
Horizont 2020

DIGITÁLIS BIZTONSÁG

2018-20. évi felhívások

Horizont 2020

Biztonságos Társadalmak
Információs Nap

13 Dec 2017

Németh Edina

Információs és Kommunikációs Technológiák (ICT)

Jövőbeni és Feltörekvő Technológiák (FET)

Programbizottsági Tag (PC) / Nemzeti Kapcsolattartó (NCP)

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NEMZETI KUTATÁSI, FEJLESZTÉSI
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Content

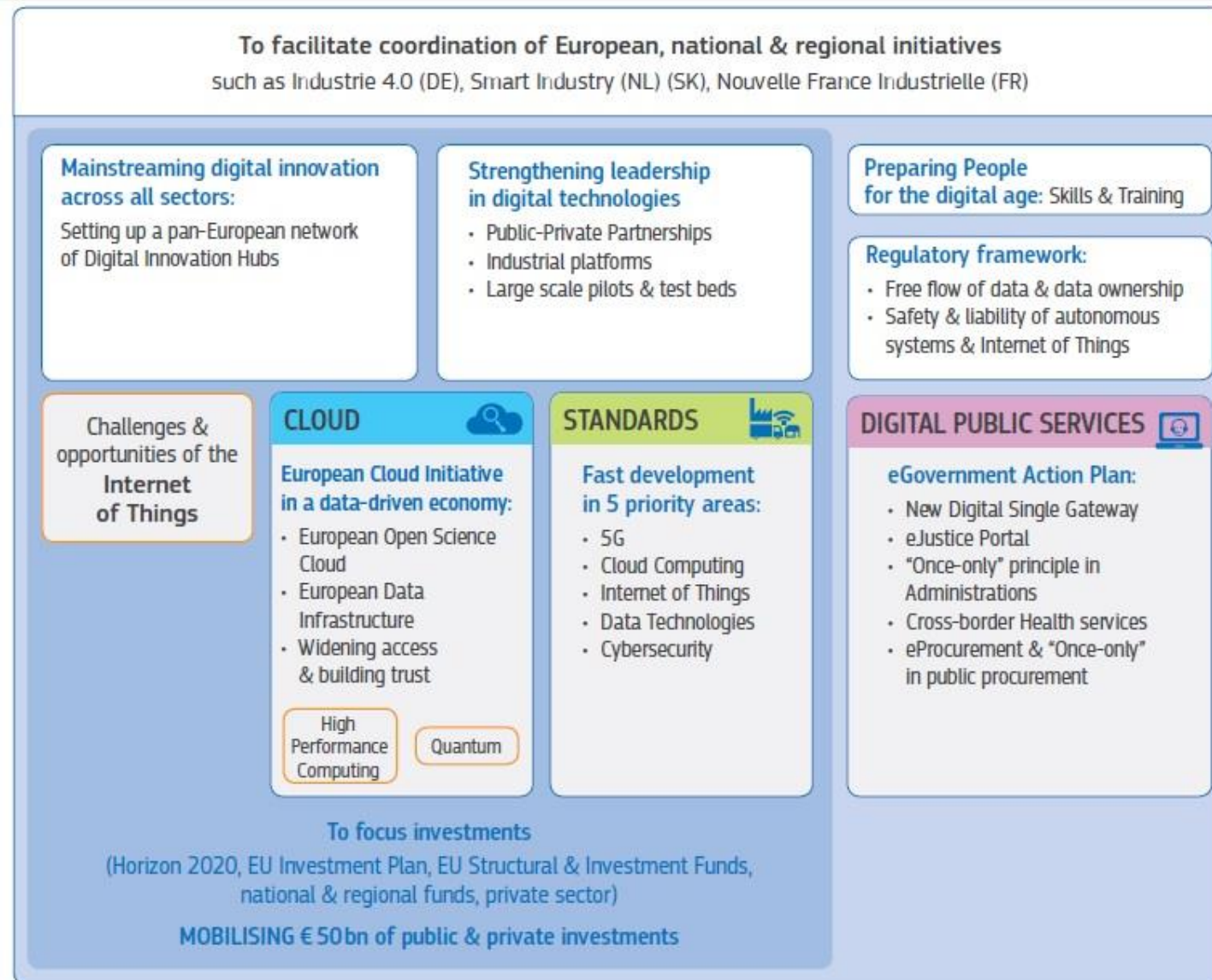
- ICT in H2020 - context
- ICT Work Programme – what is new?
 - Partnerships
 - Felhívások
 - Digital Innovation Hubs
 - Platforms and Pilots
 - Felhívások
- National Contact Points
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Policy Context

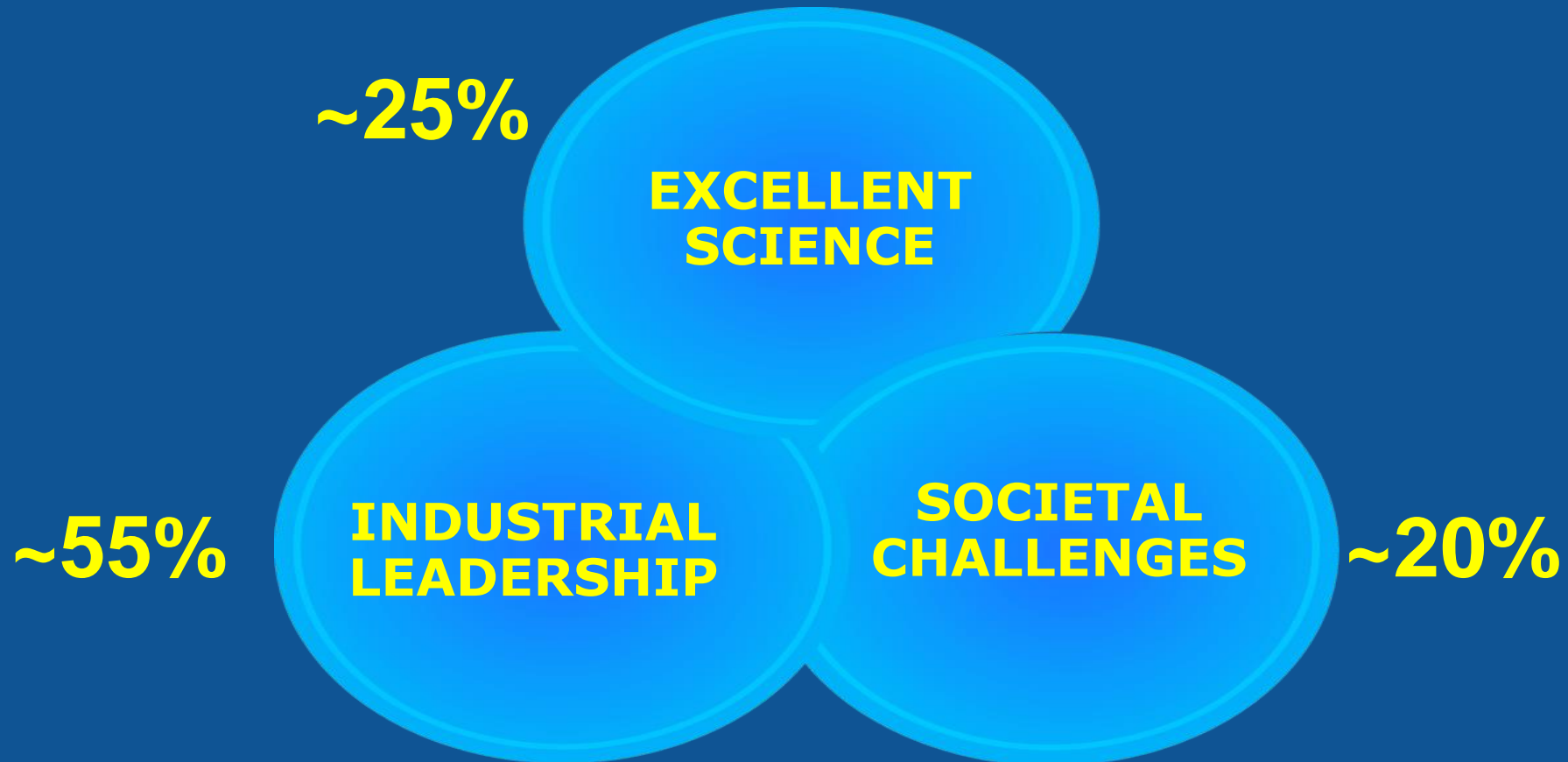


Digitising European Industry

Com (2016) 180



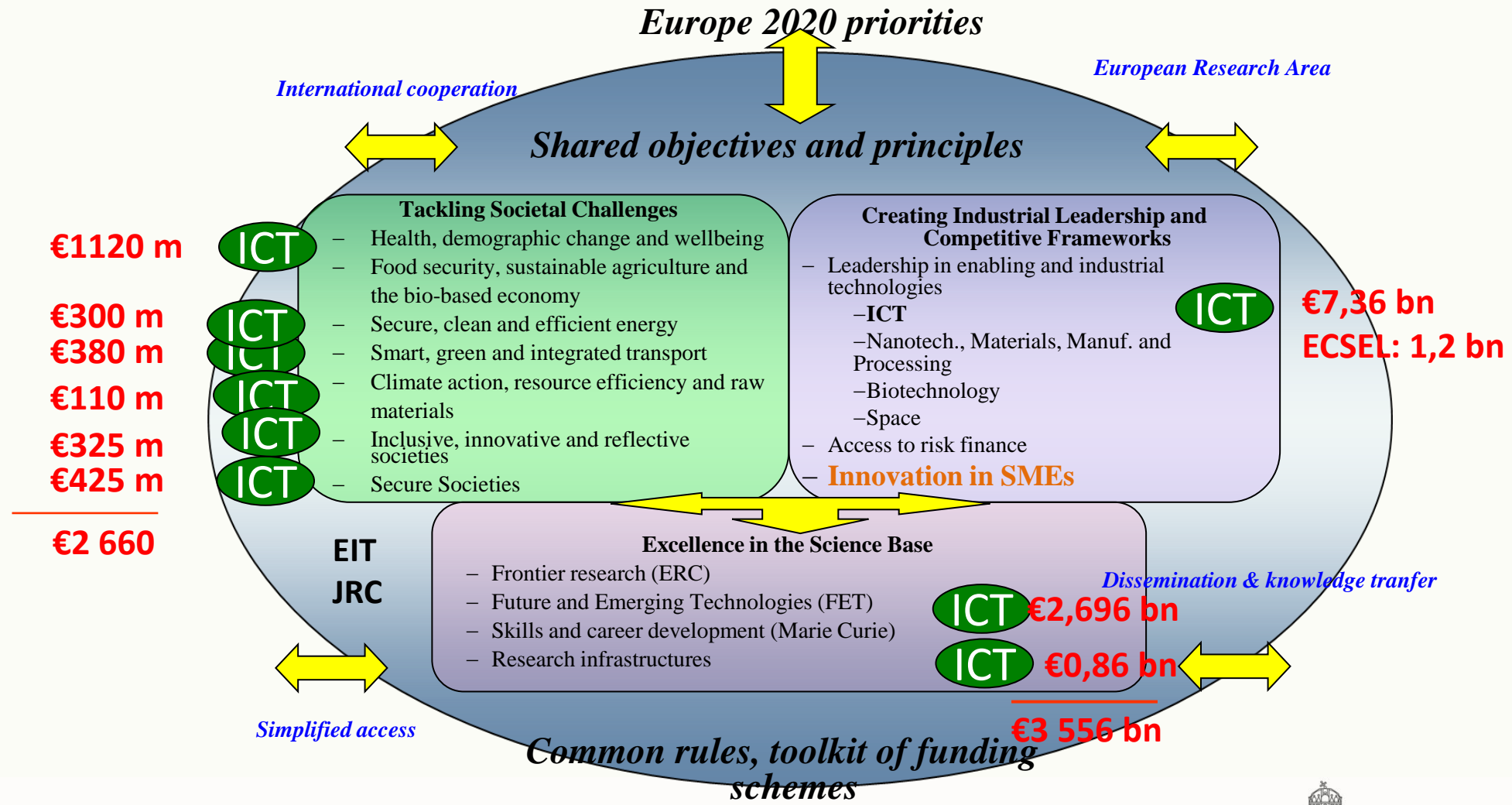
ICT in 3 Pillars of H2020



Simplification?



ICT in H2020 (€ 13 576)



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

Everywhere!

change of mindset

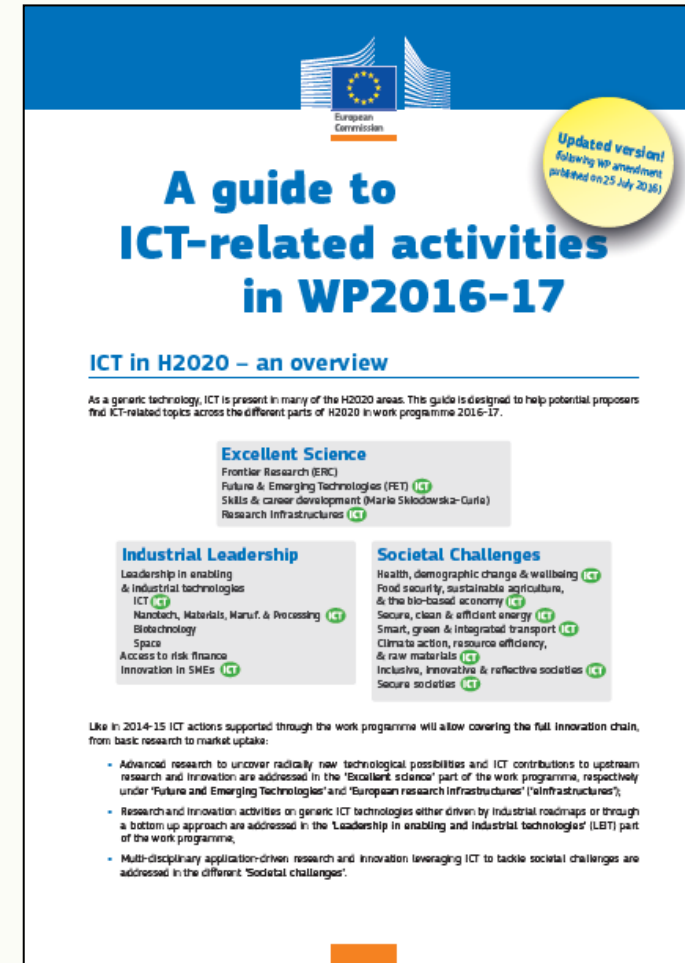
Where **ELSE** to find Cybersecuty R&D&I in H2020?

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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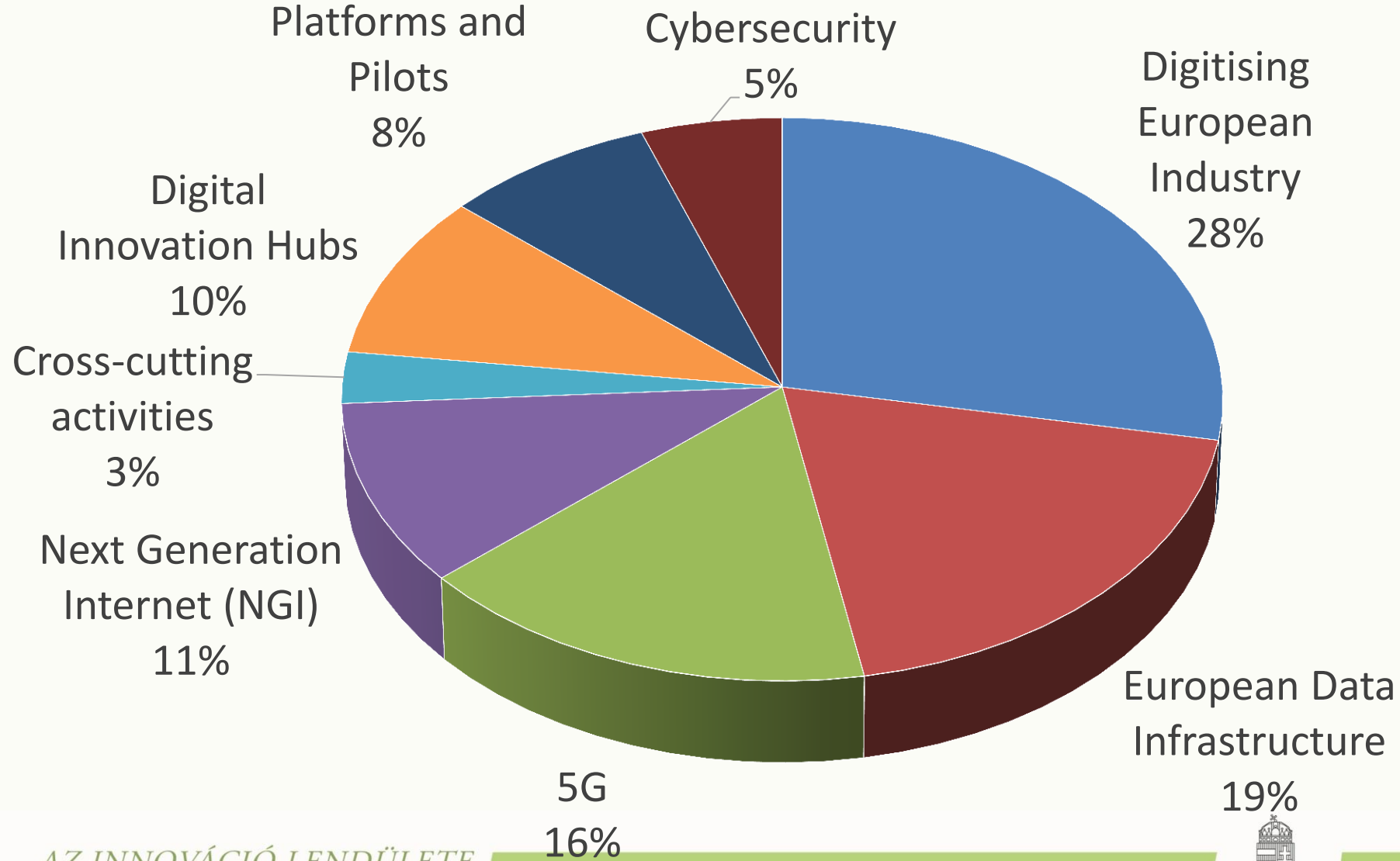


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Work Programme 2018 – 2020

- **Technologies for Digitising European Industry:**
LAE, photonics, nano-electronics, smart systems, manufacturing, robotics
- **European Data Infrastructure:**
HPC, 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



~ 2.7 B €

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Description of the topics

- 3 key features in Work Programme
 - **Specific Challenge** – sets the context, the problem to be addressed, why intervention is necessary
 - **Scope** – delineates the problem, specifies the focus and the boundaries of the potential action BUT without overly describing specific approaches
 - **Expected Impact** – describes the key elements of what is expected to be achieved
- Simplified types of action (instruments): Research & Innovation 100%; Innovation 70%; Coordination and Support Action etc.
- Size of projects may be indicated

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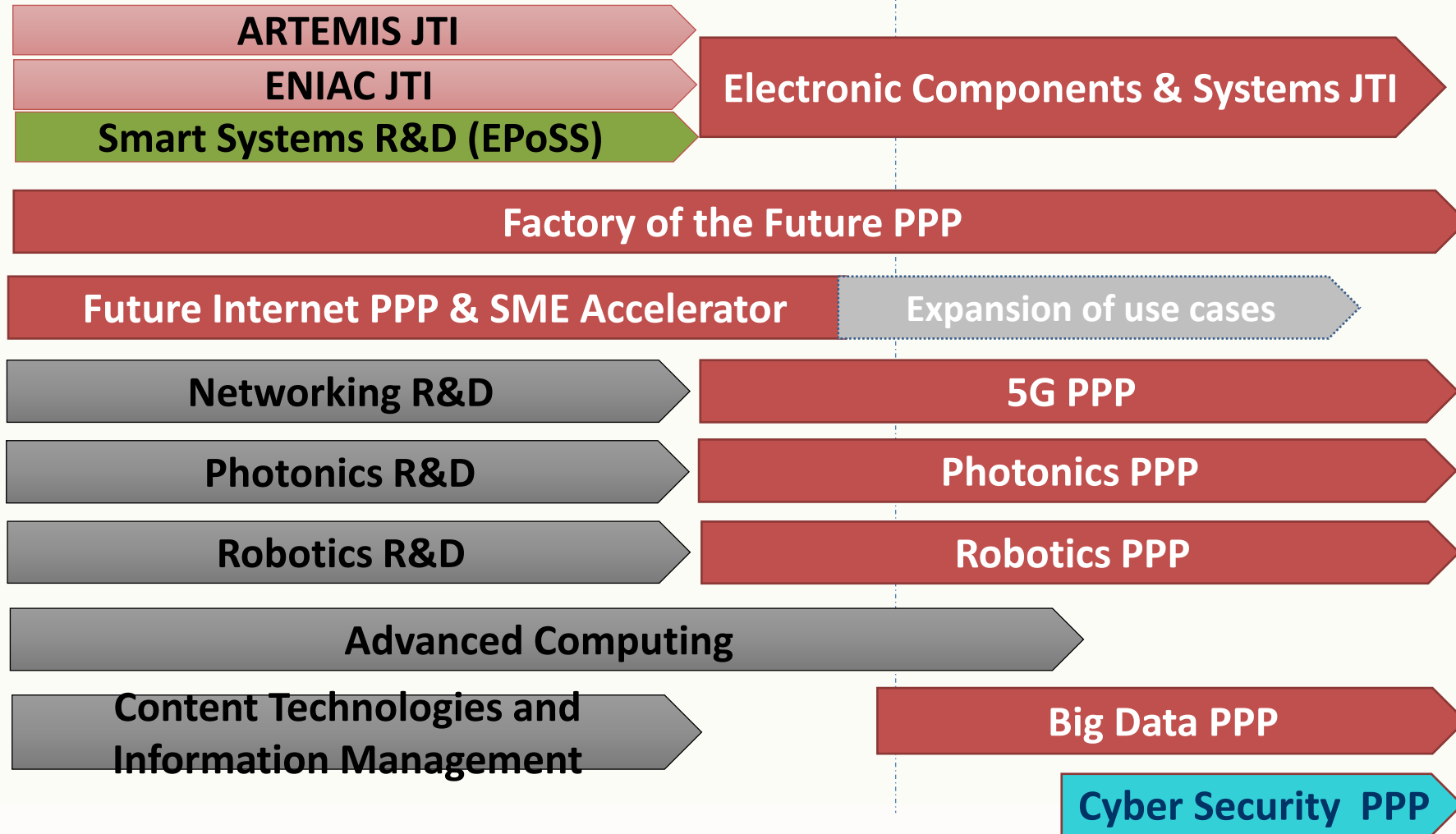
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Strategic Research Agendas

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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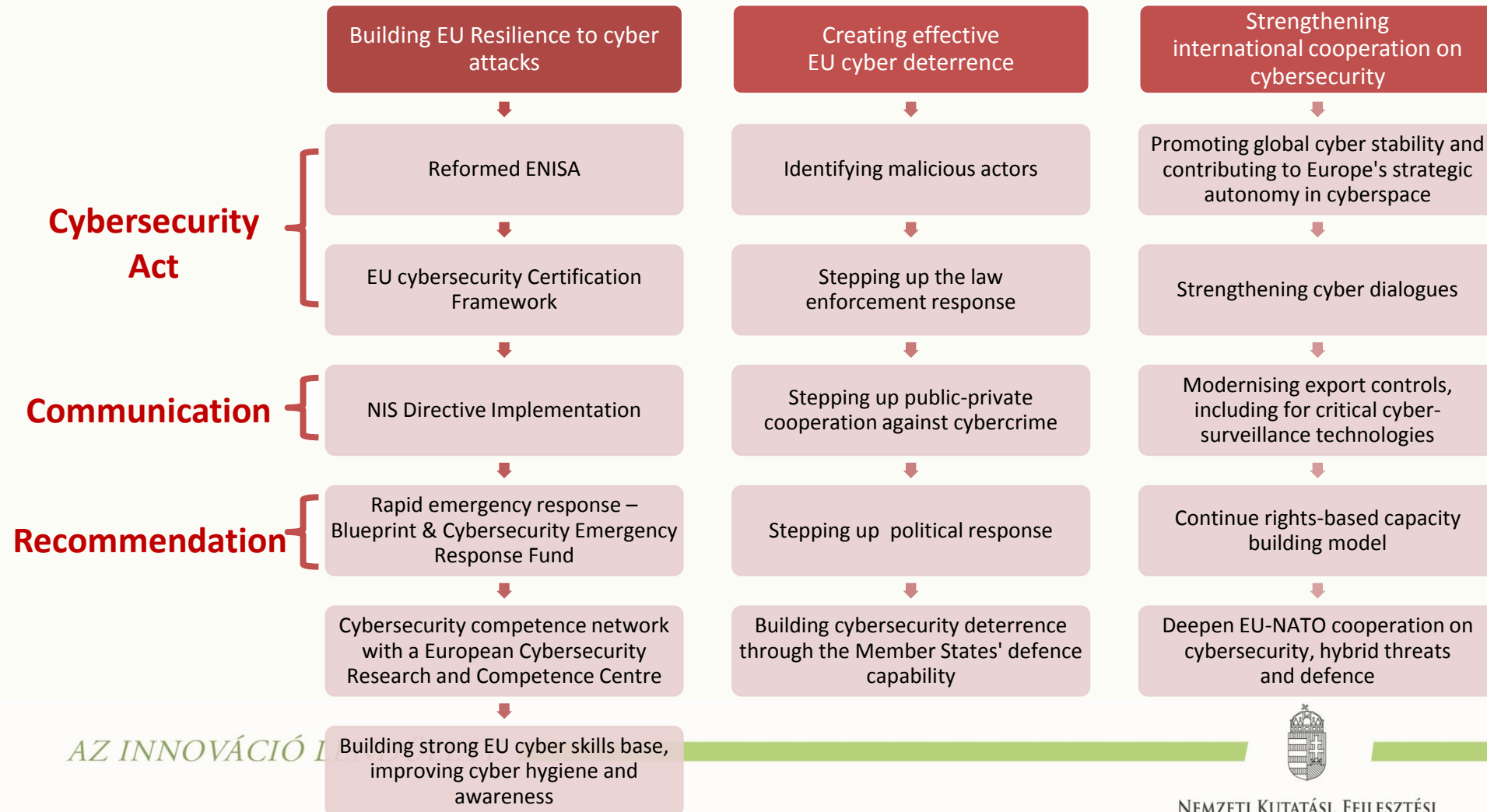
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EU Cyber Security policies

- CIIP Directive (2012) [Critical information infrastructure protection: towards global cyber-security](#)
- The [Cybersecurity Strategy for the European Union](#) (2013) and the [European Agenda on Security](#) (2015) provide the overall strategic framework for the EU initiatives on cybersecurity/cybercrime.
- [eIDAS Regulation](#) (2014) on electronic identification and trust services for e-transactions in the internal market.
- [cPPP Initiative 2015](#) ensures that Europe will have a dynamic, efficient market in cybersecurity products / services.
- [Directive \(EU\) 2016/1148 \(NIS\)](#) sets obligations: national strategies, CSIRT, requirements for operators, national competent authorities.

Cybersecurity Package - adopted 09/2017



Felhívások - H2020-SU-DS-2018-2019-2020

- [SU-DS01-2018: Cybersecurity preparedness - cyber range, simulation and economics](#) - 23 August 2018
- [SU-DS03-2019-2020: Digital Security and privacy for citizens and Small and Medium Enterprises and Micro Enterprises](#) - 22 August 2019
- [SU-DS04-2018-2020: Cybersecurity in the Electrical Power and Energy System \(EPES\): an armour against cyber and privacy attacks and data breaches](#) - 23 August 2018
- [SU-DS05-2018-2019: Digital security, privacy, data protection and accountability in critical sectors](#) - 23 August 2018
- [SU-DS05-2018-2019: Digital security, privacy, data protection and accountability in critical sectors](#) - 22 August 2019

Felhívások - H2020-SU-ICT-2018-2020

- [SU-ICT-01-2018: Dynamic countering of cyber-attacks](#) - 28 August 2018
- [SU-ICT-02-2020: Building blocks for resilience in evolving ICT systems](#) - 19 November 2019
- [SU-ICT-04-2019: Quantum Key Distribution testbed](#) - 28 August 2018

SU-ICT-04-2019: Quantum Key Distribution testbed

QT Flagship (FETFLAG-03-2018):

- Ramp-up phase in H2020 to further develop QT R&D and move technologies up to higher TRLs
- Full implementation under FP9

QKD testbed call (SU-ICT-04-2019) not on R&D but a pilot

- to determine the maturity of QKD
- to identify the practical implementation issues,
- to find out where QKD deployment makes sense
 - economically
 - security-related
- QKD pilot is investigating the technology readiness for a European digital service infrastructure

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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

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

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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*

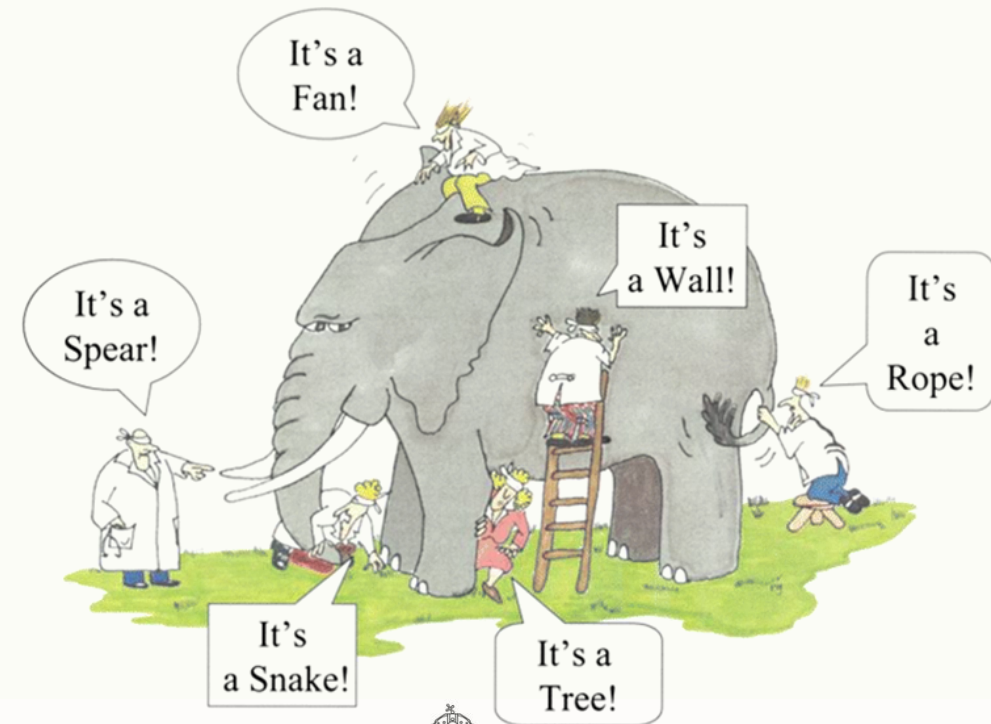
X *Online platforms in the consumer world*

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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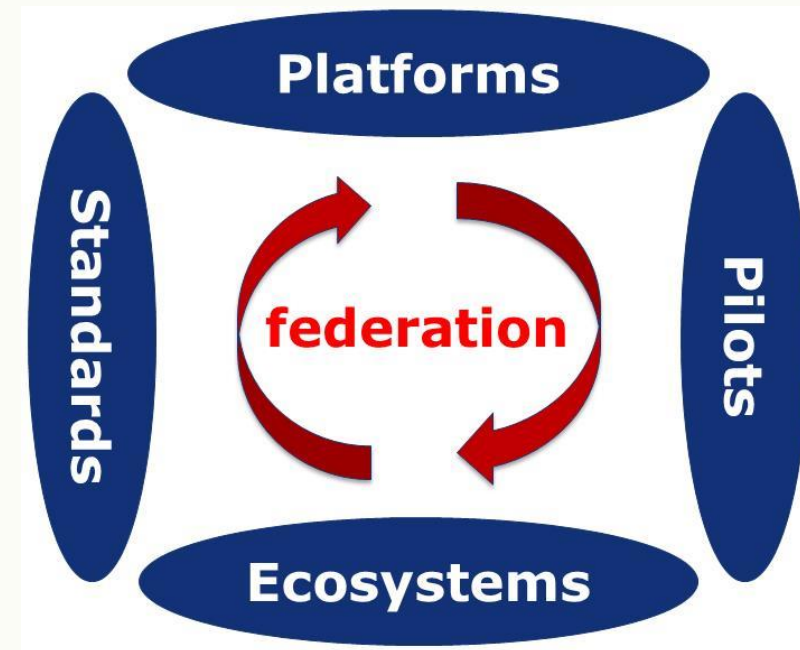
Digital Industrial Platforms

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



WP 2018-2020

Topics pan-European platform-building and piloting



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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
- Díjak
- 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.)

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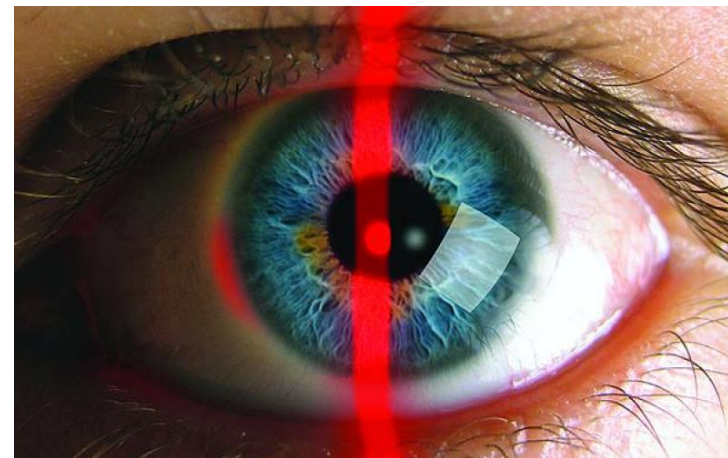
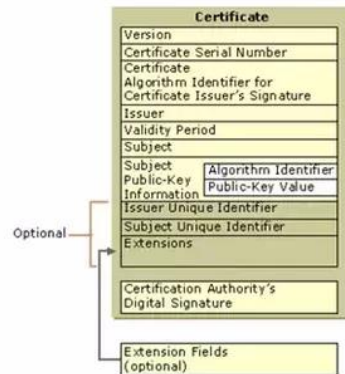
Online security Seamless personal authentication

(Authentication for All -a²)

Authentication of People



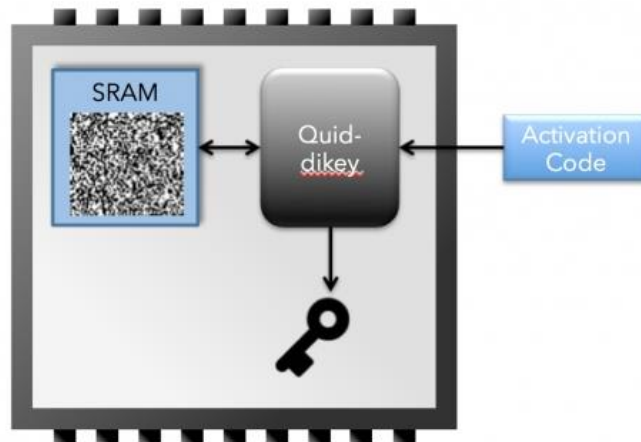
Standard X.509 certificate format



Authentication of Objects

RFIDs

SRAM PUF technology



Authentication of people linked with their objects



What is the issue?



In the new technological revolution where connected and autonomous smart objects interact, we should bring people at the center of gravity, liable for their smart objects.

The Challenge

Develop innovative ways to enable **everyone** with their **linked smart objects** to be able to easily prove in the cyberspace their **identities**, their **mutual relationships**, **privileges** and **rights**.

In other words we need **innovative (group) authentication** where connectivity will become an opportunity and not a burden to people.

Characteristics of the solution

- Inclusive (appropriate for **all citizens**)
- Easy to use,
- reliable,
- Robust against cyber-attacks,
- Privacy-aware
- Compatible
- Affordable
- Open

What are inducement prizes?

- A novel funding instrument, different from e.g. grants (the usual way to co-fund research projects).
- Prize contests address technological and/or societal challenges.
- A target is specified through award criteria.
- The reward goes to the contestant who (first/best) reaches the target.

Deadlines

Opening of the submission	28/09/2017
Closing date for submission	27/09/2018 at 17:00 CEST
Evaluation and solution demonstration	11-12/2018
Prize award	12/2018

Scoring Matrix

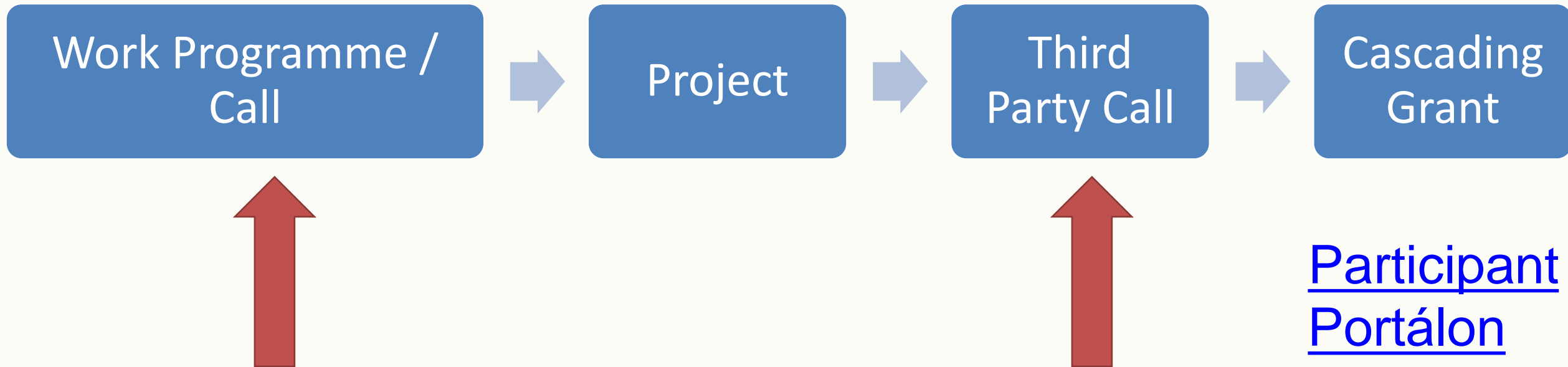
Criterion	Threshold	Maximum points
1. Significant contribution	18	23
2. Usability	6	8
3. Reliability	5	8
4. Security	11	14
5. Privacy and data protection	10	13
6. Applicability	5	8
7. Compatibility	5	8
8. Affordability	5	8
9. Openness	6	10
Total	71	100

■ PRIZE AMOUNT

A total budget of 4.000.000 EUR is available for this prize, offering 3 (three) awards as follows:

- 2.800.000 EUR for the winner(s).
- 700.000 EUR for the 1st runner-up.
- 500.000 EUR for the 2nd runner-up

Channels for H2020 ICT Funding



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
• 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	-	-



Future Internet Research and Experimentation (FIRE)

- [ORCA: Orchestration and Reconfiguration Control Architecture](#)
Beadási határidő: 2017.11.08 (feasibility), 2017.11.15 (final)
- [RAWFIE: Road-, Air-, Water-based Future Internet Experimentation](#)
Beadási határidő: 2017.11.27 (feasibility), 2017.12.27 (final)
- [F-INTEROP: Platform for Online Interoperability and Performance Test](#)
Beadási határidő: 2017.12.20, 17:00
- [Fed4FIRE+: Innovative Experiments \(Future Internet Research and Experimentation\)](#)
Beadási határidő: 2018.01.15, 17:00
- [FLAME: Facility for Large-scale Adaptive Media Experimentation](#)
Várható megjelenés: 2018.03.
- [5GINFIRE: Evolving FIRE into a 5G-Oriented Experimental Playground for Vertical industries](#)
Várható megjelenés: hamarosan

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Future Internet (FIWARE)

- [IMPACT Growth: European Superstars for Future Internet](#)
Beadási határidő: 2017.12.12 13:00
- [IMPACT Connected Car: Impacting on the Emerging Connected Car VaLuE Chains](#)
Beadási határidő: 2018.01.10, 13:00
- [FrontierCities2: Market Acceleration Grants](#)
Várható megjelenés: 2017.11.15

ICT Innovation for Manufacturing SMEs (I4MS)

- RECONCELL: Reconfigurable automated assembly workcell
Várhatóan megjelenés 2017.11
- HORSE: Smart integrated Robotics system for SMEs controlled by Internet of Things based on dynamic manufacturing processes
Várhatóan megjelenés 2017.11
- ROSIN: ROS-Industrial quality-assured robot software components
Beadási határidő: költségvetési keret függvényében akár a projekt lezárásáig (2020.12.31)

Smart Anything Everywhere (SAE)



SmartAnythingEverywhere

- fed4SAE: Federated CPS Digital Innovation Hubs for the Smart Anything Everywhere Initiative
Várható megjelenés: 2017.vége
- Tetramax: TEchnology TRAnsfer via Multinational Application eXperiments
Beadási határidő: 2018.02.28
- Diatomic: Digital Innovation Hubs boosting European Microelectronics Industry
Várható megjelenés: 2018.03
- SmartEEs: SMART Emerging Electronics Servicing DIH
Várható megjelenés: 2018.03

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Internet of Things - European Platforms Initiative



- [symbloTe: Symbiosis of smart objects across IoT environments](#)
Beadási határidő: 2017.12.15 (feasibility), 2018.01.18 (final)
- [BloTope: Building an IoT OPen innovation Ecosystem for connected smart objects](#)
Várható megjelenés: 2017.12
- [Big IoT: Bridging the Interoperability Gap of the Internet of Things](#)
Várható megjelenés: 2018.01
- [AGILE: Adoptive Gateways for diverse muLtiple Environments](#)
Várható megjelenés: 2018.02
- [VICINITY: Open virtual neighbourhood network to connect intelligent buildings and smart objects](#)
Várható megjelenés: 2018.01

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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](#)

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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](#)

Description of the topics

Új Ideal-ist szolgáltatás - pre-proposal check

A szolgáltatás keretében a potenciális résztvevők az IKT felhívásokra vonatkozó projektötleteikről előzetes visszajelzést kaphatnak a munkaprogram elvárásai kapcsán.

A projektötletek rövid leírását regisztrációt követően az alábbi online felületen keresztül lehet benyújtani:

<http://ppc.ideal-ist.eu/node/add/ppc>

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ICT Proposers' Day

9-10 Nov 2017

Budapest



INFORMATION – BROKERAGE – CONSORTIUM BUILDING – EXHIBITION

Web: <https://ec.europa.eu/digital-single-market/en/news/ict-proposers-day-2017>

Twitter: <https://twitter.com/ictproposereu>

Brokerage: www.b2match.eu/ictproposersday2017

25 project ötlet
423 profil
(268 ECSO)

ICT Proposers' Day

9-10 Nov 2017 - Budapest

Day 1: Thursday 9/11/2017

	NGI & 5G	Digitising European Industry	European Data Infrastructure	FET	Societal Challenges	Innovation
9:30 - 11:00	5G - Phase 3 & Global 5G Collaborations (part I)	Digital Platforms & Manufacturing	European Data Infrastructure: HPC (part I)	FET Proactive	Cybersecurity & Digital Privacy	Pitching session
COFFEE BREAK						
11:30 - 13:00	5G - Phase 3 & Global 5G Collaborations (part II)	Digital Platforms for Homes	HPC (part II)	FET Open	H2020: Proposal Making *	Innovation Radar Pitching session
LUNCH						
14:00 - 15:30	Future Hyper-connected Sociality	Agriculture Platforms & Horizontal Actions	eInfrastructures and European Open Science Cloud	FET Flagships	E-health, Well-being and Ageing (Part I)	Artificial Intelligence & Start-ups
COFFEE BREAK						
16:00 - 17:30	Artificial Intelligence	Smart Systems & Flexible Wearable Electronics	European Data Infrastructure: Big Data	H2020: Proposal Making *	E-health, Well-being and Ageing (Part II)	Innovation Radar Awards
					Cybersecurity & Digital Privacy: Authentication prize	

* Information/ Horizontal session

ICT Event

4-6 Dec 2018

Bécs



INFORMATION – BROKERAGE – CONSORTIUM BUILDING – EXHIBITION

Web: <https://ec.europa.eu/digital-single-market/en/news/save-date-ict-2018-event-will-take-place-4-6-december-2018-vienna>

Twitter: <https://twitter.com/ICT2018eu>

Brokerage: <http://www.b2match.eu/ict2018> (hamarosan)

Thank you and get in touch !

Németh Edina

ICT & FET

Programme Committee Member

National Contact Point

NKFIH

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