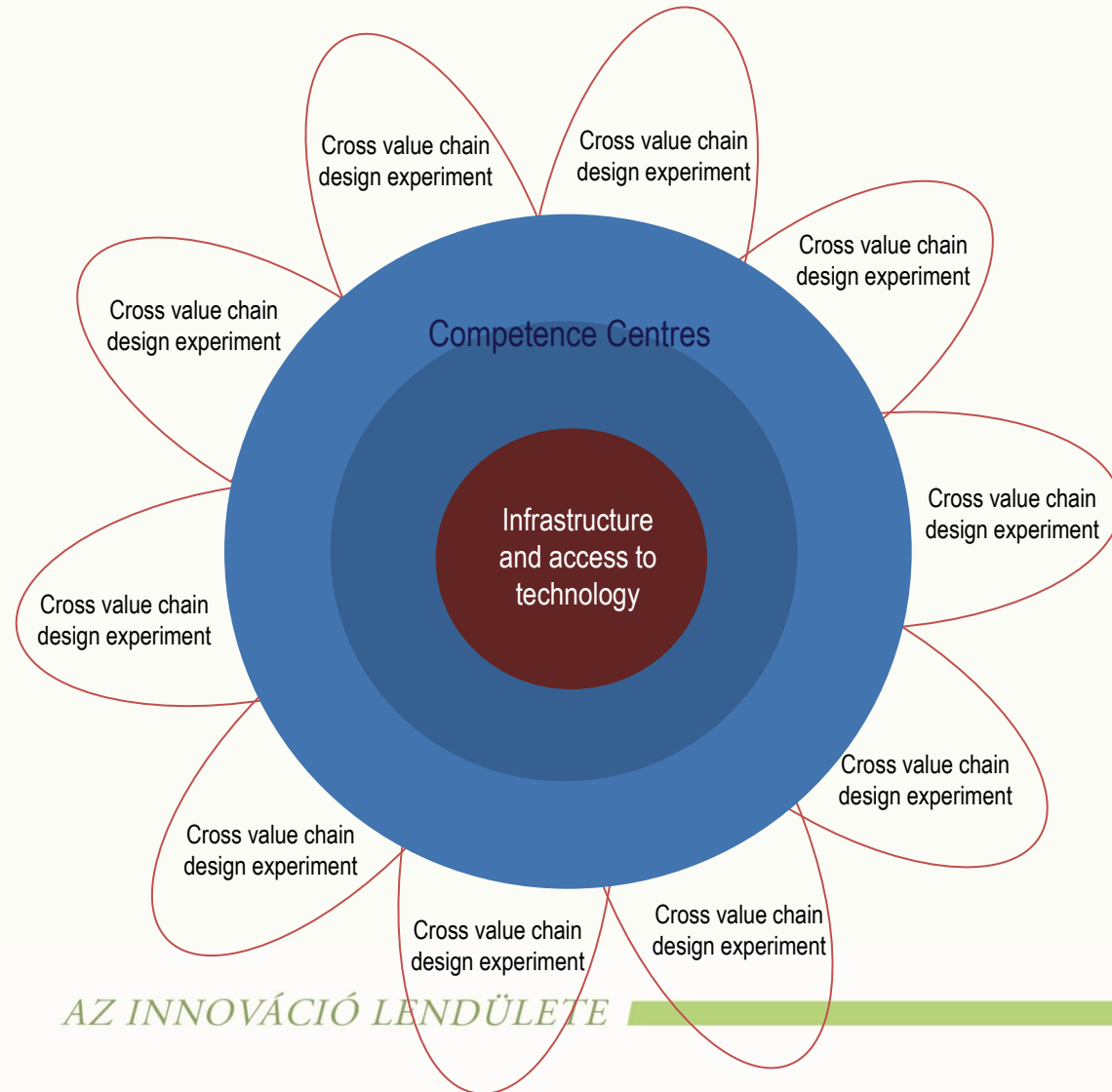
WP 2018 – 2020 - ICT

Focus area "Digitising and transforming European industry and services" calls for digital innovation hubs

Innovation actions with the following characteristics:

- Consortia should be deeply rooted in **regional/national DIH**
- Critical mass of highly innovative, **cross border experiments**. At least 50% of the budget should **directly benefit SMEs** or slightly bigger companies.
- Activities should aim at **long-term sustainability** and include a business plan for the digital innovation hubs, a plan to attract investors, to address training and skills development needs and dissemination. Established networks reaching out to SMEs like the Enterprise Europe Network and the NCP network should be used.
- Selected projects are expected to collaborate on building a network of Digital Innovation Hubs, covering most regions in Europe.

Critical Mass of Cross-Border Application Experiments



Develop novel products or services with digital technologies.

Bring together actors along value chain.

Suppliers to assist new users in customising and applying digital technologies in their environment.

Financial support to third parties may be used for flexibility

Many projects are using FSTP to implement open calls in H2020

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Digital Innovation Hubs

- Smart Anything Everywhere (SAE), (CPS, SSI, MNT)
- I4MS (phase 4) - uptake of digital game changers and digital manufacturing platforms
- Photonics
- Robotics (healthcare, infrastructure, agri-food, production)
- Big Data Innovation Hubs
- Digital Innovation Hub network

DT-RUR-12-2018: ICT Innovation agriculture – Digital Innovation Hubs for Agriculture

20M€

- To accelerate the adoption of ICT-based solutions for more productive and sustainable agriculture systems.

Innovation Action up to 10M €



Topic published under the Societal Challenge 2 Work Programme "Food Security, sustainable agriculture and forestry, marine, maritime and inland water research and the bio economy".

Digital Innovation Hubs

The screenshot shows the 'Digital Innovation Hubs' tool interface. At the top, there is a header with the European Commission logo and the text 'SMART SPECIALISATION PLATFORM' and 'S3'. Below the header is a navigation menu with 'Home', 'S3 Platform', 'Sections', 'Tools', 'News', 'Events', and 'Knowledge Repository'. A search bar is located on the right side of the navigation menu. The main content area is titled 'Digital Innovation Hubs' and features a map of Europe with various digital innovation hubs marked by numbered blue circles. The map includes a search bar on the left, a 'Countries' dropdown menu, and several other filter options like 'Evolutionary Stages', 'Technical Competences', 'Services Provided', 'Focus on TRL', and 'Market sectors'. A 'SEARCH' button is located at the bottom of the filter section. At the bottom left of the map area, there is a link: 'Click on the following link if you want to propose new HUB.' with a red arrow pointing to it.

- **Catalogue of Digital Innovation Hubs around the EU:**

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

- **Add your Digital Innovation Hub to the catalogue:**

http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool/-/dih/add_hub

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Digital Industrial Platforms

What do we mean?

X *A place or opportunity for public discussion*

e.g. European Platform of National Initiatives

✓ *An **operating system** that **integrates** different technologies and various applications and services*

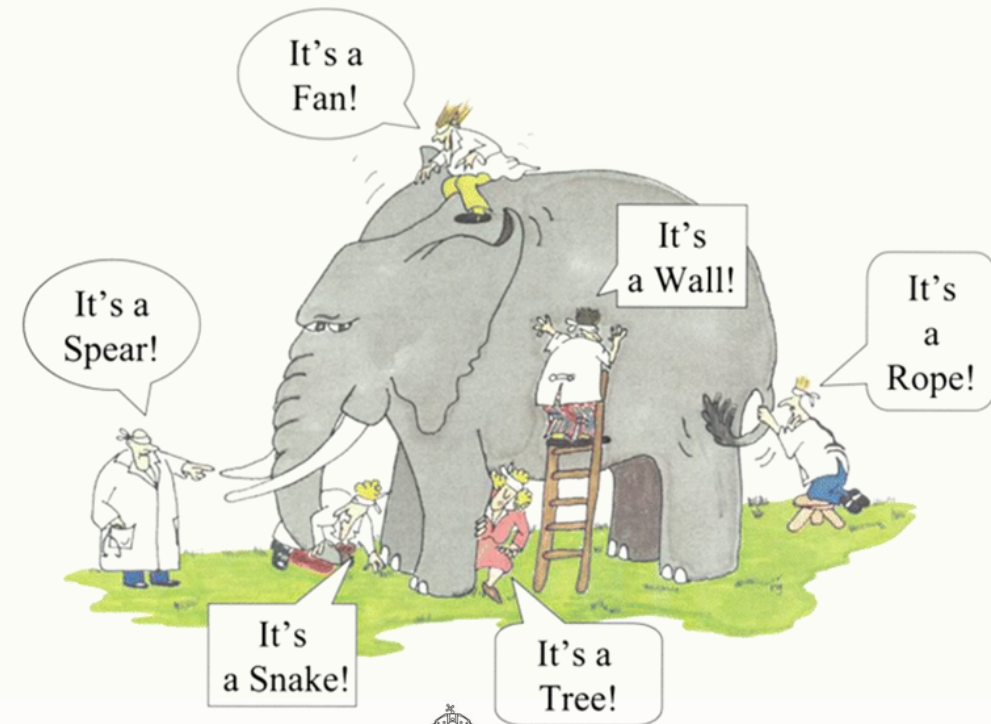
X *Online platforms in the consumer world*

e.g. Facebook, Nest, Android

✓ *Industrial platforms in the **business world***

In different ways and to varying degrees they may take in:

- 1) a **community** role
- 2) an **infrastructure** role
- 3) a **data** role



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Digital Industrial Platforms

Smartphone analogy



Digital Industrial Platforms

Examples

Community-led
sector-specific
(vertical)



ISOBUS

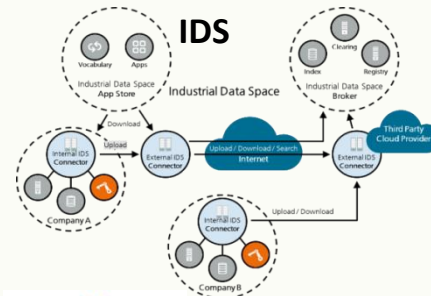


FITMAN



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Community-led
cross-sector
(horizontal)



Commercial
with open interfaces

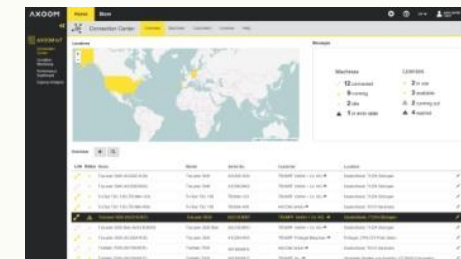
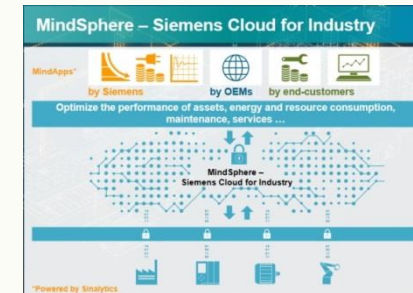


Photo: TRUMPF



- Social and Collaborative apps
Related brands: ENOVIA, 3DSWYM
- Information Intelligence apps
Related brands: EKALEAD, NETWORKS
- Content and Simulation apps
Related brands: 3DVIA, DELMIA, SIMULIA
- 3D Modeling apps
Related brand: CATIA, GEOVIA, SOLIDWORKS
- Real time 3DEXPERIENCE Platform

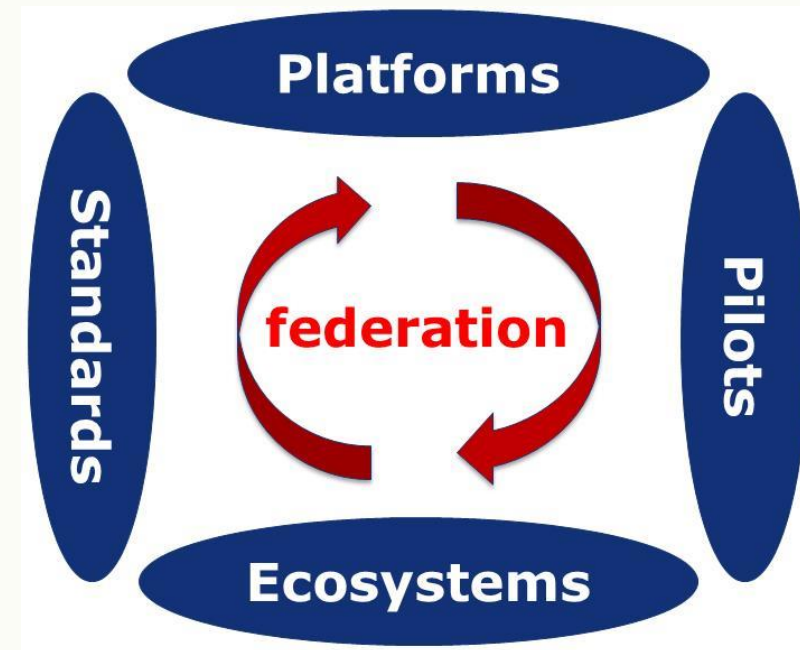
Digital Industrial Platforms

Alignment of R&I efforts

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

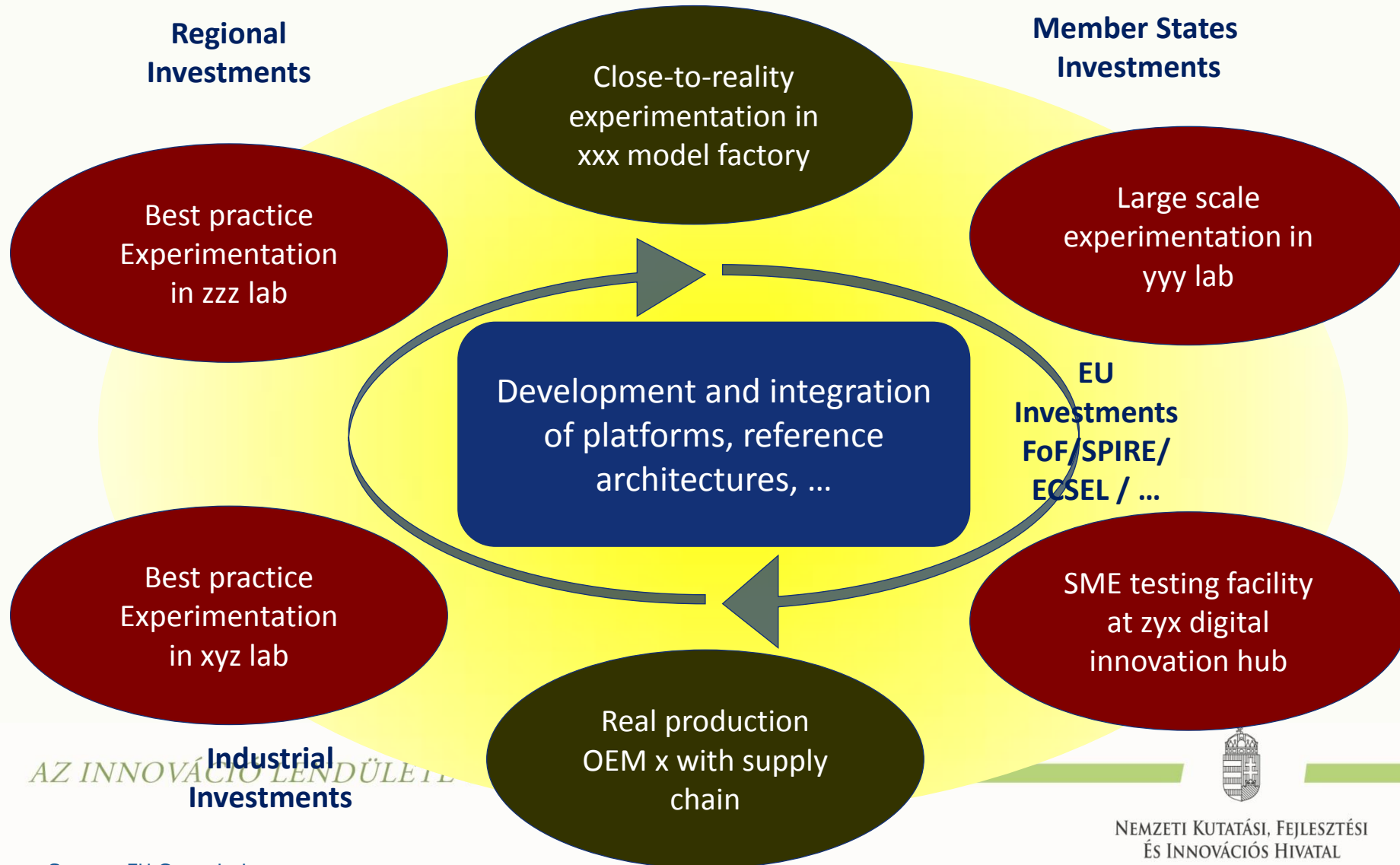
Focus investments on:

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



Digital Industrial Platforms

Pooling Investments



WP 2018-2020

Topics pan-European platform-building and piloting



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WP 2018-2020

Focus Area

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 tbc
- 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 tbc
- DT-ICT-13-2019: Digital Platforms/Pilots Horizontal Activities 4 M€

SC1

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

LEIT-NMBP:

- DT-NMBP-20-2018: A digital 'plug and produce' online equipment platform for manufacturing 20 M€

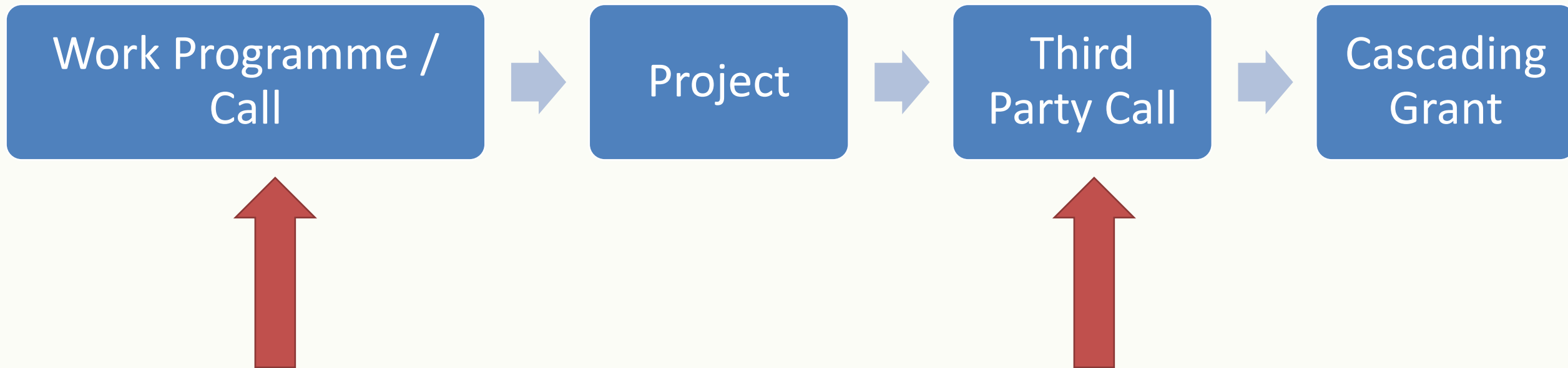
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Channels for H2020 ICT Funding

- H2020 projects in LEIT (eg. Research and Innovation Actions, Innovation Actions, SME Instrument, FTI projects, Prizes)
- H2020 projects in Societal Challenges (same)
- H2020 projects in Excellent Science (eg. Marie Curie Projects, FET, Infrastructures)
- ECSEL JTI, AAL, ERA-NETs
- Calls for Third Parties / Expressions of Interest through large initiatives (eg. PPP projects, Large Scale Pilots, Smart Anything Everywhere, I4MS, IoT EU platforms, FET Flagships etc.)

Channels for H2020 ICT Funding



H2020 calls

- [I4MS](#) – ICT Innovation for Manufacturing SMEs
- [SAE](#) - Smart Anything Everywhere
- [FIRE](#) – Future Internet Research & Experimentation
- [FET Flagships](#) – [Human Brain](#), [Graphene](#)
- [Internet of Things - European Platforms Initiative](#)
- Pre-commercial procurement (PCP) tenders
- Further competitive calls on [Participant Portal](#)

- [Future Internet PPP](#) – Accelerators (FP7, closed)
- [ECHORD ++](#) - Robotics (FP7, closed)

Upcoming open calls of DIH projects (using FSTP)

Project	Technology Area	Call 1	Call 2	Call 3	Call 4
I4MS (Innovation for Manufacturing SMEs) Initiative					
HORSE	Robotics	Nov.17	-	-	-
ReconCell	Robotics	Nov.17	-	-	-
L4MS	Logistics for Manufacturing	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	Low energy computing powering CPS and IoT	Nov.17	Oct.18	Sep.19	Apr.20
• Bilateral					
• Value chain/ interdisciplinary		Feb.18	Dec.18	Oct.19	Apr.20
• Entrepreneurial		Aug.18	Aug.19	Aug.20	-
DIATOMIC	Organic and large area electronics	Mar.18	Sep.18	-	-
SMARTEES	Smart System Integration	Dec.17	Nov.18	-	-
Other projects					
Data Pitch	Data brokerage between public sector organisations and SMEs	Jul.17–end of Sep.17	Autumn 18	-	-

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National Contact Point & Partner Search & Proposal Development



NCP system in Hungary

- Free information on Horizon 2020 – per thematic area
- Information days: <http://nkfi.gov.hu/nemzetkozi-tevekenyseg/horizont-2020-rendezvenynaptar/nkfi-hivatal-h2020>
- Electronic / phone / personal information on funding opportunities and processes
- Personal consultations with potential applicants, feedback on project ideas and proposals
- H2020 news, events
- National H2020 website: <http://www.h2020.gov.hu/>

- 
- > [View Partner Searches](#)
 - > [Launch a New Partner Search](#)
 - > [Toolbox](#)
 - > [Find your Representative](#)

Ideal-ist addresses ICT companies and research organizations worldwide wishing to find project partners for a participation in the Horizon 2020 program of the European Commission. Ideal-ist offers a unique and quality-labelled Partner Search and other services helping to ease participation in Horizon 2020. Learn more [About ideal-ist](#)



Open calls

[View All](#)

- > [2016 Mobility for Growth](#)
- > [2016-2017 Green Vehicles](#)

Recent Partner Searches

- > [PS-IL-102368:
Range Anxiety's reduction for the L-
Category Vehicles users](#)



ICT Events

[View All](#)

- > [Information and Networking Days
on Horizon 2020 Big Data PPP
topics 2017](#)

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ICT Event 4-6 Dec 2018

Vienna



INFORMATION – BROKERAGE – CONSORTIUM BUILDING - EXHIBITION

Web: <https://ec.europa.eu/digital-single-market/en/events/ict-2018-imagine-digital-connect-europe>

Twitter: [@ICT2018_eu](https://twitter.com/ICT2018_eu)

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Thank you and get in touch !

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