APRE
Agenzia per la Promozione della Ricerca Europea

# Il Cluster 4 Digital, Industry and Space Work Programme 2024

# GRUPPO DI SUPPORTO RISTRETTO – *CLUSTER 4*

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# CLUSTER 4 DIGITAL, INDUSTRY and SPACE

## Overview della partecipazione italiana 2023

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# GLOSSARIO

**Tasso di successo =** viene calcolato in percentuale come rapporto tra le proposte valutate positivamente e quelle presentate. Il tasso di successo viene calcolato a livello di singolo paese o nel complesso della call.

**Rientro nazionale o ritorno=** viene calcolato in percentuale come rapporto tra quanto ottiene un paese e quanto è stato assegnato sull'intero programma/bando/call.

**# Partecipazioni o numerosità =** numerosità delle singole partecipazioni al bando (coordinatori + partner). SI calcola sui singoli proponenti e non sulle proposte.

**€ Requested EU contribution =** contributo finanziario richiesto in fase di proposta dal singolo proponente.

**Mainlist =** proposte ammesse a grant preparation.

# IT-CALL 2023 | OVERVIEW

| | # Partecipazione | € Contributo finanziario |
|---|---|---|
| **Main list** | 321 | 116.639.183,93 € |
| **Reserve list** | 138 | 54.684.828,00 € |
| **Below available budget** | 532 | 230.214.301,96 € |
| **Below Threshold** | 393 | 179.085.689,55 € |
| **Totale complessivo** | **1385** | **580.624.003,44 €** |

| # Tasso di successo | € Tasso di successo | # Rientro nazionale | € Rientro Nazionale |
|---|---|---|---|
| 24,3% | 23% | 11,2% | 9,9% |

# CALL 2023| COMPETIZIONE EUROPEA

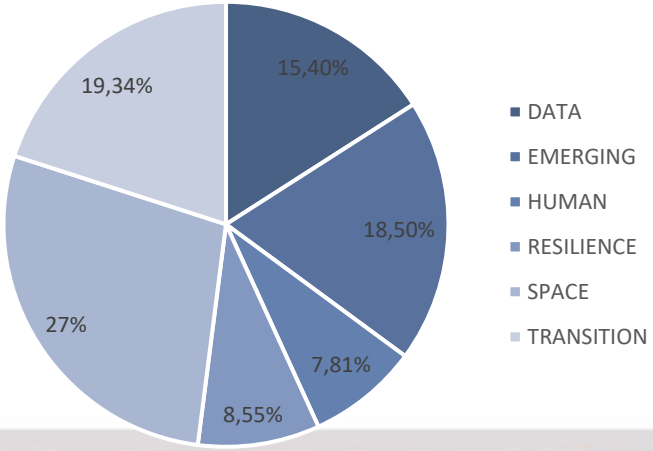
| Paesi | # Partecipazione | € Contributo finanziario | # Rientro | € Rientro |
|---|---|---|---|---|
| DE | 388 | 208.495.726 € | 14,47% | 18,77% |
| NL | 145 | 119.928.962 € | 5,09% | 8,12% |
| ES | 313 | 135.140.331 € | 11,25% | 10,23% |
| FR | 275 | 117.403.423 € | 13,57% | 14,56% |
| IT | 312 | 116.443.466 € | 11,08% | 10,02% |
| EL | 184 | 77.216.629 € | 5,76% | 5,04% |
| BE | 184 | 84.451.775 € | 6,17% | 6,27% |

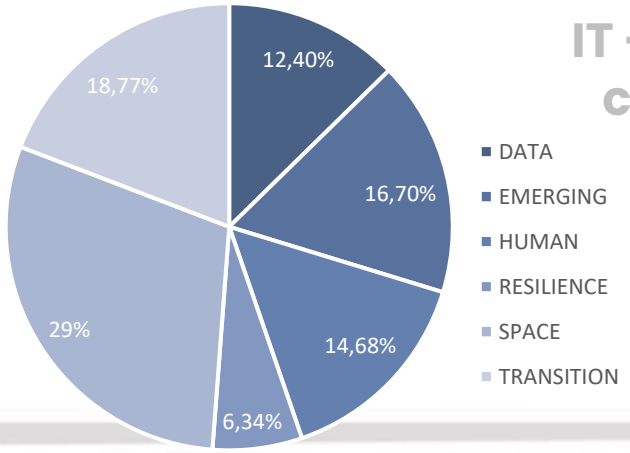
**ITALIA #**
**3° posto**

# IT – CALL 2023 | DESTINATION

| | Destination | DATA | EMERGING | HUMAN | RESILIENCE | SPACE | TRANSITION |
|---|---|---|---|---|---|---|---|
| Tasso di successo | # Numerosità partecipazione | 15,4% | 18,5% | 7,81% | 8,55% | 27% | 19,34% |
| | € Contributo Finanziario | 12,4% | 16,7% | 14,68% | 6,34% | 29% | 18,77% |
| Rientro Nazionale | # Numerosità partecipazione | 12,7% | 9,7% | 9,09% | 11,48% | 11% | 14,42% |
| | € Contributo Finanziario | 11,6% | 9% | 14,15% | 11,12% | 12% | 12,33% |

IT – Distribuzione partecipanti per Destination



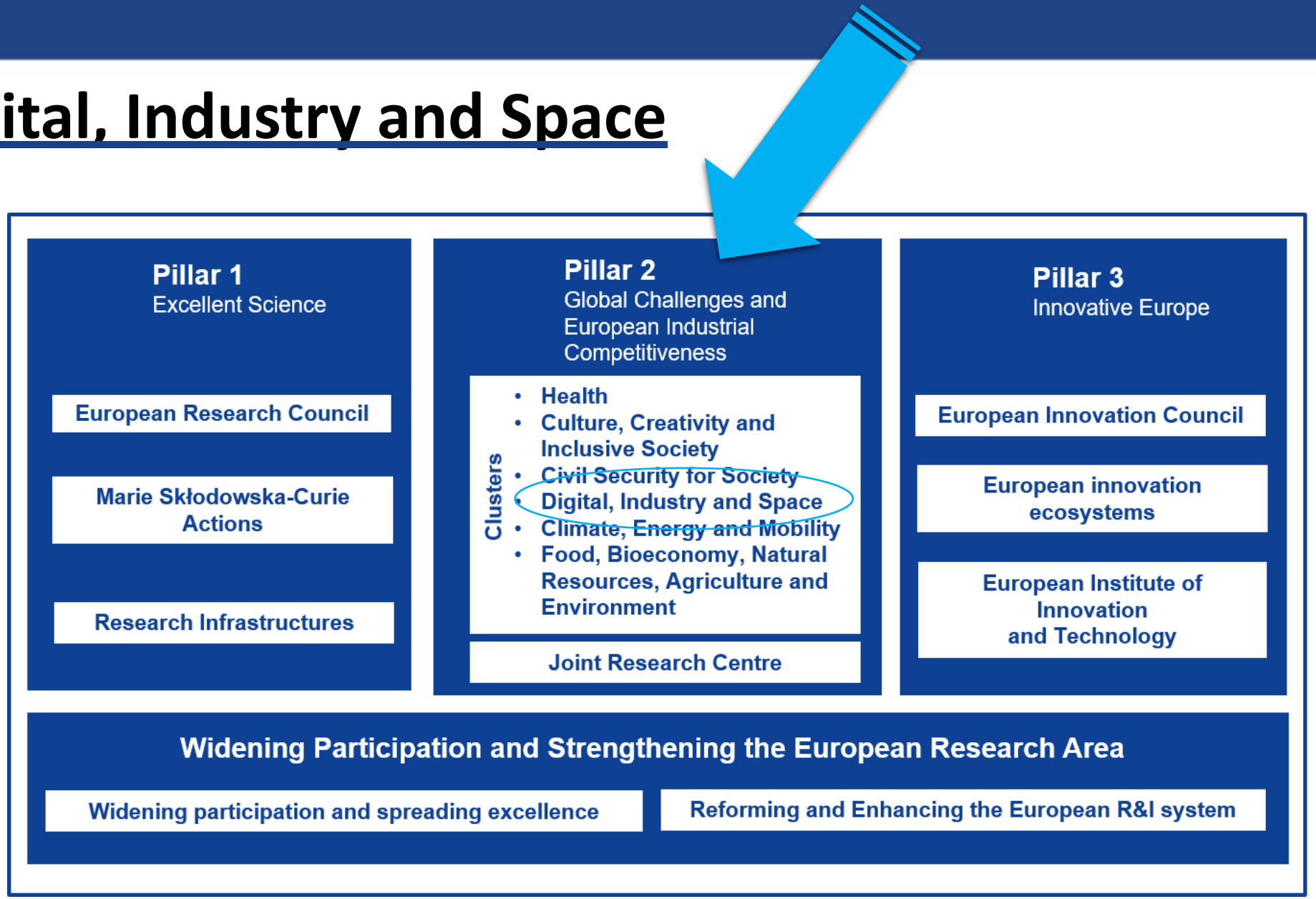




IT – Distribuzione contributo per Destination

# Cluster 4: come è andato il 2023?

- DIGITALE:
  - Italia è prima nella presenza in progetti HUMAN, ma 3° per budget ottenuto
  - Abbiamo una buona partecipazione distribuita nelle tre aree
- INDUSTRIA
  - Buon posizionamento sia su RESILIENCE che Twin-Transition
  - 9 progetti in Main List a coordinamento italiano
- SPACE
  - Buon risultato in termini di partecipazione a progetti valutati positivamente, buono il rientro economico (terza in entrambe le classifiche

# Digital, Industry and Space



# Cluster 4 Destinations and connected Expected Impacts

1. **Destination 1 (WP2023-2024) - Climate neutral, circular and digitized production**

   Expected Impact 2021-24: Global leadership in clean and climate-neutral industrial value chains, circular economy and climate-neutral digital systems and infrastructures

2. **D2 (WP23-24) - Increased autonomy in key strategic value chains for resilient industry**

   Expected Impact 2021-24: Industrial leadership and increased autonomy in key strategic value chains with security of supply in raw materials

3. **D3 (WP23-24) - World leading data and computing technologies**

   Expected Impact 2021-24: Globally attractive, secure and dynamic data-agile economy

4. **D4 (WP23-24) - Digital & emerging technologies for competitiveness and fit for the Green Deal**

   Expected Impact 2021-24: Sovereignty in digital technologies and in future emerging enabling technologies

5. **D5 (WP23-24) - Open strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data**

   Expected Impact 2021-24: Strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data

6. **D6 (WP23-24) - A human-centred & ethical development of digital and industrial technologies**

   Expected Impact 2021-24: A human-centred and ethical development of digital and industrial technologies

# Cluster 4 – Work Programme 2023-24 Overview

## D1 - Climate neutral, circular and digitized production
**TWIN-TRANSITION**

- Manufacturing Industry
- A New Way to Build, accelerating disruptive change in construction
- Energy Intensive Process Industries

## D2 - Increased autonomy in key strategic value chains for resilient industry
**RESILIENCE**

- Raw Materials for strategic autonomy and circular economy
- Safe and Sustainable by Design Chemicals and Materials
- Strategic Innovation Markets Driven by Advanced Materials
- Improving the resilience of EU businesses

## D3 - World leading data and computing technologies
**DATA**

- Data sharing and analytics capacity
- From Cloud to Edge to IoT

## D4 - Digital and emerging technologies for competitiveness and fir for the Green Deal
**DIGITAL-EMERGING**

- Open Source for Cloud/Edge Digital Autonomy
- Photonics
- AI, data and robotics
- Graphene
- Quantum
- Emerging Techs

## D5 - Open strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data
**SPACE**

- Competitiveness
- Access to Space
- Galileo, EGNOS and Copernicus, PRS and GOVSATCOM
- Copernicus service
- Galileo and EGNOS
- SSA, GOVSATCOM , Quantum
- CASSINI & Space entrepreneurship

## D6 - A human-centred and ethical development of digital and industrial technologies
**HUMAN**

- AI based on trust
- Internet of Trust
- Extended Reality
- Accelerating uptake of tech & innovation
- Industry 5.0
- Standardization
- Digital Humanism

Energy efficiency and climate neutral process industries
Circularity and Zero Pollution in process industry
Clean Steel

Other Actions: NGI commons; Critical Raw Materials Exploration Investment Facility; UNECE resource management system; JRC & Action Plan on Critical Raw Materials; Raw Materials events; Support to Hydrogen

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# Cluster 4 - Policy Framework

# CLUSTER 4 | Overview Work Programme 2023 -24

Versione WP:
**published**

| Scadenze | |
|---|---|
| '23 | 28 e 29 Marzo+20 Aprile |
| '24 | 7 e 20 Feb + 19 Marzo |

| Topic | |
|---|---|
| '23 | 88 |
| '24 | 42 |
| | 130 |

| Budget | |
|---|---|
| '23 | 1390,23 |
| '24 | 927 |
| | 2317,23 |

# WP23-24|OVERVIEW call 2024

| Destination | CL4 components | Call | Deadline | Budget (mln €) | N° of topics |
|---|---|---|---|---|---|
| 1 | Industry | HORIZON-CL4-2024-TWIN-TRANSITION-01 | 7 Feb 2024 | 251 | 9 |
| 1 | Industry | HORIZON-CL4-2024-TWIN-TRANSITION-01-TWO-STAGE | 7 Feb 2024 (First Stage)<br>24 Set 2024 (Second Stage) | 37 | 2 |
| 2 | Industry | HORIZON-CL4-2024-RESILIENCE-01-TWO-STAGE | 7 Feb 2024 (First Stage)<br>24 Set 2024 (Second Stage) | 62 | 2 |
| 2 | Industry | HORIZON-CL4-2024-RESILIENCE-01 | 7 Feb 2024 | 160,20 | 7 |
| 3 | Digital | HORIZON-CL4-2024-DATA-01 | 19 Mar 2024 | 85 | 3 |
| 4 | Digital | HORIZON-CL4-2024-DIGITAL-EMERGING-01 | 19 Mar 2024 | 136,5 | 5 |
| 4 | Digital | HORIZON-CL4-2024-DIGITAL-EMERGING-01-CNECT | 19 Mar 2024 | 88 | 6 |
| 5 | Space | HORIZON-CL4-2024-SPACE-01 | 20 Feb 2024 | 46,30 | 4 |
| 6 | Digital | HORIZON-CL4-2024-HUMAN-01 | 19 Mar 2024 | 61 | 4 |

# 2024 | Condizioni specifiche/criteri di eleggibilità aggiuntivi

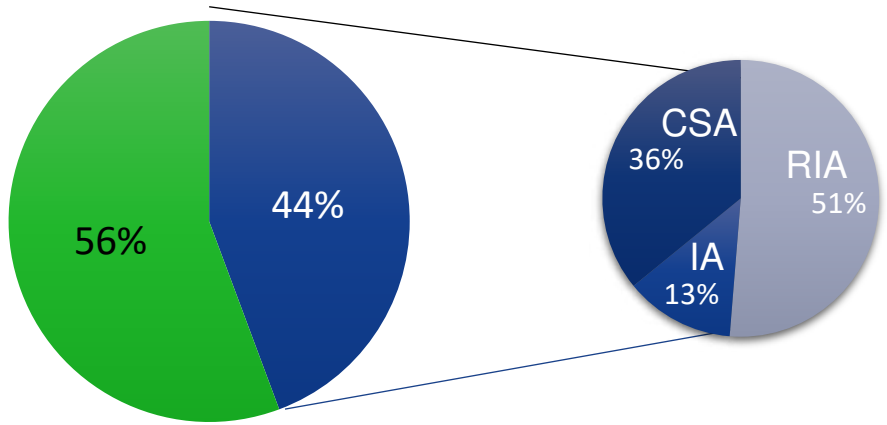
**Blind evaluation** (two-stage)

4 topics in with **FSTP**

**ART 22.5**
- 4 topics in SPACE
- 5 topics in RESILIENCE

**COLLABORATIONS**
- International Cooperation: 3 topics
- Collaboration with JRC: 1 topics
- Collaboration with EIT: 2 topics

**Lump Sum**



# Cluster 4 Complementarities - European Partnerships

**DID YOU KNOW?**

European Partnerships are initiatives where the EU, together with private and public partners, commit to jointly support the development and implementation of a programme of research and innovation activities. The partners could represent industry, universities, research organisations, bodies with a public service remit at local, regional, national or international level or civil society organisations, including foundations and NGOs. Partnerships are not new - they were first introduced in 2002 as part of the European Research Area to overcome fragmentation of research effort.

**3 Istitutional partnerships (Art.187, Public-Private)**

EuroHPC JU
Key Digital Technologies JU (ex ECSEL JU)
Smart Networks and Services JU (ex 5G PPP)

**7 Co-programmed partnerships**

Made in Europe (ex FoF)
Process4Planet - Carbon neutral Circular Industry
Clean steel (ex SPIRE)
AI, Data and Robotics
Photonics
Globally competitive Space Systems

**1 Istitutional partnership (Art. 185, Public-Public)**

European Partnership on Metrology

# Cluster 4 Complementarities – Digital Europe

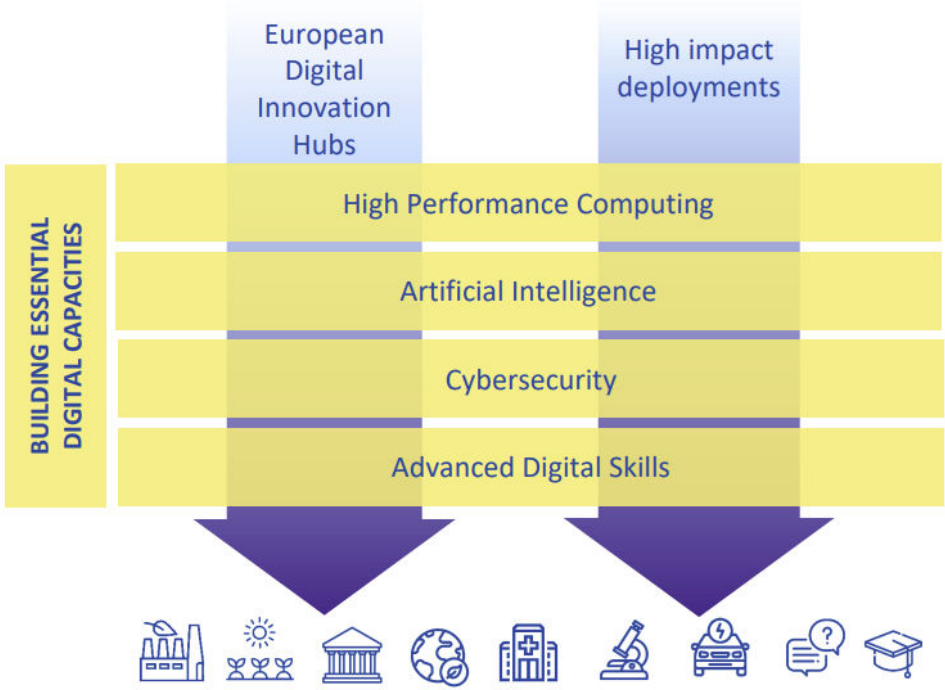
It will make use of the most recent research results, **but it will not support research**. For example, DE will support:

- The acquisition of HPC machines
- The set-up of sectorial data spaces, e.g. manufacturing
- The building or reinforcing of Testing and Experimentation Facilities
- The set up and delivery of Master courses in key advanced digital technologies

The programme has **specific restrictions to participation** of entities not in the EU or in the EEA.

**Funding schemes:**

- Grants with cost reimbursement 50% for everybody or with 75% for SMEs
- CSA at 100%
- Wider use of procurement



# Cross-clusters complementarities

Artificial Intelligence

Robotics

Data

Photonics

NEB

Advanced Materials

Manufacturing

Construction

Process Industry

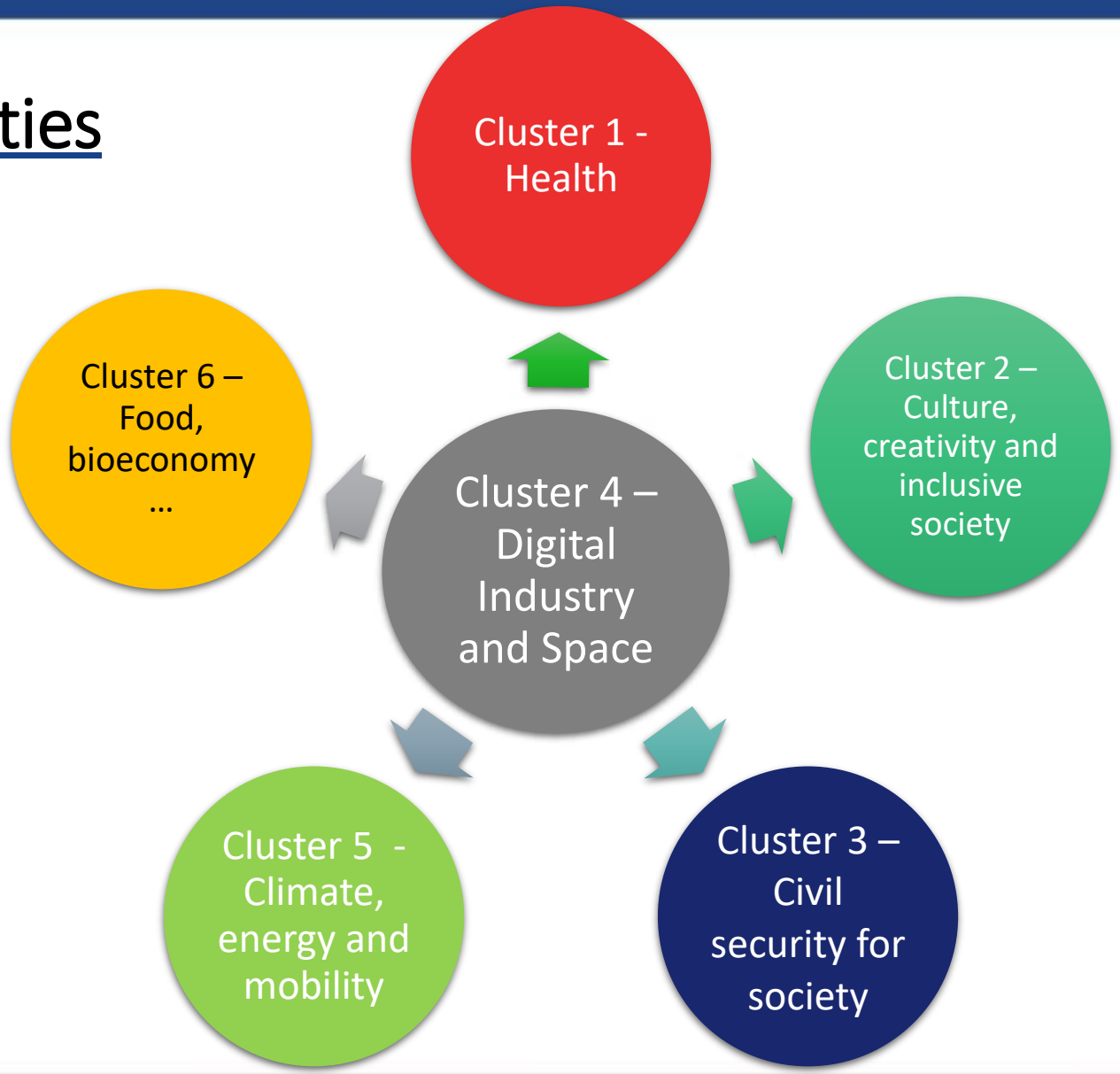
Raw Materials

Galileo

Copernicus

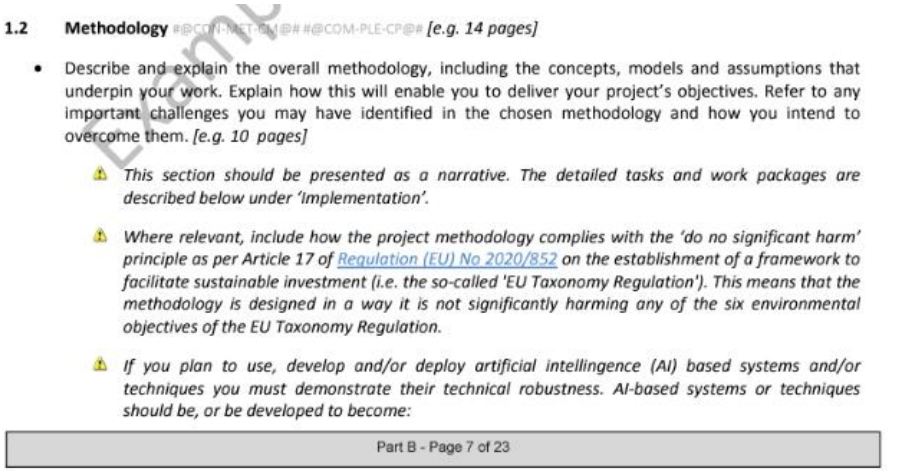
Production

Earth Observation



# Policy and horizontal considerations

## Trustworthy Artificial Intelligence



1.2 **Methodology** #@COM-MET-EM@# #@COM-PLE-CP@# *[e.g. 14 pages]*

- Describe and explain the overall methodology, including the concepts, models and assumptions that underpin your work. Explain how this will enable you to deliver your project's objectives. Refer to any important challenges you may have identified in the chosen methodology and how you intend to overcome them. *[e.g. 10 pages]*

  ⚠ *This section should be presented as a narrative. The detailed tasks and work packages are described below under 'Implementation'.*

  ⚠ *Where relevant, include how the project methodology complies with the 'do no significant harm' principle as per Article 17 of Regulation (EU) No 2020/852 on the establishment of a framework to facilitate sustainable investment (i.e. the so-called 'EU Taxonomy Regulation'). This means that the methodology is designed in a way it is not significantly harming any of the six environmental objectives of the EU Taxonomy Regulation.*

  ⚠ *If you plan to use, develop and/or deploy artificial intelligence (AI) based systems and/or techniques you must demonstrate their technical robustness. AI-based systems or techniques should be, or be developed to become:*

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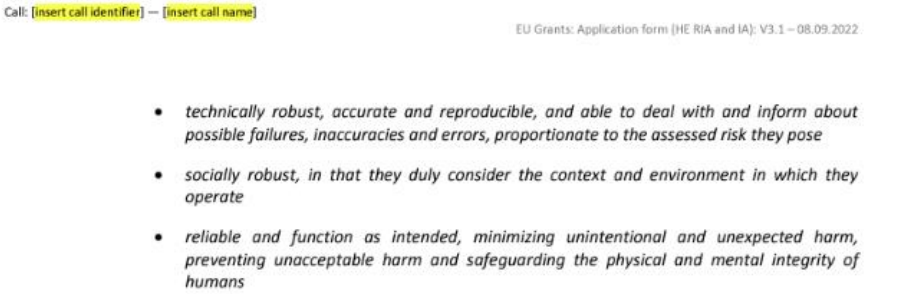

Call: [insert call identifier] – [insert call name]

EU Grants: Application form (HE RIA and IA): V3.1 – 08.09.2022

- *technically robust, accurate and reproducible, and able to deal with and inform about possible failures, inaccuracies and errors, proportionate to the assessed risk they pose*
- *socially robust, in that they duly consider the context and environment in which they operate*
- *reliable and function as intended, minimizing unintentional and unexpected harm, preventing unacceptable harm and safeguarding the physical and mental integrity of humans*

**Due diligence** su qualsiasi tecnica o sistema AI su affidabilità e robustezza:

- Robusta, accurata e riproducibile, in grado di gestire e informare su possibili guasti, imprecisioni ed errori, in relazione al rischio connesso al sistema o algoritmo AI
- Che tenga conto del contesto e dell'ambiente in cui opera
- Salvaguardia dell'integrità fisica e mentale delle persone
- Capace di spiegare il proprio sistema decisionale, specialmente se ha impatto sulla vita delle persone

Tre valutatori per la due diligence

Ulteriori informazioni: https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence

# European NCP Networks

- Impact Canvas
- Partner Search
- Pre-proposal Check
- Toolbox
- Topic Tree
- ICT Projects Dashboard

- **HE NCP Networks:**

www.ideal-ist.eu

www.ncp4industry.eu

www.ncp-space.net

- **LE NUOVE RETI:**
  **CLUSTER 4 DIGITAL, INDUSTRY, SPACE – NCP4INDUSTRY**

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