HORIZON 2020: ICT WORK PROGRAMME – LAST CALLS

TU Wien, 14.11.2019
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

Scientific Excellence
- European Research Council
- Marie Skłodowska Curie Actions
- Research Infrastructures
- Future & Emerging Technologies

Industrial Leadership
- Key Enabling Technologies:
  - ICT
  - Nano/new materials
  - Biotechnology
  - Space
- Innovation in SMEs
- Access to Risk Finance

Societal Challenges
- Health, demographic change and wellbeing
- Food Security, Sustainable Agriculture, Maritime Research and Bioeconomy
- Energy
- Transport
- Climate
- Inclusive Society
- Security
H2020 LEIT-ICT WORK PROGRAMMES

Capabilities & Deployment: new “Digital Europe” Programme

continuation & bridge to
new FP 2021-2027

~950 M€
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 😊**

**Proposal**
- 4-6 months
- Call **opening**

**Evaluation**
- 5 months
- Call **deadline**
- Evaluation **results**

**Contract**
- 3 months
- Earliest project **start**

**Project**
# TIMELINE

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<tr>
<th>Year</th>
<th>Month</th>
<th>ICT-2020 (1)</th>
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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’ activitites

### Budget

709.00 M€

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<th>Project Code</th>
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<td>ICT-51-2020</td>
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## ICT - 2020

- **Deadline:** 16.01.2020
- **Budget:** 709.00 M€

## ICT - 2020

- **Deadline:** 22.04.2020
- **Budget:** 709.00 M€

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<td>ICT-49-2020</td>
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<td>ICT-41-2020</td>
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<td>ICT-52-2020</td>
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<td>ICT-40-2020</td>
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<td>ICT-37-2020</td>
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<td>ICT-46-2020</td>
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<td>ICT-58-2020</td>
<td>EU-Africa innovation hubs.</td>
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ARTIFICIAL INTELLIGENCE

CALLS - Deadline

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

**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
5G PPP

CALLS - Deadline

- ICT-42-2020: 5G PPP – 5G core 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)
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)

NGI - Open Internet Initiative https://www.ngi.eu/
SOFTWARE TECHNOLOGIES

CALLS - Deadline

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

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
CROSS CUTTING AND INTERNATIONAL ACTIVITIES

CALLS - Deadline


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

**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

**Budget:** 190.5 M€
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)
CALLS - Deadline

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

**Pillar 1**
Excellent Science
- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

**Pillar 2**
Global Challenges and European Industrial Competitiveness
- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment
- Joint Research Centre

**Pillar 3**
Innovative Europe
- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

**Widening Participation and Strengthening the European Research Area**
- Widening participation and spreading excellence
- Reforming and Enhancing the European R&I system
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)

Scientific Excellence
- European Research Council
- Marie Skłodowska Curie Actions
- Research Infrastructures
- Future & Emerging Technologies

Industrial Leadership
- Key Enabling Technologies:
  - ICT
  - Nano/new materials
  - Biotechnology
  - Space
- Innovation in SMEs
- Access to Risk Finance

PILOT: 2019-2020
EUROPEAN INNOVATION COUNCIL

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: ~ 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

### 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

### CEF - Connecting Europe Facility - Digital
- Connectivity
  - Synergies with Transport /Energy
  - WIFI/Broad Band 4EU
  - 5G roll out

### Creative Europe including MEDIA
- Distribution of works
- Creation

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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

www.ffg.at/ikt/international

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