

# Cluster 4 - 2021 call (closed 21/10/2021)

| Action type | Total budget per topic<br>(mil. €) | Recommended budget<br>per project (mil. €) | Expected no. of<br>funded projects | No. of proposals |
|-------------|------------------------------------|--------------------------------------------|------------------------------------|------------------|
|-------------|------------------------------------|--------------------------------------------|------------------------------------|------------------|

|                             |                                                                                                                                         |     |       |       |   |     |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----|-------|-------|---|-----|
| DESTINATION 3               | World leading data and computing technologies                                                                                           |     | 141   |       |   | 109 |
| Section                     | Data sharing in the common European data space                                                                                          |     |       |       |   |     |
| DATA-2021-01-01             | Technologies and solutions for compliance, privacy preservation, green and responsible data operations                                  | RIA | 52    | 8-11  | 5 | 21  |
| DATA-2021-01-03             | Technologies for data management                                                                                                        | IA  | 30    | 5     | 6 | 25  |
| Section                     | From Cloud to Edge to IoT for European Data                                                                                             |     |       |       |   |     |
| DATA-2021-01-05             | Future European platforms for the Edge: Meta Operating Systems                                                                          | RIA | 54    | 8-12  | 5 | 55  |
| DATA-2021-01-07             | Coordination and Support of the 'Cloud-Edge-IoT' domain                                                                                 | CSA | 3     | 1.5   | 2 | 7   |
| DATA-2021-01-08             | Roadmap for next generation computing and systems technologies                                                                          | CSA | 2     | 2     | 1 | 1   |
| DESTINATION 4               | Digital and emerging technologies for competitiveness and fit for the green deal                                                        |     | 311.9 |       |   | 327 |
| Section                     | Ultra-low power processors                                                                                                              |     |       |       |   |     |
| DIGITAL-EMERGING-2021-01-01 | Ultra-low-power, secure processors for edge computing                                                                                   | RIA | 26    | 8-10  | 3 | 17  |
| DIGITAL-EMERGING-2021-01-05 | Open Source Hardware for ultra-low-power, secure processors                                                                             | CSA | 2     | 2     | 1 | 2   |
| Section                     | European Innovation Leadership in Electronics                                                                                           |     |       |       |   |     |
| DIGITAL-EMERGING-2021-01-31 | Functional electronics for green and circular economy                                                                                   | RIA | 35    | 3-5   | 9 | 45  |
| Section                     | European Innovation Leadership in Photonics                                                                                             |     |       |       |   |     |
| DIGITAL-EMERGING-2021-01-06 | Advanced optical communication components                                                                                               | IA  | 26    | 4-6   | 6 | 15  |
| DIGITAL-EMERGING-2021-01-07 | Advanced Photonic Integrated Circuits                                                                                                   | RIA | 39    | 3-5   | 8 | 43  |
| Section                     | 6G and foundational connectivity technologies                                                                                           |     |       |       |   |     |
| DIGITAL-EMERGING-2021-01-26 | Coordination of European Smart Network actions                                                                                          | CSA | 3     | 3     | 1 | 1   |
| Section                     | Innovation in AI, data and robotics                                                                                                     |     |       |       |   |     |
| DIGITAL-EMERGING-2021-01-09 | AI, data and Robotics for the Green Deal                                                                                                | IA  | 27    | 3-5   | 7 | 35  |
| DIGITAL-EMERGING-2021-01-10 | AI, Data and Robotics at work                                                                                                           | IA  | 22    | 3-5   | 6 | 47  |
| Section                     | Tomorrow’s deployable Robots: efficient, robust, safe, adaptive and trusted                                                             |     |       |       |   |     |
| DIGITAL-EMERGING-2021-01-11 | Pushing the limit of robotics cognition                                                                                                 | RIA | 44.5  | 5     | 9 | 64  |
| DIGITAL-EMERGING-2021-01-12 | European Network of Excellence Centres in Robotics                                                                                      | RIA | 11.5  | 11.5  | 1 | 2   |
| Section                     | European leadership in Emerging Enabling Technologies                                                                                   |     |       |       |   |     |
| DIGITAL-EMERGING-2021-01-13 | Academia-Industry Forum on Emerging Enabling Technologies                                                                               | CSA | 2.5   | 2,5   | 1 | 6   |
| DIGITAL-EMERGING-2021-01-14 | Advanced spintronics: Unleashing spin in the next generation ICs                                                                        | RIA | 17    | 2-3   | 6 | 14  |
| DIGITAL-EMERGING-2021-01-27 | Development of technologies/devices for bio-intelligent manufacturing                                                                   | RIA | 22.5  | 5-7   | 4 | 7   |
| Section                     | Flagship on Quantum Technologies: a Paradigm Shift                                                                                      |     |       |       |   |     |
| DIGITAL-EMERGING-2021-01-21 | Next generation quantum sensing technologies                                                                                            | RIA | 13.5  | 6,75  | 2 | 8   |
| DIGITAL-EMERGING-2021-01-23 | International cooperation with Canada                                                                                                   | RIA | 4     | 1,33  | 4 | 15  |
| DIGITAL-EMERGING-2021-01-30 | Investing in new emerging quantum computing technologies                                                                                | RIA | 10    | 5     | 2 | 5   |
| DIGITAL-EMERGING-2021-01-32 | Support and coordination of the Quantum Technologies Flagship Initiative                                                                | CSA | 6.4   | 6,4   | 1 | 1   |
| DESTINATION 6               | Open Strategic Autonomy In Developing, Deploying and Using Global Space-Based Infrastructures, Services, Applications and Data          |     | 206   |       |   | 206 |
| Section                     | Leadership in AI based on trust                                                                                                         |     |       |       |   |     |
| HUMAN-2021-01-01            | Verifiable robustness, energy efficiency and transparency for Trustworthy AI: Scientific excellence boosting industrial competitiveness | RIA | 36    | 4     | 9 | 38  |
| HUMAN-2021-01-02            | European coordination, awareness, standardisation & adoption of trustworthy European AI, Data and Robotics                              | CSA | 13    | 4-9   | 2 | 3   |
| HUMAN-2021-01-03            | European Network of AI Excellence Centres: Pillars of the European AI lighthouse                                                        | RIA | 9     | 9     | 1 | 2   |
| HUMAN-2021-01-24            | Tackling gender, race and other biases in AI                                                                                            | RIA | 10    | 3-3,5 | 3 | 24  |
| HUMAN-2021-01-27            | AI to fight disinformation                                                                                                              | RIA | 13    | 6.5   | 2 | 22  |
| HUMAN-2021-01-21            | Art-driven use experiments and design                                                                                                   | RIA | 8.5   | 2.8   | 3 | 13  |
| Section                     | An Internet of Trust                                                                                                                    |     |       |       |   |     |
| HUMAN-2021-01-04            | Trust & data sovereignty on the Internet                                                                                                | RIA | 12    | 12    | 1 | 7   |
| HUMAN-2021-01-05            | Trustworthy open search and discovery                                                                                                   | RIA | 17    | 8.5   | 2 | 7   |
| HUMAN-2021-01-07            | Next Generation Internet community-building and outreach                                                                                | CSA | 2     | 2     | 1 | 7   |
| HUMAN-2021-01-08            | NGI International Collaboration - Transatlantic fellowship programme                                                                    | CSA | 2     | 2     | 1 | 2   |
| HUMAN-2021-01-09            | NGI Tech Review                                                                                                                         | CSA | 1.5   | 1.5   | 1 | 1   |
| Section                     | eXtended Reality (XR)                                                                                                                   |     |       |       |   |     |
| HUMAN-2021-01-13            | eXtended Reality modelling                                                                                                              | RIA | 14.5  | 4.8   | 3 | 18  |
| HUMAN-2021-01-14            | eXtended Reality for All – Haptics                                                                                                      | RIA | 6     | 6     | 1 | 3   |
| HUMAN-2021-01-25            | eXtended Reality Collaborative Telepresence                                                                                             | IA  | 14    | 5-8   | 2 | 6   |
| HUMAN-2021-01-06            | Innovation for Media, including EXTended Reality                                                                                        | IA  | 26    | 8-9   | 3 | 15  |
| HUMAN-2021-01-28            | eXtended Reality Ethics, Interoperability and Impact                                                                                    | CSA | 2.5   | 2.5   | 1 | 2   |
| Section                     | Systemic approaches to make the most of the technologies within society and industry                                                    |     |       |       |   |     |
| HUMAN-2021-01-17            | Awareness raising on Intellectual property (IP) management for European R&I                                                             | CSA | 1     | 1     | 1 | 5   |
| HUMAN-2021-01-18            | Fostering standardisation to boost European industry's competitiveness                                                                  | CSA | 1     | 1     | 1 | 4   |
| HUMAN-2021-01-19            | Testing innovative solutions on local communities'-demand                                                                               | CSA | 5     | 5     | 1 | 6   |
| HUMAN-2021-01-20            | Piloting a new industry-academy knowledge exchange focussing on companies' needs                                                        | CSA | 2     | 2     | 1 | 6   |
| HUMAN-2021-01-29            | Support for transnational activities of National Contact Points in the thematic area of Digital                                         | CSA | 2.5   | 2.5   | 1 | 1   |
| HUMAN-2021-01-30            | Support for transnational activities of National Contact Points in the thematic area of Industry                                        | CSA | 1.5   | 1.5   | 1 | 1   |
| HUMAN-2021-01-31            | Support for transnational activities of National Contact Points in the thematic area of Space                                           | CSA | 1     | 1     | 1 | 1   |
| HUMAN-2021-01-26            | Workforce skills for industry 5.0                                                                                                       | RIA | 5     | 5     | 1 | 12  |