

# Cluster 4 – Digital, Industry and Space

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# Destination 3

## World leading data and computing technologies

Sovereignty in digital technologies and in future emerging enabling technologies by strengthening European capacities in key parts of digital and future supply chains, allowing agile responses to urgent needs, and by investing in early discovery and industrial uptake of new technologies.

- Call – World leading data and computing technologies (ID: **DATA**)
  - Call 2021 - **6** topics (**3** RIA, **1** IA, **2** CSA), single stage call + 4 topics in 2022
  - Provisional budget 2021 **172 M€**
  - Provisional opening 15/04/2021 - deadline **31/08/2021**
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- Data sharing in the common European data space
  - Strengthening Europe's data analytics capacity
  - From Cloud to Edge to IoT for European Data
  - High-end computing for exascale performance and beyond

## Destination 3 - World leading data and computing technologies

Section	Budget (M€)	Topics (RIA / IA / CSA)
Data sharing in the common European data space	83	2 ( 1 / 1 / - )
Strengthening Europe's data analytics capacity	30	1 ( 1 / - / - )
From Cloud to Edge to IoT for European Data	59	3 ( 1 / - / 2 )

**Focus of topics:** trustworthy digital technologies / responsible and fair data operations / secure and energy efficient data management tools / data markets and data economy / extreme data mining, aggregation and analytics technologies / cascade funding – FSTP / higher-level operating systems for smart Internet of Things / other

# Destination 4

## Digital and emerging technologies for competitiveness and fit for the green deal

Globally attractive, secure and dynamic data-agile economy by developing and enabling the uptake of the next-generation computing and data technologies and infrastructures (including space infrastructure and data), enabling the European single market for data with the corresponding data spaces and a trustworthy artificial intelligence ecosystem.

- Call – Digital and emerging technologies for competitiveness and fit for the green deal (ID: **DIGITAL-EMERGING**)
  - Call 2021 - **23** topics (**10** RIA, **4** IA, **5** CSA, **4** FPA), single stage call + 20 topics in 2022
  - Provisional budget 2021 **326.5** M€, Provisional opening 15/04/2021 - deadline **31/08/2021**
- Ultra-low power processors
  - European Innovation Leadership in Electronics
  - European Innovation Leadership in Photonics
  - 6G and foundational connectivity technologies
  - Innovation in AI, data and robotics
  - Tomorrow's deployable Robots: efficient, robust, safe, adaptive and trusted
  - European leadership in Emerging Enabling Technologies
  - Flagship on Quantum Technologies: a Paradigm Shift
  - Graphene: Europe in the lead

# Destination 4 - World leading data and computing technologies

Section	Budget (M€)	Topics (RIA / IA / CSA)
Ultra-low power processors	27.5	2 ( 1 / - / 1 )
European Innovation Leadership in Electronics	34.5	1 (1 / - / -)
European Innovation Leadership in Photonics	65	2 ( 1 / 1 / - )
6G and foundational connectivity technologies	2.5	1 ( - / - / 1 )
Innovation in AI, data and robotics	48	2 ( - / 2 / - )
Tomorrow's deployable Robots: efficient, robust, safe, adaptive and trusted	56	2 ( 2 / - / - )
European leadership in Emerging Enabling Technologies	42	3 ( 2 / - / 1 )
Flagship on Quantum Technologies: a Paradigm Shift	51	6 (3 / 1 / 2), 4 FPA*
Graphene: Europe in the lead (3 RIA, 1 IA, 1 CSA)	-	Call 2022

**Focus of topics:** ultra-low power secure microprocessors, microcontrollers and accelerators / functional electronics for green and circular economy / advanced optical communication components / new generation of photonic integrated circuits and devices / 6G Europe wide platform – Communication Network Technologies / innovative AI, data and robotics solutions for resource optimisation / AI, Data and Robotics at work / AI-Powered robotics / human-robot interaction / European Network of Excellence Centres in Robotics / spintronics / disruptive spin-based hardware components and devices / technologies for bio-intelligent manufacturing / large-scale quantum computers / quantum communication / quantum sensing technologies / advanced electronic and photonic 2D materials-based devices, systems and sensors / 2D-material-based composites, coatings and foams / other

\* Framework partnership agreements (FPA)



# Destination 6

## A human-centred and ethical development of digital and industrial technologies

A human-centred and ethical development of digital and industrial technologies, through a two-way engagement in the development of technologies, empowering end-users and workers, and supporting social innovation.

- Call – A human-centred and ethical development of digital and industrial technologies (ID: **HUMAN**)
  - Call 2021 - **23** topics (**10** RIA, **4** IA, **9** CSA), single stage call + 6 topics in 2022
  - Provisional budget 2021 **227.5** M€
  - Provisional opening 15/04/2021 - deadline **31/08/2021**
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- Leadership in AI based on trust
  - An Internet of Trust
  - eXtended Reality (XR)
  - Systemic approaches to make the most of the technologies within society and industry

## Destination 6 - A human-centred and ethical development of digital and industrial technologies

Section	Budget (M€)	Topics (RIA / IA / CSA)
Leadership in AI based on trust	88.5	6 ( 5 / - / 1 )
An Internet of Trust	35.5	5 ( 2 / - / 3 )
eXtended Reality (XR)	84.5	6 ( 2 / 3 / 1 )
Systemic approaches to make the most of the technologies within society and industry	19	6 ( 1 / 1 / 4 )

**Focus of topics:** trustworthy AI technologies / novel learning / advance intelligence and autonomy of AI-based systems / greener AI / social aware AI / standardisation / European Network of AI Excellence Centres – AI lighthouse / FSTP / gender, race and other biases in AI / AI to fight disinformation / the trustworthy open search and discovery on the Internet / NGI community building and fellowship programme / Art-driven use experiments and design / XR modelling / XR telepresence / XR learning / XR haptics hardware / awareness raising on Intellectual property management / testing innovative solutions on local communities'-demand / workforce skills for industry 5.0 / other



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