HORIZON EUROPE
DIGITAL EUROPE

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European Commission

DG CONNECT
Digital Industry
Competitive Electronics Industry

EF ECS 2020. 25th November 2020
From world-class research and strong industries...

- 7% of the world’s population
- 20% of global R&D
- 1/3 of all high-quality scientific publications

1.3% EU business R&D investment

...to leadership in innovation and entrepreneurship
Gross Domestic Product

Shares in world GDP in PPS (%, 2017)

- 16.4 China
- 16.3 United States
- 16.0 European Union
- 6.7 India
- 4.3 Japan
- 3.2 Russia
- 2.5 United Kingdom
- 2.5 Brazil
- 2.4 Indonesia
- 2.1 Mexico
- 1.9 Turkey
- 1.8 South Korea
- 1.5 Canada
- 1.3 Saudi Arabia
- 1.1 Iran
- 1.1 Egypt
- 1.0 Australia
- 1.0 Thailand
- 16.8 Rest of the World

Note: The European Union represents the European Union with 27 Member States after 1 February 2020.
From Horizon 2020 Lessons Learned

- Support breakthrough innovation
- Create more impact through mission-orientation and citizens’ involvement
- Strengthen international cooperation
- Reinforce openness
- Rationalise the funding landscape
- Encourage participation

To Horizon Europe Novelties

- European Innovation Council
- R&I Missions
- Extended association possibilities
- Open science policy
- New approach to Partnerships
- Spreading Excellence
Mission areas

Adaptation to climate change

Healthy oceans

Cancer

Smart cities

Soil health and food
Partnership. Areas

Horizon Europe – Joint Undertakings
Circular Bio-based Europe
Clean Aviation
Clean Hydrogen
Europe’s Rail
Global Health
Innovative Health Initiative
Single European Sky ATM Research
Smart Networks and Services
EuroHPC

Key Digital Technologies

Other partnerships
Photonics 21
Artificial Intelligence, data and robotics
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
Objectives

- to strengthen the EU's **scientific and technological** bases
- to boost Europe's **innovation** capacity, **competitiveness** and **jobs**
- to deliver on **citizens' priorities** and sustain our **socio-economic** model and **values**
On 10 November 2020, the European Parliament and EU Member States in the Council, with the support of the Commission, reached an agreement on the largest package ever financed through EU budget, of €1.8 trillion.
EU R&I Framework Programmes
“Destinations” in Cluster 4”

TWIN-TRANSITION
RESILIENCE
DATA
DIGITAL-EMERGING
SPACE
HUMAN

Horizon Europe legislative package
Strategic Plan 2021-2024
Work programme 2021-2022
Calls for proposals
### “Destinations” in Cluster 4”

<table>
<thead>
<tr>
<th>Short name</th>
<th>Full name</th>
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<tbody>
<tr>
<td>TWIN-TRANSITION</td>
<td>Climate neutral, circular and digitised production</td>
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<tr>
<td>RESILIENCE</td>
<td>A digitised, resource-efficient and resilient industry</td>
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<tr>
<td>DATA</td>
<td>World leading data and computing technologies</td>
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<tr>
<td>DIGITAL-EMERGING</td>
<td>Digital and emerging technologies for competitiveness and fit for the green deal</td>
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<tr>
<td>SPACE</td>
<td>Strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data</td>
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<tr>
<td>HUMAN</td>
<td>A human-centred and ethical development of digital and industrial technologies</td>
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### Topics includes:

- **Green, flexible Manufacturing, construction, Renewable resources, waste, CO/CO2**
- **Materials (raw, green, sustainable)** Multi-functional materials, green electronic materials
- **Data, platforms, OS, Cloud to Edge computing, Internet infrastructures**
- **Electronics, Photonics, low-power processors, AI, Robotics, Quantum, Graphene**
- **Space, Satellite, Observation systems, space services, Galileo**
- **Trustworthy AI, Ethics, data sovereignty Internet communities, digital interactions**
Financing the digital age (2021 – 2027)

- **Investing in research and innovation**
- **Connecting Europe**
- **Digital Europe**
- **Horizon Europe**

- **Connectivity and the digital transformation**

**Investing in High-Performance computing, AI, cybersecurity, skills, and digital take-up**
Digital Europe Programme

To ensure that Europe drives the digital transformation of the economy and society and brings its benefits to all citizens and businesses.

Focus on:
- Building essential capacities and advanced skills in digital technologies, contributing to Europe’s strategic autonomy;
- Accelerating deployment and best use in areas of public interest and the private sector.
Next Generation Computing

TECHNOLOGIES FOR LARGE SCALE TESTING AND EXPERIMENTATION FACILITIES (TEF)

EDGE AI: AI Chips / “Neuromorphic” chips
- Neuromorphic technology: mimics brain with hardware neural network, 1000x more efficient than standard HW+SW
- EU world player expertise and supply
- Major initiative: infrastructure facilities to design, test, experiment and validate for industrial use.
- Level of ambition and the role of technology providers joint MS/EC effort
Framework Programme Portal

https://ec.europa.eu/info/funding-tenders/opportunities/portal/

Funding & tender opportunities
Single Electronic Data Interchange Area (SEDIA)

F&T Portal proposal submission service will be unavailable on 24.11.2020, between 7:00 PM CET and 10:00 PM. We apologize for any inconvenience this may cause.

• Downloading documents will be unavailable in the Grants & Audits Management Services on Monday, 23.11.2020, between 18:00 and 20:00 CET. Uploading documents will remain available
• Legal Entity and Bank Account validations tasks will experience issues in the Grant Management Services and the Identity, Bank Account, Contracts and Payments functionalities in the Experts Area on Monday, 23.11.2020, between 20:00 and 22:00.
• Grant Management and Audits Management Services will be unavailable on Tuesday, 24.11.2020 between 07:30 and 08:15 CET.
Thanks!

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