

Angelo Nuzzo, Manfred Halver | ICT Experts

HORIZON 2020: ICT WORK PROGRAMME – LAST CALLS

TU Wien, 14.11.2019

HORIZON 2020: RULES OF THE GAME

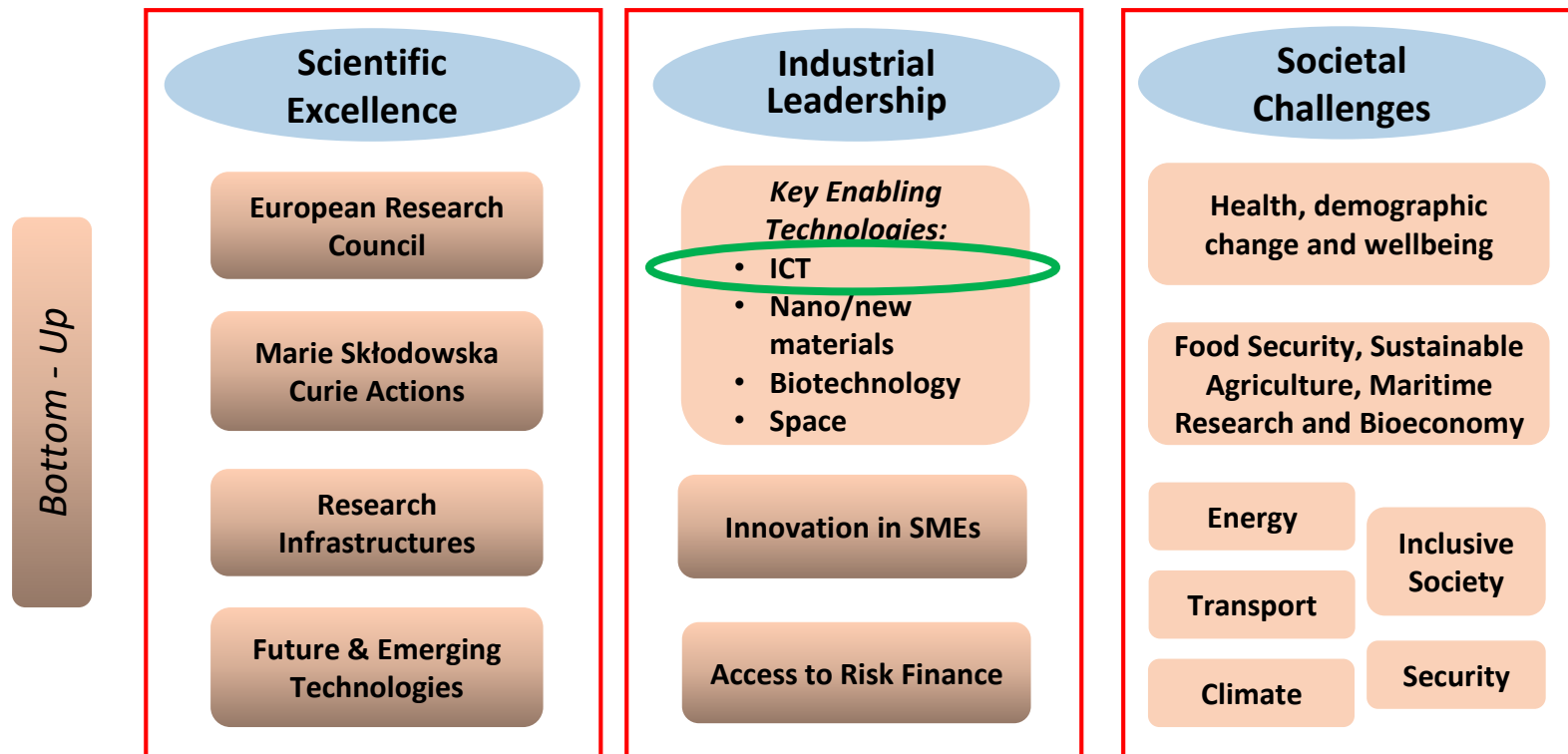
COLLABORATIVE RESEARCH..... (© EC)

...across borders and other barriers

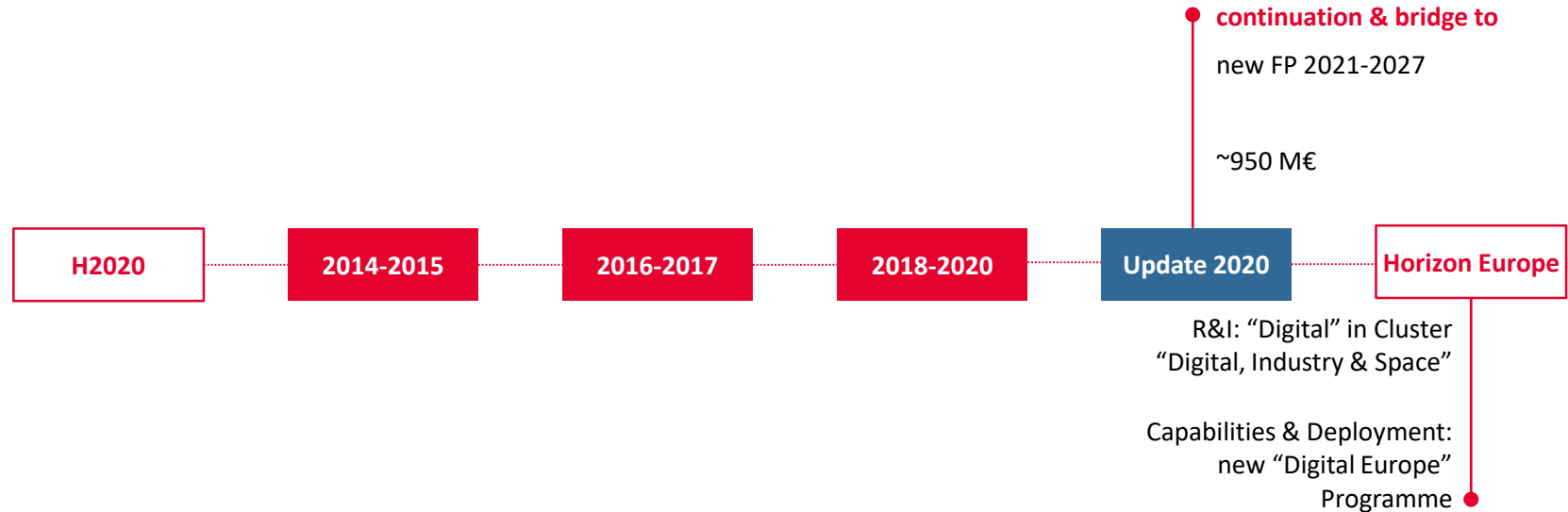
- **between countries**
Min. 3 partners from 3 different EU countries (or associated parties)
- **between different types of organizations**
Public & private sector: universities, research centres, large companies, Small and medium-sized enterprises (SMEs), etc.
- **between disciplines:** multidisciplinary, translational research

Type of Action	Funding Rate
RIA - Research and Innovation Actions	100 %
IA - Innovation Action	70 % 100 % for Non Profit Organisations
CSA - Coordination and Support Action	100 %

HORIZON 2020: THE STRUCTURE



H2020 LEIT-ICT WORK PROGRAMMES



ICT WP 2020

ICT

Information and Communication Technologies

- Artificial intelligence and Technologies for Digitising European Industry and Economy
- European Data Infrastructure: HPC, Big Data and Cloud Technologies
- 5G
- Next Generation Internet (NGI)
- Cross-cutting activities
- International Cooperation activities

Budget: 709.0 M€

DT-ICT

Digitising and transforming European industry and services: digital innovation hubs and platforms

- Support to Hubs
- Platform and Pilots

Budget: 190.5 M€

SU-ICT

Cybersecurity

- Focus on resilience

Budget: 47.0 M€

TIMELINE OF EACH CALL

write



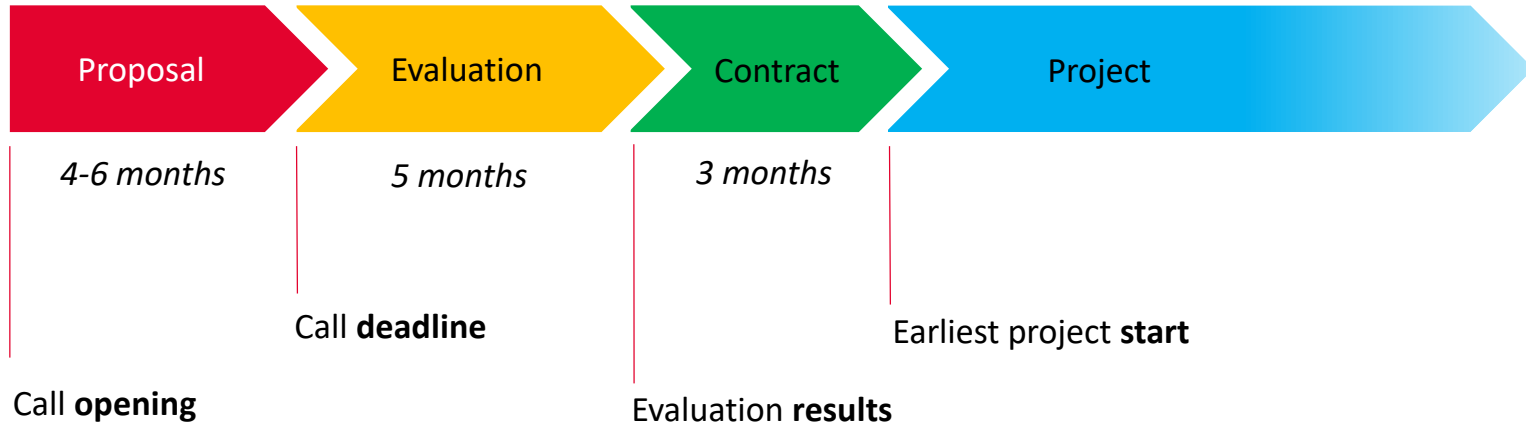
wait



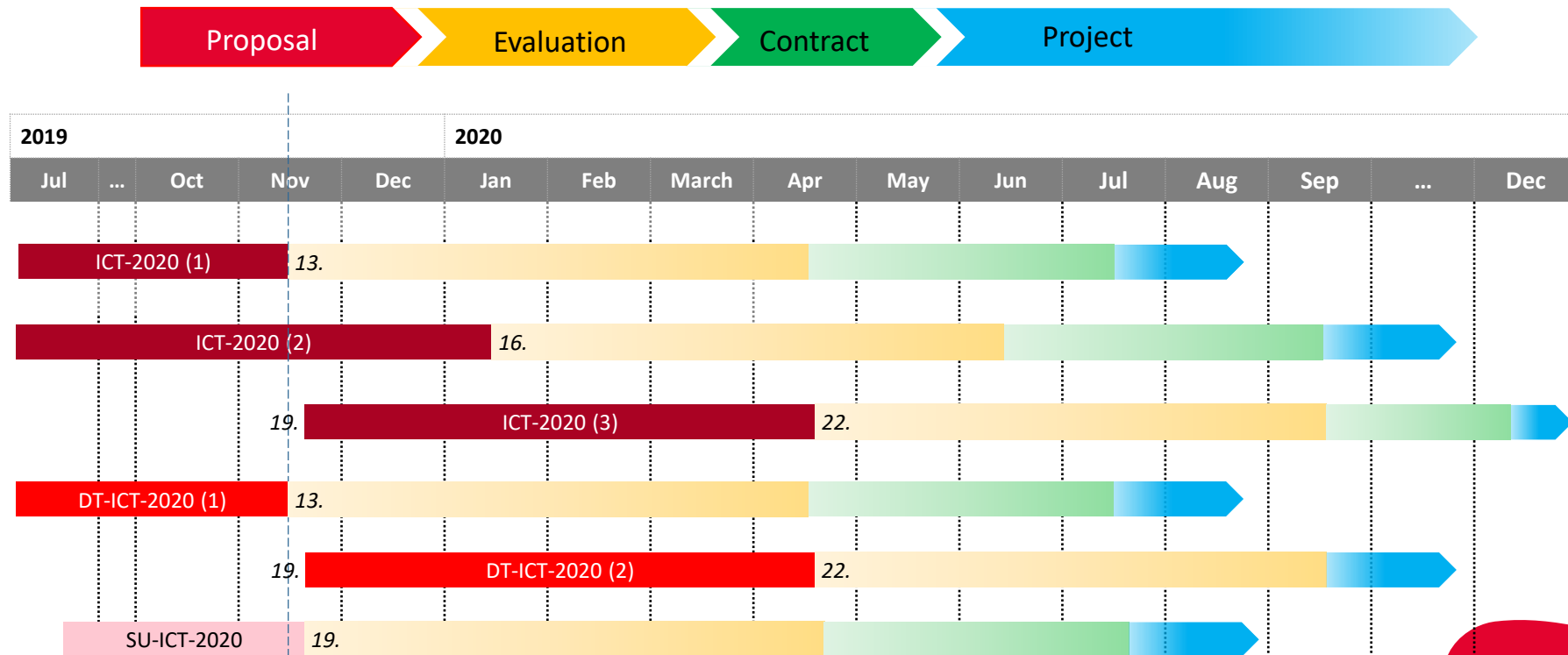
work out the deal



work 😊



TIMELINE



INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)

ICT

Information and Communication Technologies

Reinforcement on:

Artificial Intelligence

5G Corridors

Blockchain/NGI/IoT

Software/Computing

Continuation of:

Core Tech.

Cross/Intl' activities

Budget 709.00 M€

Deadline
16.01.2020

ICT-38-2020 (RIA,CSA) 48.0
AI for manufacturing

ICT-42-2020 (IA,CSA) 49.0
5G Core Tech.

ICT-44-2020 (IA,CSA) 17.5
Next Generation Media

ICT-54-2020 (RIA) 20.0
Blockchain for NGI

ICT-56-2020 (RIA,CSA) 48.5
Next Generation IoT

ICT-50-2020 (RIA,CSA) 30.0
Software Technologies

ICT-51-2020 (RIA,CSA) 31.5
Big Data Analytics

Deadline
22.04.2020

ICT-49-2020 (IA) 20.0
AI on demand

ICT-41-2020 (IA) 49.00
5G for verticals

ICT-52-2020 (IA) 49.00
Beyond 5G

ICT-57-2020 (RIA) 7.0
Inclusive NGI

ICT-40-2020 (RIA,CSA) 20.0
Cloud Computing

ICT-36-2020 (RIA) 47.50
Disruptive Photonics tech.

ICT-37-2020 (all) 48.0
Advanced Photonics tech.

ICT-46-2020 (all) 86.0
Robotics Application

ICT-47-2020 (RIA) 20.0
Robotics innovation

ICT-58-2020 (IA,CSA) 11.0
EU-Africa innovation hubs.



ARTIFICIAL INTELLIGENCE

CALLS - Deadline

- **ICT-38-2020:** Artificial intelligence for manufacturing
- **ICT-49-2020:** Artificial Intelligence on demand platform

16.01.2020

22.04.2020

KEY points:

- Both ICT-48 and ICT-49 build on the AI-on-demand platform – AI4EU (<https://www.ai4eu.eu/>) and reinforce it:
 - ICT-48 for the R&D part
 - ICT-49 to be “one-stop-shop” for AI resource in Europe and to enlarge the user community, focuses on its use in experiments
- ICT-38 expects NEW technologies applied in NEW use cases
 - Build on ICT-26-2018, link with DT-ICT-03-2020 (I4MS)
- Joint initiative from BDVA and euRobotics: Strategic Research, Innovation and Deployment Agenda for an AI PPP

CALLS - Deadline

- ICT-42-2020: 5G PPP – 5G cor technologies innovation 16.01.2020
- ICT-41-2020: 5G PPP – 5G innovations for verticals with third party services 22.04.2020
- ICT-52-2020: 5G PPP – Smart Connectivity beyond 5G 22.04.2020

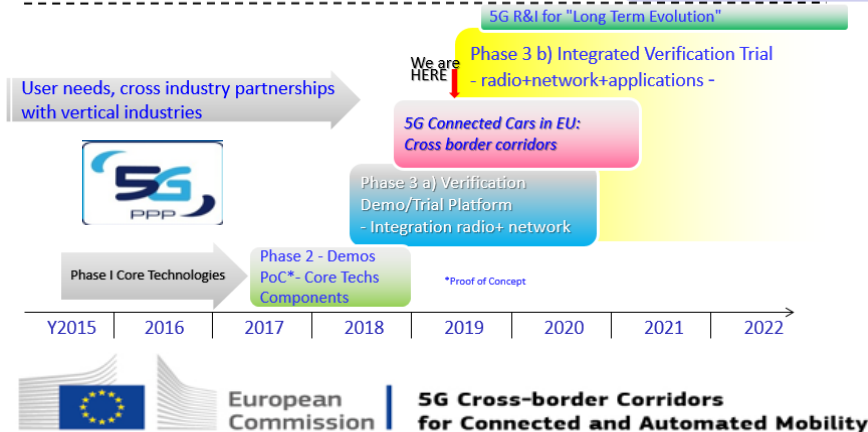
KEY points:

- Leveraging on 5G enabling technologies and systems developed within or out of the 5G PPP Phases 1, 2 and 3
- Extending the innovation to software innovations with low market entry barriers for SME's and new actors
- Extending coverage, technology (e.g. AI), use cases, impact towards standards
- ICT-42: Support a European offer for new 5G (> TRL 7)

5G Public Private Partnership

Phase 3 in Work Programme 2020: accelerating take up and industrial readdiness

WP 2020, extra R&I
- 5G innovations for verticals with third party services



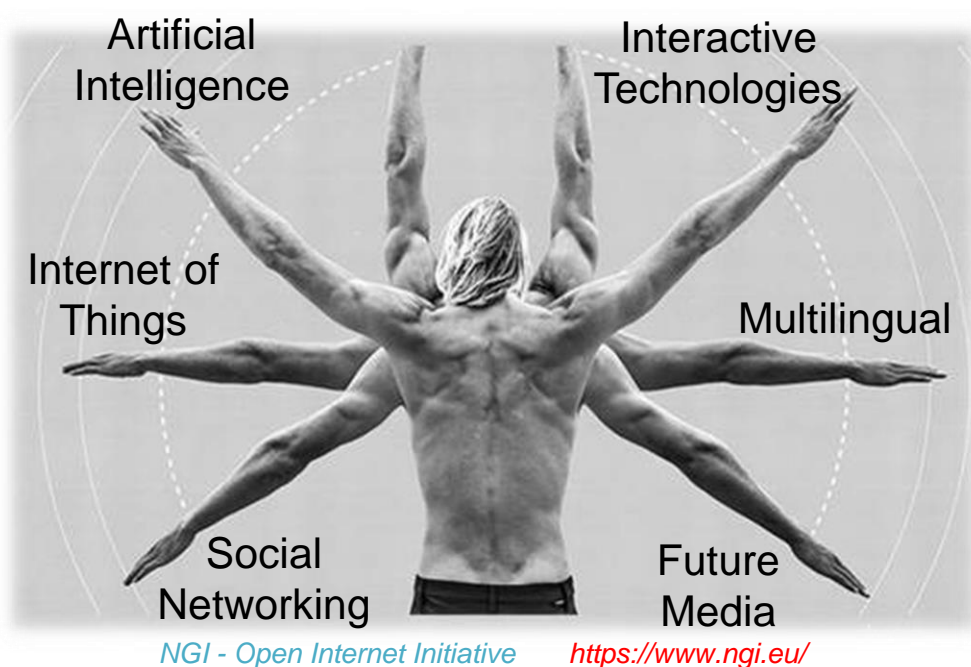
NEXT GENERATION INTERNET

CALLS - Deadline

- ICT-44-2020: Next Generation Media **16.01.2020**
- ICT-54-2020: Blockchain for the Next Generation Internet **16.01.2020**
- ICT-56-2020: Next Generation Internet of Things **16.01.2020**
- ICT-55-2020: Interactive Technologies **22.04.2020**
- ICT-57-2020: An empowering, inclusive Next Generation Internet **22.04.2020**

KEY points:

- Fostering trust in internet information exchange and content with blockchain, well linked with other NGI projects
- European Blockchain Observatory and Forum (www.eublockchainforum.eu)



- Next generation IoT architectures & devices
- Towards the **Tactile Internet** enabled by IoT, AR/VR and contextual computing
- Developing a more **human-centric Internet**
- ICT-44: Starts – Technology and Arts Alliance as Driver for Next Generation Media (significant amount of budget to be reserved for activities involving artists)

SOFTWARE TECHNOLOGIES

CALLS - Deadline

- **ICT-50-2020:** Software Technologies **16.01.2020**
- **ICT-51-2020:** Big Data technologies and extreme-scale analytics **16.01.2020**
- **ICT-40-2020:** Cloud Computing: towards a smart cloud computing continuum **22.04.2020**

KEY points:

- SW: Development tools, methods & processes, improve reliability and cybersecurity, contribute to EU SW technology independence
- BD: machine learning/deep learning, architectures, deep analysis, precise predictions, considering computing capacity and connectivity issues and responding to industrial requirements
- Advanced cloud technologies to demonstrate the applicability and viability of the proposed technological solutions across multiple application domains.



CALLS - Deadline

- ICT-46-2020: **Robotics** in Application Areas and Coordination & Support
- ICT-47-2020: Research and Innovation boosting promising **robotics** applications

KEY points:

- 4 Priority Areas: Healthcare, Inspection and maintenance of infrastructure, Agri-food, Agile production
- 4 Core Technologies: AI and Cognition, Cognitive Mechatronics, Socially cooperative human-robot interaction, Model-based design and configuration tools (*at least 1 proposal per technology funded*)
- Strong connection to DIHs (<http://www.dih-squared.eu/>, <https://dih-hero.eu/>)

CALLS - Deadline

- ICT-36-2020: Disruptive **photonics** technologies
- ICT-37-2020: Advancing photonics technologies and application driven **photonics** components and the innovation ecosystem

KEY points:

- **components and systems** which enable 3D light field or holographic displays
- Novel Photonics Integrated Circuit (PIC) Technology
- <http://www.photonics21.org>



CROSS CUTTING AND INTERNATIONAL ACTIVITIES

CALLS - Deadline

- **ICT-58-2020:** International partnership building between European and African Innovation Hubs

22.04.2020

KEY points:

- To reinforce cooperation and strategic partnership with selected countries in Africa to support the strengthening of existing digital innovation hubs (DIHs) in Africa and to facilitate the collaboration between EU and African DIHs



HUBS AND PLATFORMS (DT-ICT)

DIGITISING EUROPEAN INDUSTRY

DT-ICT

**Digitising and transforming
European industry and
services:**

Digital Innovation Hubs

Digital Platforms

Budget: 190.5 M€

Deadline
22.04.2020

DT-ICT-04-2020 (IA) 19.00
Photonics Innovation Hubs

DT-ICT-09-2020 (IA) 30.00
Boost rural economies

DT-ICT-12-2020 (IA) 40.00
AI for smart hospitals

DIGITAL INNOVATION HUBS

CALLS - Deadline

- **DT-ICT-04-2020**: Photonics Innovation Hub **22.04.2020**

KEY points:

- 4 mandatory features of DIH (study the Work Programme for details)
- Provide support to SMEs via cascade funding
- Look at relevant initiatives (BDVA for Big Data, Photonics21 for Photonics, DIHELP.eu and DIHNET.eu for all DIHs)
- <https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool>





PLATFORMS



CALLS - Deadline

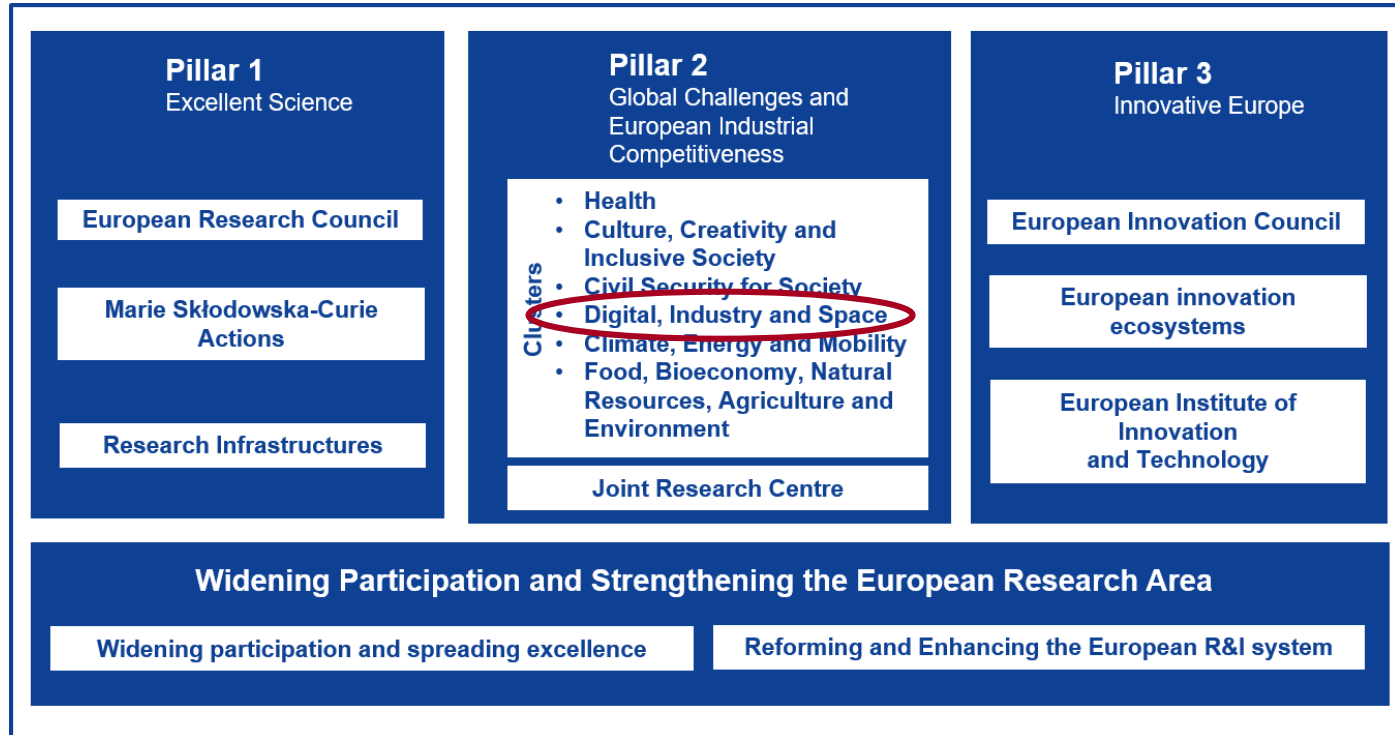
- **DT-ICT-09-2020:** Boost rural economies through cross-sector digital service platforms **22.04.2020**
- **DT-ICT-12-2020:** AI for the smart hospital of the future **22.04.2020**

KEY points:

- Related to support whole industry/economic sectors
- Key-players of sector included in consortium
- Third Parties deliver specific digital solutions via “cascading funding” mechanism

HORIZON EUROPE

HORIZON EUROPE



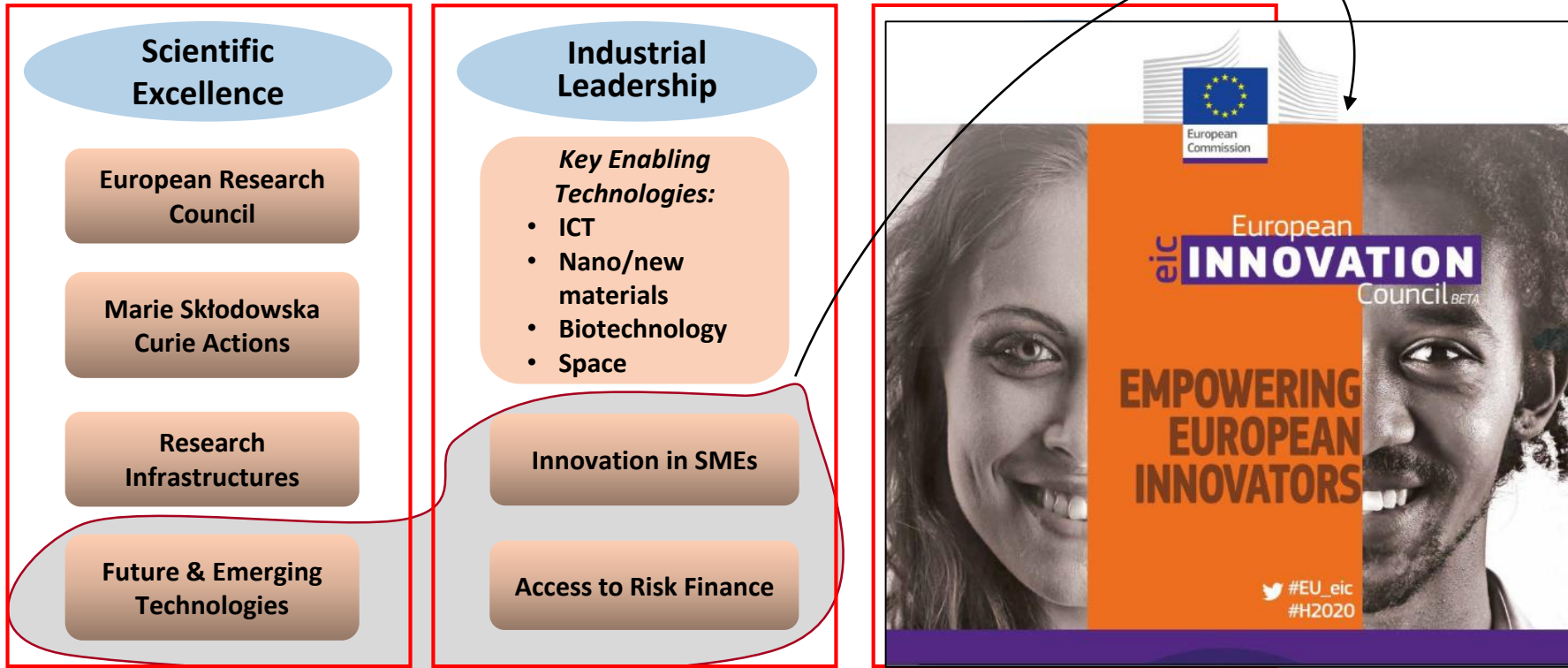
HORIZON EUROPE – CLUSTER 4

9 intervention areas:

- Manufacturing technologies
- Key digital technologies
- Advanced materials
- Artificial intelligence and robotics
- Next generation internet
- Advanced computing and big data
- Circular industries
- Low carbon and clean industries
- Space



HORIZON 2020 → HORIZON EUROPE (PILLAR 3)

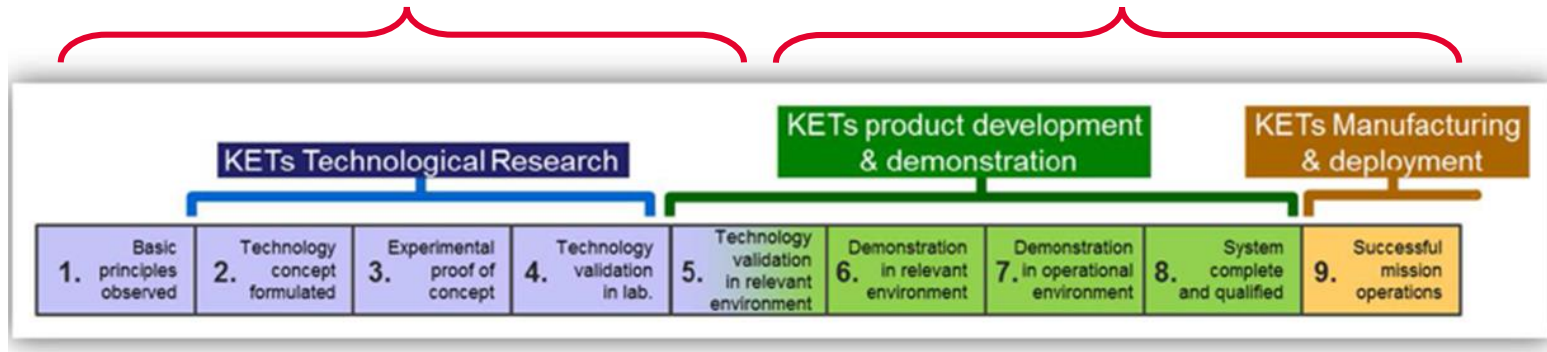


PILOT: 2019-2020

Two complementary instruments bridging the gap from idea to investable project

Pathfinder: grants
(from early technology
to pre-commercial)

Accelerator:
grants & blended finance
(from pre-commercial
to market & scale-up)



If you are an innovative researcher with an idea for the next breakthrough technology, you should apply to the **"Pathfinder"**.

If you are a start-up, SME, entrepreneur with a business plan to develop and scale up a high-risk innovation, then the **"Accelerator"** is the right way forward for you.

FET OPEN – EIC PATHFINDER

- Objective: Embodiment of novel ideas into **radically new technologies**
- Optimal project results: Proof of concept/early lab demonstrator of the proposed technology
- Collaborative projects of ≥ 3 partners (RIAs)
- Any topic, any discipline, any participants
- Deadline: 13. May 2020
- Call budget: 190 M€
- Project budget: ~ 3 M€
- Project execution time: ~ 3 years
- Typical consortia: 3 - 6 partners
- Success rate: 10-15%

EIC ACCELERATOR

- **Single SME** with a business plans to develop a **high risk** innovation **to scale up** with a **disruptive impact** on the Market
- **Bottom-up**: any topic, product, service, business model
- Funding options:
 - **Grant** funding for the **late stage development** (min. TRL 6) up to € 2.5 millions (70% of costs)
 - **Equity** investment by EC up to € 15 millions (TRL 9)
- Success rate: $\sim 5\%$ (extremely competitive)
- Funded projects map: <https://sme.easme-web.eu/>
- Next submission deadlines:
 - 8 January 2020
 - 16 March 2020
 - 19 May 2020
 - 7 October 2020

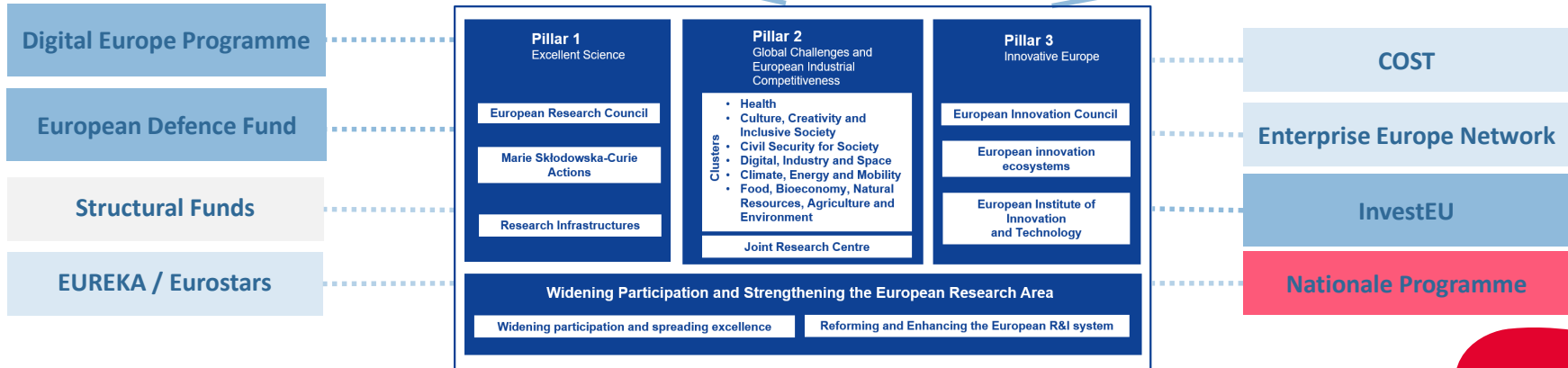
HORIZON EUROPE

Mission Areas

- Adaptation to climate change, including societal transformation
- Cancer
- Healthy oceans, seas and inland waters
- Climate-neutral and smart cities
- Soil Health and Food

Partnership Areas

- Health innovations and global health
- Key digital and enabling technologies
- Metrology and an integrated metrology system
- Air traffic, aviation and rail
- Bio-based solutions
- Clean hydrogen and sustainable energy storage
- Clean, autonomous and automated mobility
- Innovative and R&D intensive SMEs



„DIGITAL“ TOPICS IN EU PROGRAMMES

DEP - Digital Europe

1. High Performance Computing (HPC)
2. Artificial Intelligence (AI)
3. Cybersecurity
4. Advanced digital skills
5. Digital transformation and interoperability

€ 9.2 Bn

HEU - 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

› € 12 Bn
for digital

CEF - Connecting Europe Facility - Digital

Connectivity

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

€ 3 Bn

Creative Europe including MEDIA

- Distribution of works
- Creation

€ 1.1 Bn

SUMMARY

CALLS SUMMARY: TOPICS AND DEADLINES

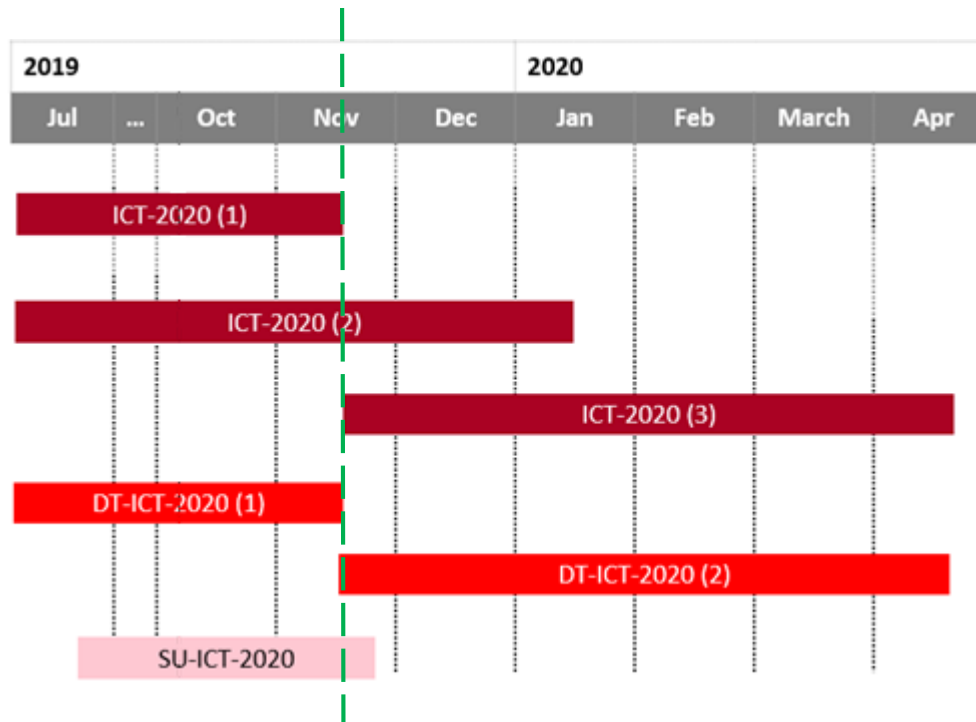
Information and Communication Technology (ICT)

- Artificial intelligence and Technologies for Digitising European Industry and Economy
- European Data Infrastructure: HPC, Big Data and Cloud Technologies
- 5G
- Next Generation Internet (NGI)
- Cross-cutting activities
- International Cooperation activities

Digitising and transforming European industry and services (DT-ICT)

- Support to Hubs
- Platform and Pilots

Cybersecurity (SU-ICT)



YOUR ICT EXPERTS



DI Manfred Halver

www.ffg.at/ikt/international



Dr. David Kolman



DI Dr. Angelo Nuzzo



DI Dr. Angelo Nuzzo
Programme Manager ICT
European and International Programmes
FFG Austrian Research Promotion Agency

angelo.nuzzo@ffg.at
+43 57755 4203